

NA-65

SEMINAR REPORT

UNIVERSITY EDUCATION

29th March 1980

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SOCIAL SCIENCE RESEARCH CENTRE
NATIONAL SCIENCE COUNCIL OF SRI LANKA
47/5, MAITLAND PLACE, COLOMBO 7.

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PROGRAMME

29th March 1980

SESSION I

Chairman - Dr. R. P. Jayewardene

Alternate Chairman - Dr. H. N. S. Karunatilake

- | | | |
|------------|--------------|--|
| 9.00 a.m. | - 9.15 a.m. | - Key-note Address Dr. F. S. C. P. Kalpage |
| 9.15 a.m. | - 9.45 a.m. | - Concept of University Autonomy - Prof. K. M. de Silva |
| 9.45 a.m. | - 10.15 a.m. | - Operation of University Act - Prof. S. Wijesundera |
| 10.15 a.m. | - 10.30 a.m. | - Tea |
| 10.30 a.m. | - 11.00 a.m. | - Demand for University Education -
Prof. (Mrs.) S. Jayaweera |
| 11.00 a.m. | - 11.30 a.m. | - Selections for University Education - Prof. C.R. de Silva |
| 11.30 a.m. | - 12.00 noon | - Discussion |
| 12.00 noon | - 1.00 p.m. | - LUNCH |

SESSION II

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|-----------|-------------|--|
| 1.00 p.m. | - 2.00 p.m. | - Professional Courses at the University |
| | | (a) Medicine - Dr. S. A. Cabraal |
| | | (b) Law - Prof. T. Nadarajah |
| | | (c) Engineering - Prof. C. Patuwathavithane |
| | | (b) Architecture - Prof. R. Peiris |
| 2.00 p.m. | - 2.30 p.m. | - Sciences in the University - Prof. H. Cruz |
| 2.30 p.m. | - 3.00 p.m. | - Social Sciences in the University - Dr. S. Bandaranayake |
| 3.00 p.m. | - 3.45 p.m. | - Tea and Discussion |

SESSION III

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|-----------|-------------|--|
| 3.45 p.m. | - 4.15 p.m. | - The Role of the University in Society -
Dr. H. N. S. Karunatilake |
| 4.15 p.m. | - 5.00 p.m. | - Panel Discussion and Summing Up
(Prof. A. W. Mailvaganam, Mr. R. B. Weerakoon,
Mr. S. Amunugama, Dr. D. A. Kotelawela,
Prof. K. Kailasapathy) |

Rapporteur:

Mrs. C. M. Fernando
Secretary, Social Science Research Centre, N. S. C.

Opening Address

Dr. R. P. Jayewardene

On behalf of the Social Science Research Centre of the National Science Council, I welcome all of you to this Seminar on the important topic of 'University Education'. The Social Science Research Centre is to be commended for selecting this theme for discussion because Universities and University Education is one of the biggest problems facing this country. We all know that the history of university development in Sri Lanka has been a very stormy one. The University of Ceylon was created in 1942 when Ceylon was still a Crown Colony of the British Empire. However Hongkong, another Crown Colony which still remains one, had a University as early as 1907. There must have been something wrong with this country or the government at the time which made this long delay possible.

Those who have followed the history of the University movement will recall that there were long drawnout discussions, fruitful and otherwise, as to where the University should be sited. The battle of the sites was settled in favour of Peradeniya which was in my opinion a good choice. Since then Peradeniya itself has been the site of many battles between staff, students and various factions both within and outside the University which interfered with development of the University. I am sorry to note that a discussion on politics and the university is not on the programme today. I am hopeful however that some of the speakers will deal with this aspect - how politics has affected the university movement and university education in Sri Lanka.

I think the next speaker Dr. Kalpage is well suited for this task because as a University Professor at Peradeniya he was once in the thick of this battle. The ravaging effects of politics and politicians on university education, administration, staff and students should not merely be discussed but someone should write a book about it and I can think of no one better than Prof. Kingsley de Silva for this task. It will be very interesting to read about it because as teachers of the university we were all affected.

Then later we had the creation of one University of Sri Lanka with several campuses and with the new Act several Universities have been established once again. I believe all these matters will be coming up for discussion today. Ladies and Gentlemen, I now call upon Dr. Kalpage to deliver the keynote address.

Keynote Address

Dr. F. S. C. P. Kalpage

Mr. Chairman, Ladies and Gentlemen, I wish to thank the Social Science Research Centre of the National Science Council for having given me this opportunity to discuss University education. A seminar such as this is particularly useful to those of us who like myself are in the middle of the stream, as it were, and who have very little time to step out on to the bank and to have a look at what the waters are like, whether we are swimming with the current or against it, what sort of currents there are on the surface and underneath. This seminar would help us to get some feed-back as to what is happening. I have been asked to give a keynote address and allocated 15 minutes -within this time I shall not attempt to deal exhaustively with the various topics which are the subjects for discussion at this seminar - University Autonomy, Operation of the University Act, Demand and Selections for University Education, the different kinds of courses at the University and finally the role of the University in society. We could perhaps deal all day with each of these topics. I shall just touch on them briefly.

It is now 15 months after Universities Act No. 16 of 1978 came into operation. We are dealing with University matters in an atmosphere entirely different from that of 1972. Fifteen months after Act No. 1 of 1972 was passed there was a turbulent period in University affairs. It brings to mind two incidents - the C. R. de Silva incident where the University teachers were rightly agitated and the Ashley Halpe incident. Now things are very much better though there are rumblings against the 'dictatorial attitude' of the University Grants Commission and the University teachers are still waiting for their salary increase. I admit the new Act is not perfect but we have initiated a series of discussions on the Act and amendments are being prepared. We intend to make changes as we go on.

Few people are aware of the tremendous struggle we had to safeguard University autonomy and we have to continue doing it. The fact that we have been victorious is a vindication, I feel, of the role of the University Grants Commission.

Then there is the demand for university education. Until last year the figures were approximately 70,000 sitting the G.C.E. Advanced Level examination, 30,000 being eligible to enter and 5000 being selected for admission to the traditional Universities. Last year the situation was aggravated because there were two Advanced Level examinations, one in April 1979 and one in August 1979. Over 70,000 sat in April and nearly 30,000 sat in August and from both examinations only 5000 can be selected to the traditional Universities. How is this demand to be met? Is it necessary to meet this demand as far as University education goes? These are some of the problems that Prof. Swarna Jayaweera will discuss.

Of course one way to meet the demand is to set up Universities in every district. I am happy to say that the present Minister of Higher Education, H. E. the President has told the University Grants Commission when we met him for the first time that we should aim at consolidating what we have rather than proliferating. I hope I won't be misquoted, that Dr. Kalpage said that the University in Batticaloa will not be established. We are looking into the possibility of creating a University in Uva and the University in Batticaloa will be established provided we get Cabinet sanction so that the necessary funds can be obtained.

One way of dealing with the expansion of University places is to establish the Open University which will begin functioning by May/June 1980. By the end of this year we expect the correspondence courses of the Open University to cater to about 8000 students and by the mid 1980s to about 40,000 - 50,000 students.

Prof. C. R. de Silva will be dealing with the topic of Selections for University Admission. We are all aware of the mode of selection adopted for 1979/80. We have presented our recommendations on the mode of selection for 1980/81 to the Minister of Higher Education and I understand that a decision will be made next week. It has been the practice for this matter to be considered by the Cabinet of Ministers. I don't know whether it is the right practice or not but this practice was not started by this government. Ever since 1976 the Cabinet has deliberated on this matter and decided on the method of selections for University admission.

Before I conclude I wish to say that during the past year or so we have been clearing the decks for action. We inherited a legacy of chaos and confusion and we have tried during the past 15 months to sort out the mess. I can say that now all University Councils are in a position to plan for the future. Once again the philosophy of this government is not to impose plans from above. We have not come before the Universities with ready-made plans but we have asked each University to prepare its own master plan - their academic programme, their departments and courses, their plans for undergraduate and postgraduate education, what facilities they require, their physical needs and the financial implications of their programmes and so on. We will consolidate all these plans into one Master Plan for the development of the Universities. That is what we have to do in the immediate future and this we can only do with the assistance of all Universities because we want these plans to evolve in the Departments through the Faculties and come to the University Grants Commission through the respective Councils. That is all for the present but I hope I will have a further opportunity to intervene in the course of the discussion later on. Thank you, Mr. Chairman.

The Concept of University Autonomy

Prof. K. M. de Silva

Mr. Chairman, Ladies and Gentlemen, I must thank the organisers of this Seminar for the invitation extended to me to participate in the discussion this morning and for choosing a nice "non-controversial" topic like University Autonomy for me to speak on. In fact in comparison to Dr. Kalpage's theme - the politics of University education - this question of University autonomy so far as Sri Lanka is concerned is far more controversial.

Let me begin by saying that the concept of University autonomy has various meanings. as many meanings as there are countries which accept the concept. For instance, in the continent of Europe the concept differs from the British version of it. It differs also from autonomy as it is understood in the United States, where the concept of autonomy varies from one sector of higher education to the other. But I will go so far as to say that if today there are universities which are genuinely autonomous, they are the great private universities of the United States. Even Oxford and Cambridge lag behind them in this.

The second point about University autonomy is that it is often linked with the concept of academic freedom. In a sense there is a link between them but I would insist that the concept of academic freedom can stand on its own. It is a principle which most civilised countries accept without reservation. You cannot have a university in the true sense of the word if you do not accept the principle of academic freedom i.e. the freedom that a University teacher has to teach the subject in the way he wishes to teach it, to publish a document or an article or a book without fear of censorship either by the university or by the government; of course, there is equally the assumption that his views, however unpopular or unorthodox they may be, will not stand in the way of his promotion within the university. A university teacher is often referred to as a person who thinks otherwise. If he doesn't think otherwise there is something wrong with him.

The concept of university autonomy is not something that can be dealt with in a mere 30 minutes. One can only refer to some of its salient features and that is what I propose to do. I spoke earlier of the various versions of university autonomy. Before I come to the type of university autonomy that we have in this country, I would like to point out that in this sense we have been greatly influenced by the British practice.

University autonomy in Britain was seldom a matter of controversy. For many centuries Britain did not have very many universities and these universities survived in isolation as independent self-financed organisations. After the establishment of Oxford and Cambridge in the 12th Century no new universities were established in Britain until the 18th Century, although several were established in Scotland during this period. As long as the Universities were small and relatively isolated there were few threats to their autonomous status. They were independent bodies enjoying what were called the liberties of a medieval corporation. Those liberties were as strong as any of the fundamental freedoms that we talk of today in various international assemblies and do nothing about. The Universities of Oxford and Cambridge were given a degree of independence which they preserved till the 1950s. The preservation of autonomy of these universities was rendered easier by the fact that they had accumulated considerable wealth through donations and by skilful investments. Oxford and Cambridge then survived partly because they were isolated, partly because they were wealthy and partly because university education itself was confined to a small elite. The fact that these universities were autonomous did not mean that Parliament could not intervene in their affairs. Parliament did intervene and very often parliamentary intervention was provoked by religious fanaticism-one form of Christianity imposing its own orthodoxy on Oxford or Cambridge whenever these two universities stood up to protect their form of orthodoxy. Also there were occasions when the intervention was due to public recognition of the fact that the Colleges of Oxford and Cambridge had ceased to be real universities:

The problem of university autonomy can be viewed in one way as the problem of the relationship between the University and the State. This problem was not a very serious one until the beginning of the 20th century. In the second half of the 19th Century there was a new development, civic universities funded by municipalities and wealthy merchants. This was the origin of the Universities of Manchester, Durham and London all of which were federal Universities. Unlike Oxford and Cambridge they did not propose any tests of religious orthodoxy.

There was now a greater demand for University education. By this time it was Germany that was in the forefront of university education in the world and not England.

The point I wish to emphasise is that the relationship between the state and the universities was relatively uncomplicated till after the first World War, when for the first time in the United Kingdom it was recognised that private sources by themselves, whether they be municipalities or private individuals could no longer finance universities. They could no longer provide the vast sums of money which universities required to pay their staff and to finance research. The new benefactor was the state, and the money from this source was channelled through the novel device of a University Grants Committee. This was established in 1918 as a Committee of the British Treasury. The Treasury Minute of that occasion reads as follows:

“to inquire into the financial needs of University education in the United Kingdom and to advise the government as to the application of any grants that may be made by Parliament to meet them”.

This was once again a typical British device - a pragmatic solution to a problem they recognised. The problem being that once the state starts financing universities, pressure for state influence if not control would become very great. Therefore they resorted to the device of a group of university teachers and a few others, normally distinguished persons, serving on this Committee and advising the government. Some myths have developed about this University Grants Committee of 1918. The British decided that this committee should be set up under the Treasury and not under the Ministry of Education and this choice was later interpreted as a conscious bid to protect university autonomy. The fact of the matter is that the writ of the British Department of Education did not extend beyond the boundaries of England to Scotland, whereas the Treasury wanted to make grants to all British universities including the Scottish universities and for that reason the University Grants Committee came under the Treasury which had jurisdiction over the entire British Isles. Once this device was adopted the British used it as a means of protecting the Universities from political interference and for obtaining the best possible expert advice on how to finance the universities.

Between 1918 and 1962 there were a number of changes. Half the British universities that exist today came into existence after 1930. In terms of the money given to the universities by the state the figures are as follows

33% of finances provided up to 1914

50% of finances provided up to 1950

67% of finances provided up to 1960

With this increase in financing, state influence and state control became much more powerful than it had been earlier. State influence on British universities through the University Grants Committee increased considerably in the 1960s and 1970s. In 1962 the terms of reference of the University Grants Committee were expanded thus: “to collect, examine and make available information related to university education throughout the U.K. and to assist in consultation with the universities and other bodies concerned in the preparation and execution of such plans for the development of the universities as may from time to time be required in order to ensure that they are fully adequate to national needs”. Here was a complete change in the powers and the functions of the University Grants Committee. This definition of the powers of the University Grants Committee has affected thinking on University Grants Committees in other countries such as India. In Sri Lanka it certainly has influenced those who framed the present University Act. If we look at the powers given to the University Grants Commission in this country they are much the same.

To give you an idea of what British academics themselves thought of University autonomy I would like to read a brief extract from Sir Eric Ashby - "There is a wide measure of agreement about the ingredients which matter most when talking of university autonomy. To be autonomous a university must be free to select its students and its staff and to determine the conditions under which they remain in the university. An autonomous university must be free to set its own standards and to decide to whom to award its degrees. An autonomous university must be free to design its own curriculum although it may in practice have to do so within certain constraints such as the requirements of professional bodies which recognise the degree as a right to practice. The financial sanctions which will be imposed from outside to prevent the university creating for example a medical school. Finally (and this is at the root of the previously held belief in Britain that Parliament should not inspect the accounts of the universities), an autonomous university having received its income from the state or private sources must be free to decide how to allocate it among the different categories of expenditure. It is the last pre-requisite for autonomy that is most in danger of erosion". He was perfectly right. He wrote that in 1961 or 1962 just before the dangers he referred to overtook British universities. This happened in the 1960s as a result of two things. The enormous increase in the number of students clamouring for admission to the universities and the great increase in the staff of the universities. At this time with the Labour party in power they took a number of decisions. First, of course, a committee was appointed - I don't know whether it was appointed by the Labour government or a Tory government, very likely it was the Tories - the Robbins Commission. Their report was available to the Labour government but like most governments they chose to ignore it. This report recommended the creation of a separate Ministry of Higher Education and Science and that the University Grants Committee should be placed under this Ministry. What happened was that they created a Ministry of Education and Science and placed the University Grants Committee under it. What is more from the 1960s we have had the accounts of British Universities examined by the Public Accounts Committee. Not only that, a number of British Parliamentary Committees have investigated various areas of university administration, including for instance the relationship between university staff and teachers. There was a howl of protest when the Prices and Incomes Board was asked to examine the salary structure of the universities and they proceeded to do that. So if we look at the concept of autonomy as it was spelt out by Sir Eric Ashby and how it has changed we find that in this country we have followed more or less the British pattern.

There are three areas where the universities in Britain have a great degree of independence.

Appointments to the Staff - This is something which universities have to protect in order to prevent political and communal considerations creeping into the selection of academic staff. All over the world this is considered an essential ingredient of autonomous universities. The more outside bodies interfere in this the less autonomous the university becomes.

University Admissions - They have always been a matter of politics in Sri Lanka as my colleague Prof. C. R. de Silva has pointed out in his article 'The Politics of University Admissions' in the *Sri Lanka Journal of Social Sciences*. This problem became a political issue from the 1960s. From that time it was the state that determined how many students the universities would admit. That does not mean that once the students were admitted to the university the state had any influence on the choice of courses or the examinations the university conducted to select students for the various honours courses. But there has been a change in that where university admissions are concerned, since the 1960s the universities have lost their control over admissions, or at most they have had to share it with the state.

Curriculum and Examinations - Here there has been no infringement of university autonomy. It is the universities that prepared the syllabuses, examined students etc.

In this sense in two at least of these three major areas the universities of this country are as autonomous in their own way as the universities in Britain.

There is also the question of the University Grants Committee. In Sri Lanka and in India it is a Grants Commission and not a Committee. This difference was something deliberate because in these countries the assumption was that this Commission would have wider powers than the British Grants Committee had in 1918. Since then of course there has been a change even in Britain in regard to the powers of the University Grants Committee.

As far as the present Act is concerned there are a number of differences between autonomy in practice in this country and in India for instance. As a concession to the Trade Unions the present Act gave the University Grants Commission the right to make appointments to certain non-academic posts. In the event the control of non-academic staff lies with the Grants Commission and not the universities. By this change there has been a substantial erosion of university autonomy and there are very few countries in the world where this situation exists. In some of the state universities in India there is a transferability of non-academic staff- but even this is rapidly changing.

The other basic thing is that the University Grants Commission in Sri Lanka is given over a period of two years certain special powers, which are by their very nature temporary. Apart from these limitations the present University Act gives universities in Sri Lanka as much autonomy as the Indian or British universities.

The relationship between the state and the universities is spelt out in sections 19 and 20 of the present act. The Minister in charge of Higher Education is empowered to issue written general directives to the University Grants Commission in matters such as university places, the medium of instruction and finances. These three areas are crucially important as far as this country is concerned. As I pointed out earlier since 1960 the universities have lost their control over university admissions to the state. The medium of instruction is also a political consideration in this country. The state provides 98 to 100 percent of the finances, therefore it naturally insists on a certain accountability. The universities are accountable to Parliament, through the Public Accounts Committee and the Committee on Public Enterprises.

Let me conclude by saying that as far as University autonomy is concerned, if you want an example of a genuinely autonomous university in the British tradition there was the University of Ceylon which existed from 1942 to 1966. In drafting the constitution for that university, Sir Ivor Jennings made use of the recommendations of the Buchanan - Riddell Commission but he also made certain changes of his own. One of the most important changes was to protect the University from political interference by getting the most influential politicians into the University Court and Council. In the 1950s and 1960s politicians of the calibre of Dudley Senanayake and Dr. N. M. Perera were serving in university bodies and learning about the problems of a University at first hand. Jennings' innovation is now held up as an example to other countries of Asia and Africa as a means of solving the eternal problem of state pressure on the universities and protecting them from political interference. Whether this device will work in other countries one does not know but it certainly worked in Sri Lanka.

I would like to end on that note. Once again I repeat that in so far as we compare the situation in this country with that in Britain today there is no substantial difference in the autonomy that the universities enjoy here and the autonomy that the universities in Britain enjoy nor is there any great difference in the powers of the Grants Committee in Britain and the University Grants Commission.

If the state or government wishes to protect University autonomy and to respect it, it will do so whether there is a charter or not, whether the university has a Council or not. If it decides not to respect university autonomy then no charter on earth will protect the universities from the state. In so far as we are concerned we operate on the basis of a pronouncement from H. E. the President that the policy of this government is to protect the autonomy of the universities.

Professor Kalpage has indicated in his talk that the U. G. C. intends to propose amendments to the present University Act, and that in doing so one objective would be to extend the area of autonomy enjoyed by Universities. Thank you.

The Operation Of The University Act

Prof. S. Wijesundera

Mr. Chairman, ladies and gentlemen, my duty today is to talk on the operation of the University Act.

Before I talk in terms of the operation of the University Act, I would like to discuss some features of the Act and in doing so, let me recall some of the developments that have taken place in higher education in this country.

When we joined the university in 1942 we witnessed a significant landmark in higher education in this country, viz. the amalgamation of the University College which was preparing students for the London examinations and the Ceylon Medical College which was founded in 1870, to form the new University of Ceylon.

The Act connected with this was drafted by none other than Sir Ivor Jennings. Since then, as mentioned by the various speakers, the autonomy that existed in the universities has gradually eroded and this process continued in the sixties and in the seventies until there was hardly any autonomy to speak of.

In 1972 another Act was passed i.e. Act No. 1 of 1972. Under this Act many of the bodies and authorities which were in the original Act of Sir Ivor Jennings ceased to exist.

In framing the new Act - Act No. 16 of 1978, there was restoration of many of these bodies and authorities, and I would say the restoration of university autonomy too under Section 10, as mentioned by Prof. Kingsley de Silva.

In Act No. 16 of 1978 the following bodies were re-introduced - the University Court, the University Council, which is the executive body, the Senate and the Academic Committee where all the faculties were represented.

There are some other important features of the new Act which must be mentioned. One is the appointment of the University Grants Commission. For the first time the Act defined clearly in very specific terms the role of the U. G. C. and the responsibilities and powers of the Minister and this is a very important feature as far as the U. G. C. was concerned.

With regard to appointments to the staff of the universities a good part of the responsibility was in the hands of the universities. As Prof. Kingsley de Silva mentioned, in the case of certain categories of non-academic staff, the U. G. C. was responsible for appointments. A Transfer Board was also introduced for the lower grades of non-academic staff. These provisions were introduced at their own request in order to give them certain advantages.

One unusual feature was the creation of an Appeals Board which, during the short period I was a member of the U.G.C., I thought would be very valuable. But after functioning as a Vice Chancellor, I now have second thoughts on this. Members of the Appeal Board are appointed by the Minister and at least one of the members must be an academic.

Another new feature is the Committee of Vice Chancellors and Directors. Finally, for the first time we have a well organised system of Student Assemblies and they are so constituted that they will be truly representative of the student body and no one faculty like the Arts Faculty can dominate by virtue of large numbers. This is an important new feature.

In the operation of the Act there has been a very smooth transition from the old to the new system. Briefly, University Act No. 16 of 1978 was passed by Parliament and certified by the Speaker on the 21st of December 1978. It was not possible to change over immediately as it would have created a vacuum, so the new Act was initially by an order of the Minister of Higher Education gazetted on the 22nd of December and this was the appointed date for certain provisions, i.e. Parts 1,2,3,4, and Part 11 and Section 143 of Part 10 of the Act, to come into operation. Part 1 provides for the establishment of the U.G.C., Part 2 defined the powers, duties and functions of the Grants Commission and Part 3 the powers of the Minister. Part 4 deals with the establishment of the universities, campuses and university colleges, Part 11 was interpretation and Section 143 of Part 10 gave special provisions to the U.G.C pending the appointment of the various bodies.

On 1st January, 1979 the provisions of other parts of the Act came into operation. On the 1st of January was constituted without any difficulty all the universities, the Chancellors and the Vice Chancellors.

Under the new Act Universities are functioning much more effectively and smoothly than in the very recent past. What is the reason for this? My answer to this is simply that the Vice Chancellor who is the principal executive is on the spot whereas under the previous Act we had one Vice-Chancellor situated in a remote place in Senate House and the Universities found it impossible to get things done because of this remoteness. Also it was nearly impossible for one person to handle all the problems of all the campuses.

Once the Vice Chancellors were appointed they proceeded to appoint the Heads of Departments and Deans of Faculties. Then the members of the Senates and Councils were appointed. The changes took place so smoothly that Departments, Faculties, Senates and Councils of all Universities were constituted and met within one month of the new Act coming into operation.

To give some figures for Colombo University, the Council consists of 21 members, 12 of whom are appointed from outside the university from eminent persons, lawyers, businessmen and educationalists. The Court comprises about 40 persons-the Chancellor who presides, the Vice Chancellor, the Council of 21 members, representatives of the academic staff, one from each faculty, two members of the Senate, one person from the administrative staff, one person from the non-administrative staff, two members from the student assembly, three members of Parliament and representatives from social and cultural organisations.

The Councils therefore are comprised of eminent persons and are functioning adequately. Likewise the Court is a fully representative body with a reasonable number of members i.e. about 40 (in the past there were about 100 members) and it is functioning very effectively unlike in the past. Another reason is that each of these bodies i.e. the Senate and the Council have several Committees so that the work is well distributed. The Deans of the Faculties contribute a great deal, I would say even more than the Vice Chancellors, to the smooth functioning of the Faculties.

As a result of the devolving of responsibility on these various bodies and committees there is a revived interest and enthusiasm in the universities. In the past the Board of Governors were solely responsible for university administration and the rest of the university did not know what decisions were taken there and were not involved in the decision-making process.

I will now speak of some of the changes that I have observed from my personal experience as a Vice Chancellor and a member of the Committee of Vice Chancellors. Every university is keen on re-organisation i.e. new courses, new building programmes etc. The attitude of students too has changed. Students to a large extent have begun to have more faith in the governing authorities. We have student counsellors and the student representatives can discuss matters freely with the Vice Chancellor. You realise how inadequate the facilities are and student demands are not as unreasonable as people believe them to be. You all know the difficulties of obtaining accommodation in the city and you will appreciate how expensive and impossible it is for young undergraduates to find suitable accommodation.

I will touch briefly on what has been done in implementing the Act.

1. Academic freedom has been restored to the universities and there is no interference in appointments etc.
2. Building programmes have been worked out and this year sufficient money has been voted for them. In Colombo we have building plans for all the Faculties. This year work commenced on the Science Faculty buildings and this will be followed by buildings for the Faculties of Education, Arts, Law etc.
3. Almost every university has had at least one convocation - some have had more than one. In some places convocations have not been held since 1967. In Colombo the examinations were held in 1979, results were released and the convocation for 1979 already held. We have also held convocations for 1978 and 1977. From 1976 backwards we will merely award degree certificates as convocations are expensive items.

To summarise, the objectives of the University Grants Commission are

1. Planning and co-ordination of university education to conform with national policy.
2. Apportionment of funds to the various higher educational institutions.
3. Maintenance of academic standards in higher education.
4. Regulation of administration of higher educational institutions.

I have no quarrel with most of these functions. Regarding item (4) regulation of administration of higher educational institutions, I know the provision was necessary because of the fact that in Sri Lanka all universities are funded by the government unlike in countries like United Kingdom where private sources of funding are available and fees are levied. Here tuition is free and we have to depend for every cent on the government. Hence we have to agree that for the time being at least the U.G.C has to exercise some control over the administration of these funds. I don't want to go into the propriety of this. Even our Council has been at times upset when the U.G.C. has raised certain questions.

But I am glad to say that the U.G.C has embarked on a programme and once it is accomplished I hope it won't be very long before the U.G.C. will merely dole out the money and allow the university administrations to disburse the funds, guided by the financial code and the administrative code. Thank you.

SESSION 1

Chairman: DR. P. R. JAYEWARDENE

Discussion

Prof. S. R. Kottegoda

On the question of functions of the University Grants Commission mentioned by Prof. Wijesundera the maintenance of academic standards and uniformity in appointments is extremely important. In the past the University of Colombo has been affected due to other campuses setting up various faculties and departments, according to their whims and fancies. Therefore I hope that this function will not be removed from the University Grants Commission.

Prof. H. Crusz

I would like some clarification regarding appointments to the non-academic staff. If we take the Bursar who is an important person in the university administration, is it correct for the University Grants Commission to make this appointment.

Dr. S. Kalpage

According to Section 38 of the University Act, the appointment of a Bursar is done not by the U.G.C. but by the Council of the University on the recommendation of a Selection Committee which consists of members of the university academic staff. But it is true that the first Bursar like the first Vice Chancellor is appointed by the U.G.C.

Prof. H. Crusz

Then all I would like to say is that we will wait for the future. The crux of the problem is that in these matters it is not the Pope at home that we should worry about but the Pope next door. We have nothing to worry about our Pope, the Vice Chancellor, but the Pope in charge of the money feels that since he is appointed by the U. G. C. he is therefore responsible to the U.G.C. and not to the Vice Chancellor. This has sometimes resulted in a crisis of authority which has been detrimental to the smooth running of the university as Prof. Wijesundera said in his talk. Coming to the question of smoothness I would not like to see things running too smoothly in the University. There must be a certain amount of disagreement because if anything runs too smoothly and nicely there is something wrong somewhere in the system. In fact a Professor of Government in the University of Nairobi has said that it is the function of a university to see that things do not run too smoothly.

Prof. W. M. K. Wijetunga

One would expect that if there are ideal conditions any institution can function smoothly. For an institution to function smoothly there should be inbuilt checks and balances in the exercise of power. We had the experience in the 1960s when Sir Nicholas Attygalle was Vice Chancellor that whatever provisions existed in the University Act, the exercise of power was dictatorial and not as desired. Now with the restoration of autonomy to the universities there could come a time when this same experience would be repeated again.

I am not a member of the Senate or the Council but I had a grievance against the Head of the institution. I made representations to the Vice Chancellor but my representations were not tabled either at the Senate or at the Council. I thought the next best course of action was to appeal to the University Grants Commission, which I did. The University Grants Commission replied that it was sorry it had no powers to look into this matter and referred me to the Senate and Council of the University. I again made representations to the Vice Chancellor but once again with the same result. Hence I feel that if amendments to the existing Act are being considered, there should be some provision where certain checks and balances are exercised over the powers of the Vice Chancellor as well as the Senate and the Council.

Mr. Jinadasa Perera

As the Head of the institution concerned in this instance I would like to say with all responsibility that I tabled all the documents before the Council and I believe they have decided on an appropriate course of action.

Demand For University Education

Prof. (Mrs.) S. Jayaweera

My topic, demand for university education, appears to be of crucial importance as the problems created by the ever-increasing demand for higher education have reached almost nightmarish proportions in Sri Lanka today. It is apparent that this question illustrates very clearly the limitations imposed on educational opportunities or the right to education by the resource constraints of a low income country. In Sri Lanka the problem is aggravated by the escalation of demand within a relatively short period of about two decades and the imbalance between economic and social development during these years.

In countries with a record of stable development, increase in the demand for education is a gradual process and numerous mechanisms exist which help to adjust demand and supply without excessive disruption. In Sri Lanka's educational history population growth, social policy and rising expectations have combined to accelerate demand in an economy which underwent little change. I feel, therefore that a brief review of the demand for higher education is necessary for an understanding of the current situation since the factors that influenced these processes are equally relevant and cogent today.

Some of our current problems stem inevitably from the transformation of an elitist-oriented education system to a relatively more mass-based system over a period of about 20 years. The University of Ceylon was created in 1942 as successor to the Medical College begun in 1870 to meet the need for medical manpower under the colonial administration, and the University College which was established in 1921 in response to the demand from the Ceylonese elite for a local superstructure to the education system. Modelled on metropolitan institutions it was geared to select and train local personnel for the administration and the professions. University education was linked with social and economic mobility and had therefore a high premium, but the demand was circumscribed by the limited size of the western-oriented clientele.

The nineteen forties and fifties also saw the acceleration of social demand for education as a result of several developments - universal franchise and the resultant political priority given to mass needs and social welfare including education, pressure for the elimination of cultural and religious inequalities which had been reinforced by the colonial education system and the positive role expected of education in a politically emergent and economically developing society. The concept of education as a fundamental right and as a social service led to the introduction of free primary, secondary and higher education and to the progressive change in the medium of instruction to the national languages.

The First Phase (1942 - 1957)

University education was relatively less affected by these changes during the first phase from 1942-1957. The quantum of applicants depended on the flow from the school system. The Sri Lanka system of an open access span of ten years followed by selective senior secondary education and higher education in the English medium ensured that free secondary and higher education widened only marginally the size of the English educated elite.

Numbers applying for admission to the university increased from 744 in 1945 (before free education) to 1171 in 1946 and 2289 in 1957 - a very slow increase in demand. The university adopted a restrictive admissions policy till 1954¹. The original target was a residential university of a thousand students, 289 students were admitted in 1945, and 438 in 1950, and the intake was limited to around 500 till the mid fifties. Over half the applicants were admitted in the second year but as a result of the emphasis on selectivity, the percentage admitted after 1945 fluctuated around 25 to 30 percent until a more liberal approach was adopted after 1954.¹ University enrolment increased very slowly from 904 in 1942 to 1302 in 1946 and 2950 in 1958, twelve years later. The percentage of students enrolled in arts courses remained around 40% during this period (Table 1).

TABLE 1
Student Enrolment - University of Ceylon (1942-1957)

Year	No. of Applicants	No. Admitted	% Applicants Admitted	% Arts Entrants	Total student enrolment	% Enrolled arts based courses
1942					904	43.8
1943	350	197	56.3	35.5	904	37.2
1944	606	268	44.2	50.7	996	36.7
1945	744	289	38.8	48.4	1065	35.2
1946	1171	372	31.7	54.0	1302	39.7
1947	1384	412	29.7	56.5	1554	41.6
1948	1530	343	22.4	46.4	1612	42.6
1949	1565	377	24.0	58.0	1844	43.8
1950	1443	438	30.3	51.8	2036	38.5
1951	1804	508	28.1	50.9	2210	41.1
1952	2026	520	25.6	51.4	2232	40.6
1953	2132	514	24.1	48.6	2392	39.6
1954	2053	607	29.5	49.4	2434	40.8
1955	2096	658	31.3	44.5	2431	40.8
1956	2137	752	35.1	46.8	2534	40.1
1957	2289	766	33.4	50.9	2718	40.3

Source: Council Reports, University of Ceylon, 1942 - 1957.

The Second Phase (1958 - 1966)

The demand which escalated in the late nineteen fifties and early sixties continues uninterrupted till today, and the two factors which precipitated the pressure from the school system - population growth and the expansion of the senior secondary school population - are also relevant to our present crisis.

This second phase from 1958 to 1966 saw the immediate repercussions of demographic and social pressure on the university. The sharp reduction of the death rate in 1945 - 46 along with a stable birth rate led to rapid increase in population and to an average rate of population growth of 2.8% from 1946 - 53, 2.6% from 1953 - 63 and 2.2% from 1963 - 71 (Table II). Primary and junior secondary enrolment expanded rapidly in the early years, and the proportion of the age group 5-14 years in schools increased from 57.6% to 71.6% in 1953. The impact of free education had been limited by the use of the English language as the medium of instruction in the secondary school. This barrier was removed by the change in the medium of instruction to the national languages, grade by grade from 1953 to 1959. The greatest impact was on the University Entrance classes (Grade 11 and 12) which had hitherto been confined to English medium secondary schools. Schools were upgraded to meet the demand from the increasing numbers who qualified at the G. C. E. (Ordinary Level) and who now had the opportunity of continuing their education as a result of the change in the medium of instruction in Grades 11 and 12 in 1958 and 1959. Enrolment in these grades more than doubled from 1957 to 1959 and increased sixfold by 1964 as senior secondary education was extended in different parts of the island. In 1942, 30 schools had presented candidates for the University Entrance Examination; 319 schools did so by 1960. Candidates appearing for the University Entrance Examination increased from 2289 in 1957 to 11,870 in 1962 and 31,350 appeared for the G.C.E. (Advanced Level) examination held in 1964 (Table III) - when the post 1946 population explosion began to reach the top of the secondary schools.

This accelerated demand for university education posed problems for the university which was buffeted also by the winds of social change. The politico-social environment of the post 1956 era gave added momentum to cultural and social imperatives for the elimination of privileges and inequalities. The issue of educational opportunity was compounded by the fact that the university provided access to prestigious and remunerative employment. The university succumbed to government and social pressure and university reports reflected for the first time the view that excluding qualified candidates was tantamount to social injustice².

TABLE II
Population 1921 - 1971

Year	5 - 14 years	15 - 19 years	20 - 24 years
1921	1,127,905	413,767	441,573
1946	1,617,005	680,614	641,571
1971	3,280,007	1,359,963	1,270,689

Source: Census Reports, Department of Census and Statistics, Colombo.

The result was in the nature of an explosion in university enrolment from 1958 to 1966. To meet the demand from senior secondary schools the state established two new Sinhala medium universities, the Vidyodaya and Vidyalandara Universities at two traditional centres of Buddhist education, each with an enrolment of about 2000 by 1966. The University of Ceylon tried to keep pace with demand. The residential principle was abandoned in 1961, and second Faculties of Medicine and Science at Peradeniya and Arts at Colombo were opened. Economic considerations led to the rejection of tentative proposals to establish 3 new universities at Galle, Jaffna and Kurunegala. Pressure was exerted on the university to accept the 6359 candidates who qualified in 1964 and accommodation improvised at the former race-course for this purpose. The University of Ceylon thus trebled its enrolment from 3684 in 1960 to 10,723 in 1965, and the campus at Colombo had to be administered as a separate university from 1967.

TABLE III
School Enrolment (1952 - 1965)

Year	Enrolment Grades 1-8	Enrolment Grades 9-10	Enrolment Grade 11	Enrolment Grade 12	No. of candidates G.C.E. (O.L.)	No. of candidates UE/G.C.E.Ad.Level
1952	1,415,664	69,233	2,955	2,387	52,992	2,026
1955	1,530,500	114,900	4,500	2,900	60,052	2,096
1957	1,615,117	151,265	4,184	2,762	101,337	2,289
1959	1,933,740	191,760	9,899	6,173	114,504	3,938
1961	2,062,000	232,700	13,400	9,600	154,813	6,547
1963	2,180,552	245,457	21,185	13,494	191,698	11,542
1965	2,215,585	294,253	20,103	26,250	222,522	31,199(A.L.)

Source: Administration Report, Director of Education, Colombo.

Admissions to all universities increased to 3656 in 1966 (except the bulge in 1965) and total university enrolment reached a peak in 1965-14,422 (Table IV). Despite this response of the universities to public demand it is significant that the percentage of applicants who entered the universities had declined to just over 10% in 1964 and 1966.

TABLE IV
Enrolment in Universities (1958-1966)

Year	No. of Applicants	No. Admitted	% Applicants admitted	% Arts Entrants	Total enrolment in Universities	% Enrolled Arts based courses
1958	3,164	886	28.0	49.7	2,950	42.0
1959	3,938	1189	30.0	54.5	4,039	55.0
1960	5,277	1812	34.3	61.0	4,723	57.5
1961	6,544	2423	37.0	63.3	6,206	63.6
1962	11,870	2551	21.4	77.4	7,816	62.9
1963	11,542 ¹	2613	22.6	75.1	9,928	69.5
1964	31,350	3382	10.7	77.9	14,210	75.9
1965	31,199	6359	20.3	84.6	14,422	76.1
1966	31,432	3656	11.6	78.4	14,287	75.8

Source: Senate House, University of Sri Lanka, Colombo.

The newly upgraded Maha Vidyalayas had no provision for science education and as the universities lacked resources for the expansion of science courses the increasing demand for university education was channelled to arts courses. An imbalance was therefore created between arts and science university education by the change in the relative proportion of arts students from 42% in 1958 to 76% in 1965.

The Third Phase (1967 - 1979)

The high population growth rate which contributed to escalating demand has continued to operate after 1966 to the present but declining age-specific participation rates in primary and secondary education helped to stabilize the demand for higher education from 1966 to 1970.. Meanwhile economic constraints caused by factors such as declining revenue and the spectre of graduate unemployment which had surfaced in the mid-sixties led the state, which now controlled university admissions, to "freeze" the annual intake to about 3500 from 1966 to 1977. University enrolment thus declined to 11,548 in 1969 and remained around 12,000 till 1976 (Table V).

It must be noted here that while over-all unemployment was a consequence of the failure of employment opportunities to keep pace with population growth, the problem of unemployed arts graduates which became a crucial issue was caused at least partly by the deliberate policy of overlooking graduates (including education graduates) and recruiting as far as possible the G.C.E. (Ordinary Level) qualified to the teaching profession as a form of cheap labour.

About 90% of aspirants to university education and over 75% of those qualified for admission were rejected annually during these years. The External Agency of the University was established in 1972 to cater to the needs of those who had qualified but could not gain admission to the six campuses (including the Technology campus near Colombo and the new campus in the North).

The situation worsened in the seventies and has assumed crisis proportions today with the increasing disparity between the number of aspirants and those selected. School reforms led to tinkering with the school system at various times leading to "artificial" swelling of the enrolment at Grades 11 and 12 since 1975.

TABLE V
Student Enrolment (1965 - 1979)

Year	Enrolment Grade II	Enrolment Grade 12	No. of candidates G.C.E.(A.L.) Examination	No. of students admitted to Universities	% Applicants admitted	% Arts Entrants	Total enrolment in Universities	% Enrolled in Arts based courses
1965	20,103	26,250	31,199					
1966	20,002	24,701	31,432	3,656	11.7	78.4	14,287	75.8
1970	22,537	23,075	30,973	3,457	10.9	72.4	11,813	71.2
1972	21,625	27,591	31,411	3,338	10.8	67.1	12,074	65.2
1974	30,920	34,678	41,405	3,532	11.2	63.7	12,165	62.7
1975	36,221	41,054	48,432	3,482	8.4	59.7	12,648	60.4
1976	34,024	52,091	62,199	3,794	7.8	63.2	13,153	61.6
1977	34,684	52,252	72,474	3,721	5.9	58.6	14,146	60.6
1978	96,455	81,504	74,577	4,831	6.7	61.0	15,931	63.3
1979	80,047	82,973	101,015 *	5,000	6.4	61.1	16,346	62.8

Source: School Census, Ministry of Education, Colombo
Office, University Grants Commission, Colombo.
*G.C.E. (A.L.) April 1979 and August 1979

The amalgamation of Grades 1 and 2 in 1964 brought two age cohorts into Grade 12 in 1975 - 76 and increased the number of G.C.E. (Advanced Level) candidates to 62,199 and those qualified for admission to over 17,000. In 1976, 40% gained admission at the first attempt, 43.7% at the second and 15.6% at the third³. A large number of repeaters were inevitably added to each year's aspirants since restricted opportunities rather than low ability had deprived many of these students of university education.

The last straw appears to be the combined onslaught of the two groups (GCE and NCGE qualified) competing for university education this year. Access to senior secondary education was liberalized with the NCGE and HNCE reforms. Grade 12 enrolment doubled from 41,000 in 1975 to 81,504 in 1978, causing enormous pressure on accommodation in schools. 101,015 candidates appeared for the two Advanced Level Examinations held in 1979. The intake has been increased to 5000 and two new campuses have been opened but a senior secondary student in Sri Lanka has a one in twenty chance of receiving a university education today and less than 20% of those "qualified" can gain admission.

Some relevant factors

Two factors merit consideration. As the declining birth rate in the seventies will have no impact till the late eighties on the size of the school population seeking university education, and as economic constraints still bedevil the question of university expansion, the disparity between the demand for university education and adequate provision will continue to be an acute problem in the eighties unless alternate strategies are conceived. It has also to be remembered that the pressure would be much greater if the educational system in Sri Lanka did not take the form of a pyramid in which 15% of an age cohort is "left out" at the base, 50% "drop out" on the way and another 20% are "pushed out" at Grade 10. At the apex approximately only 1% of 20 - 24 age group receive a university education - one of the lowest figures in even Third World countries, and one that indicates a high proportion of waste of potential and consequent frustration.

At the same time, despite graduate unemployment the university is yet the chief goal of educational aspirations in Sri Lanka. Demand for the output of universities has declined in some fields as a result of the poor absorptive capacity of the economy but social demand for university education will continue as long as wide wage and salary differentials exist and other economic incentives are not sufficiently attractive.

The second factor is that the Sri Lankan education system has been essentially a one-track system confined largely to formal schools and to the universities. The structure of the colonial economy ensured that vocational education was the weakest sector of the education system and this situation has not changed subsequently. The second level vocational education institutions which should siphon off students from senior secondary education - such as Technical and Agricultural schools - have increased their enrolment from 2500 in 1947 to a mere 15,000 in 1979⁴. At tertiary level an effective pluralistic system has not developed to reduce the demand for university education. Opportunities are minimal - the Law College, a few Polytechnics, the External Agency and SLIDE, which will be the nucleus of the projected Open University, a handful of private concerns offering accountancy courses and Aquinas. The combined effort of different Ministries in non-formal vocational education does not exceed 30,000 places, and these cater largely to school "drop-outs" and Grade 10 school leavers.

In addition to the over-all problem of imbalance between demand and provision I wish to draw attention to two other facets of this issue.

(1) Demand and selection in relation to subject areas

If I may recapitulate

(a) the proportion of arts students tended to be limited to around 40% till the end of the fifties since the University of Ceylon initially absorbed two existing institutions (the Medical and University Colleges) and drew its population from well equipped secondary schools.

(b) this proportion exceeded 70% in the sixties as the extension of secondary school facilities was in the less expensive area of the arts curriculum.

Approximately 16% of over 9000 schools present candidates for the G.C.E. (Advanced Level) examination and only 5% of schools have Advanced Science classes even today. Nevertheless the relatively high incidence of unemployment among arts graduates, the economic value of science-based courses in both local and international labour markets and a deliberate policy in the seventies of increasing the numbers of science students and limiting the numbers of arts students admitted to universities have helped to reduce the proportion of arts students enrolled in secondary schools and universities to about 60%.

These developments have had their negative consequences. The disparity between the proportions of arts students who qualify for admission and those who are eventually selected creates frustration among students who are generally from economically disadvantaged areas and families. In 1975, 77% of those who qualified for admission and only 62% of those who were finally selected were arts students. This could be a continuing problem.

An even more significant feature of the demand for university education is that the overwhelming majority of those who seek admission to science-based courses have as their goal.

(a) medicine, in the case of those who qualify in biological sciences and

(b) engineering, in the case of physical science students.

While economic and social incentives such as highly remunerative employment and substantial dowries undoubtedly motivate the aspirations of parents and students, these predilections engender an unhealthy competitive ethos and have adverse effects on other science-based courses.

A further result of this popular demand for such courses is the tendency to confuse general ability with aptitude for science education. Almost all students who are successful at the Jathika Navodaya Scholarship examination are persuaded by parents and school authorities to select science courses irrespective of their aptitudes and interests. The consequences are that some of them fail to develop their innate potential and are also lost to the universities. In educationally developed areas the rejects are relegated to arts classes and become the pool from which it is intended to select categories of manpower such as administrators, managers, economists, sociologists and other social scientists and linguists, with obvious implications for the quality of life in this country. This, I feel is an unsatisfactory situation to which educators should address themselves.

(2) Regional Imbalances

I hope I am not encroaching on the next topic when I refer to regional imbalances. Educational disparities between regions are the focus of attention today but solutions need to be considered in a wider social context. These disparities are the consequences of uneven socio-economic and educational development over decades of history. Education policies tend to lead to unequal outcomes unless inequalities are also reduced by positive and deliberate social and economic policies. Educational expansion has extended educational opportunity at the senior secondary level but marked regional imbalances yet exist in the provision of science education and in science enrolment in the Advanced Level classes.

TABLE VI
Regional Imbalances in Education
Percentage Distribution - 1978

Educational Districts	Population Distribution	Student Enrolment Gr. I-XII	Student Enrolment Gr. XI-XII Science	Student Enrolment Gr. XI-XII Arts & Commerce	Univ. Admissions to Science-based Courses (1977-78)
1. Col. South	20.9	21.1	28.3	25.6	37.8
2. Homagama					
3. Col. North					
4. Minuwangoda					
5. Kalutara	5.7	5.5	5.4	6.7	4.5
6. Kandy	9.3	7.9	7.8	8.1	6.1
7. Matale	2.5	2.5	1.8	2.1	2.1
8. N ^o Eliya	3.5	2.6	0.9	1.3	1.2
9. Galle	5.7	6.2	6.4	8.3	4.7
10. Matara	4.6	5.1	4.8	6.9	2.5
11. Tangalle	2.7	3.1	1.8	5.1	1.4
12. Jaffna	5.6	6.3	17.5	3.4	20.2
13. Mannar	0.6	0.1	0.6	0.3	1.3
14. Vavuniya	0.8	0.3	0.5	0.4	1.3
15. Batticaloa	2.1	1.9	2.1	0.8	2.3
16. Amparai	2.2	0.9	0.3	0.7	1.1
17. Kalmunai		1.6	1.6	0.4	
18. Trincomalee	1.5	1.7	1.1	0.6	1.7
19. Kurunegala	8.1	4.3	3.9	5.6	2.9
20. Kuliyaipitiya		2.5	1.9	3.1	
21. Nikaweritiya		2.1	0.7	1.6	
22. Chilaw	3.0	3.2	1.9	2.5	1.6
23. Anuradhapura	3.1	3.8	1.0	2.5	1.2
24. Polonnaruwa	1.3	1.6	0.5	0.7	0.6
25. Bandarawela	4.9	3.1	1.8	2.4	1.5
26. Moneragala	1.6	1.6	0.4	0.7	0.6
27. Kegalle	5.2	5.2	4.9	6.9	2.1
28. Ratnapura	5.1	4.6	1.8	3.2	1.4

Source: Ministry of Education School Census and University of Sri Lanka, Senate House.

During the last eight years ad hoc measures have been taken through the use of district quotas to counter this situation. While such quotas do help to equalize opportunities for entry to universities, demand as well as eligibility for university education are largely determined by the quantum of facilities available at secondary level. Indiscriminate and exclusive use of such a mechanism could therefore create handicaps.

For instance, Colombo with its position as the administrative, professional and commercial centre of national life and its superior educational facilities attracts a large number of able and motivated students to its well established schools and its applicants are inevitably disproportionate to its share of the total population. In 1969, 74% entrants to science-based university courses were from schools in the Colombo and Jaffna districts. In 1978 this proportion was 58% chiefly as a result of regulatory admissions policies, thereby creating widespread frustration not merely among urban aspirants but also among rural scholars in Colombo schools. These scholars had been alienated from their own environment presumably to facilitate their educational progress but were now rejected in favour of their "unselected" peers in their former schools.

Moreover the concept of district quotas ignores the existence of disparities within districts and consequently limits access to universities to students from a few relatively well-favoured schools in each district.

In districts such as Kegalle, Matara and Tangalle where educational facilities in arts courses were relatively widely extended the imposition of district quotas has led to the rejection of many who qualified for entry to arts faculties. These students who had availed themselves of these facilities in the absence of alternative courses were thus denied access to universities.

Finally, district quotas are mere palliatives at best and reliance on such a mechanism appears to obscure the real issue in Sri Lanka - adequate educational opportunity at secondary and tertiary levels. In the nineteen forties secondary educational facilities were extended over the island through a network of Central Schools which brought educational opportunity to hitherto disadvantaged areas. Much discussion has centered over the last ten years on inequalities in educational provision particularly at upper secondary level. Few positive efforts have been made, however, to deploy available resources in such a way as to ensure optimum utilization of resources at district level centres to develop districts or to channel the burgeoning secondary school student population to alternative modes of education.

Conclusion

Demand for university education is relative to the availability of educational facilities which is in turn dependent on over-all development. I would emphasize, however, that unlike in the past, this problem has to be viewed not merely as one pertaining to secondary schools and universities alone but also in the total context of the needs of Sri Lankan youth between 15 and 25 years of age and the possible range of the delivery of formal and non-formal educational services at secondary and tertiary level.

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1. Annual Reports of the Council of the University of Ceylon 1946 - 1954.
2. Annual Reports of the Council of the University of Ceylon 1956 - 1965.
3. University Admissions 1976 - A study concerning background characteristics of students selected for admission to the University in 1976. Planning and Programming Division, Ministry of Education, Colombo 1977.
4. In 1978 there were 11,233 students in technical education institutions under the Ministry of Higher Education and 631 students in Agricultural Schools under the Ministry of Agriculture.

Selections For University Education

Prof. C. R. De. Silva

The question as to how students should be selected for undergraduate courses in the Universities is one of the most controversial of the problems we are discussing today. Indeed, it is quite conceivable that we could have a discussion on University administration or University course structure or even on University autonomy without raising voices or raising blood pressure. In the recent past however it has become very difficult to have a calm and objective discussion on selections for University education and I propose to start by looking at why this question has given rise to so much argument, heat and recrimination.

The answer of course is not difficult to find. Training in the university whether as a doctor, engineer, scientist or social scientist completely transforms most people's earning capacities in Sri Lanka. Education has been a key avenue of social mobility in this country during the past century and rewards for university training in Sri Lanka, like in many parts of the third world, are proportionately much greater than in either the industrialised West or in the commercial world. This would not have given rise to problems had we been able to enrol all those who wished to follow university courses in our universities. However as Prof. Swarna Jayaweera has just illustrated to you by a number of statistical tables only an increasingly smaller fraction of the demand for University admissions can be satisfied by the current placements at all the Universities in the island. This is not because the supply of University places has not increased. Indeed if you look at the figures presented by Prof. Jayaweera you will see that University admissions rose eleven fold between 1950 and 1979 during which period the population grew by less than three-fold. The problem was that secondary education and the demand for University education has risen even faster.

This has given rise to increasingly stiffer competition and a questioning of the basis of selection for University education.

Before I go into the current scheme of selection I would like to point out some characteristics of the General Certificate of Education (Advanced Level) Examination - for the performance at this examination is a key factor in the choice of new entrants to the Universities. In the first place I would like to point out to you that though we tend to regard this as one examination it is in a sense a combination of several examinations. Students take up very different combinations of subjects at the G.C.E. (Advanced Level) Examination. For instance, they may take up subjects in any one of the following areas - Biological Sciences, Physical Sciences, Arts or Commerce and the likelihood of their entering the University also differs according to the area of study they have chosen. For example only 5.6% of students seeking to follow bio-science based courses secured admission to Universities in 1978/79 while 8.9% of those seeking to follow physical science based courses were successful. In comparison just 7.1% of those seeking admission to arts, commerce and law courses attained their objective.¹ Since the places available for one type of course at the University is not readily interchangeable with another type such imbalances are bound to exist and even grow unless there is long-range planning.

Secondly the G.C.E. (Advanced Level) Examination is more than one examination in another sense. Students sit for this examination in more than one medium. In 1978 for instance 13,070 students sat for the examination in Tamil, 59,938 in Sinhala and 1438 in English. In the 1960s when I myself was an examiner some attempt was made to maintain uniform standards in all three media by using the English scripts as a control. This has become very difficult with the rise in the number of candidates and the decline of the English medium group. In 1978, 1216 candidates who were examined in the Tamil medium or 9.3% of all Tamil medium candidates entered a University; 3559 out of the Sinhala medium candidates or 5.9% of the total number of Sinhala medium candidates were similarly successful. In the English medium the success rate was even smaller with only 2.5% or just 35 candidates being successful. This variation in the performance may be accounted for by very obvious factors but the very fact that three media are involved tends to further complicate the question of selections for University admissions.

Thirdly I would like to draw attention to the fact that the G.C.E. (Advanced Level) Examination is primarily the terminal test at the Senior Secondary School level. It is intended to see whether those students who have completed twelve years of schooling have attained some level of knowledge and analysis. It is in other words primarily an attainment test. For the want of any other measure the G.C.E. (Advanced Level) Examination has also been adopted as a selection test for University admission. This has led to several problems. One of the most important of these as far as our discussion is concerned arises from the fact that as the examination is an attainment test, a majority of successful candidates obtain marks around the 40%-50% range and thus a great difference in the overall ranking can be created by a difference of a mark or two. This places a great demand on the examiners for precision in marking, a demand which cannot be satisfied especially as the examination has a great quantum of essay-type tests. Thus inevitably questions relating to examiner variability arise.

I brought in these characteristics of the G.C.E. (Advanced Level) Examination primarily to illustrate how complex the problem is and how difficult it is to provide a single formula for admissions which would be just and acceptable to all concerned.

I would now like to turn to the present system of selection. Every year the total placements in the following areas are first determined - (1) Medicine and Dental Surgery (2) Biological Sciences including Agriculture and Veterinary Science (3) Engineering and Applied Sciences (4) Physical Sciences and Architecture (5) Commerce and Management and (6) Arts.

Thirty per cent of these places in each category are filled on the basis of students who obtain the highest aggregate of marks in the four subjects they have sat for at the G.C.E. (Advanced Level) Examination, irrespective of the medium they have sat in. Another 55% are recruited on the basis of districts, the number of places given to each district depending on its total population. Here too the choice for these places is determined by the G.C.E. (Advanced Level) Examination marks. Finally the other 15% of places in each category are filled from twelve so-called educationally backward districts and these places too are filled in the same way.

It has been argued that this system is a good one as the allocation of thirty per cent of the places for open competition enables the best students to get in while the allocation of quotas to districts gives the children in outlying areas who do not have the same facilities as those around Colombo a chance to obtain access to University education.

However I am myself convinced that the disadvantages of the system clearly outweigh the advantages. I do not have time to analyse the issue in all its aspects but would like to refer those interested to several articles published on the subject.³ For the moment I will content myself by pointing out disparities in the performance of candidates who enter the University under this system. In 1979 candidates from Jaffna and Colombo districts who failed to obtain 229 marks, or an average of 55.2% did not secure admission to the Medical and Dental Courses. On the other hand a student from Badulla district who obtained 151 marks or an average of 37.7% and another from Mannar with an aggregate of 165 or average of 41.2% secured admission. In the case of the Engineering Faculty the position was comparable. In Colombo you had to obtain 238 marks or an average of 59.5% to qualify. In Jaffna the cut-off point was even higher - 248 or 62.0%. On the other hand a student from Badulla district entered with an aggregate of 170 or an average of 42.5% while a student from Mannar entered with an aggregate of 162 or an average of 40.5%⁴

These statistics seem to clearly show that students with very good performances in the Colombo and Jaffna districts are being rejected in favour of students with relatively poor performances in other areas. Some of these students who are being excluded are the very same students who were tempted into schools in Colombo and Jaffna by the award of government scholarships. Thus unfortunate children find themselves excluded from the Universities while their less bright friends who remained in the so-called backward regions have an easier access to the University. The scheme of district quotas is also particularly hard on students in less well endowed schools within districts like Colombo and Jaffna for their chances of entering University are further diminished.

Let me now turn to the question as to whether Tamil medium students are discriminated against by this system. As a Sinhalese I approach the issue with considerable caution. There is little doubt that the district quota system does restrict the admission of Tamil students from Jaffna in some fields. However, the 1979 figures of admissions if analysed by media should not give Tamil medium students any great room for concern.

In that year Tamil medium students secured 38.3% of the places in Medicine and Dentistry, 26.0% of the places in Engineering, 41.6% of the places in Biological Sciences including Agriculture and Veterinary Science and 31.2% of the places in Physical Science. This was their best performance in almost a decade and almost comparable to their last performance under open competition in 1979/71.⁵

It is possible for me to merely raise the problem, underline, its complexities and make a diplomatic retreat but I think it is time we adopted a bolder approach and tried to resolve the issue. For the last few years many of us have come to realise that tinkering with the present system of selection is no real answer. An increase in the quota here or there will only create a different kind of injustice. Thus I have, along with others, advocated that we keep the G.C.E. Advanced Level Examination as an achievement test and that a separate aptitude test be administered to all successful at that examination in order to find out those best suited for university education. I am aware that this kind of measure takes time to devise and that its feasibility is being investigated by a competent group of officials and academics from Colombo. It is to be hoped that they will come up with a suitable test which will be easy to correct and couched in such a form that irrespective of the medium in which the candidate was educated, any person would be able to mark the answer scripts.

Notes:

1. Percentages worked out by author from information in *Parliamentary Debates (Hansard)* 9 Nov. 1979, Column 1691 and 6 Sept. 1979, Column 148.
2. *Ibid.* 6 Sept. 1979, Columns 146 - 148.
3. C. R. de Silva - The Politics of University Admissions: A Review of Some Aspects of the Admissions Policy in Sri Lanka 1971 - 1978, *Sri Lanka Journal of Social Sciences* Vol. 2 No. 1 pp. 85 - 123.
C. R. de Silva - Weightage in University Admissions: Standardization and District quotas in Sri Lanka, *Modern Ceylon Studies* Vol. V No. 2 pp. 151 - 178.
4. See Table I
5. Percentages worked by author from information in sources cited in footnote 1.

Table : 1 UNIVERSITY ADMISSIONS 1979 BY DISTRICT & COURSES OF STUDY

District	Medicine and Dental Surgery		Bio. Science including Vet. Science and Agriculture		Engineering and Applied Science		Phy. Science including Architecture		Arts including Law		Commerce including Management Studies	
	1	11	1	11	1	11	1	11	1	11	1	11
1. Kegalle	12	203	18	194	16	215	21	192	91	207	32	218
2. Ratnapura	14	191	15	172	12	180	10	160	79	201	26	206
3. Anuradhapura	05	166	05	144	01	213	05	155	95	186	28	192
4. Polonnaruwa	04	159	02	149	03	191	02	149	38	180	16	189
5. Galle	18	221	19	209	19	231	38	209	112	210	43	224
6. Matara	12	204	15	196	16	217	21	197	93	212	30	227
7. Hambantota	19	163	16	150	10	152	13	153	94	200	28	213
8. Badulla	21	153	16	155	14	170	16	147	135	195	44	192
9. Monaragala	01	171	—	—	01	158	02	141	48	196	15	189
10. Kurunegala	23	202	24	190	22	210	37	179	181	211	47	223
11. Puttalam	07	203	09	185	10	207	15	188	44	196	18	220
12. Matale	08	219	06	203	07	231	12	191	44	206	11	199
13. Nuwara Eliya	—	—	03	159	—	—	03	154	84	163	29	158
14. Kandy	28	214	27	206	26	226	44	201	152	203	47	214
15. Jaffna	74	229	100	214	66	248	124	218	128	213	41	227
16. Mannar	07	165	11	151	03	162	05	174	24	192	05	213
17. Vavuniya	02	153	03	156	02	162	03	162	16	187	08	174
18. Mullaitivu	03	177	02	153	02	186	01	173	09	186	03	190
19. Trincomalee	09	157	11	153	12	163	05	165	47	187	14	167
20. Batticaloa	33	182	57	150	21	165	16	158	81	198	22	198
21. Amparai	06	166	09	148	05	195	10	155	63	182	21	202
22. Kalutara	17	211	20	199	21	222	26	202	131	211	45	223
23. Colombo	79	229	99	213	75	238	111	214	217	206	83	225
24. Gampaha	24	207	28	195	25	218	40	194	152	204	86	227
TOTAL	426	—	515	—	389	—	580	—	2,158	—	742	—

Column I -

Number selected for University Admission

Column II - Minimum mark scored by student
admitted from district.

Source : Hansard 9 November 1979 Columns 1693 - 1694

Discussion

Prof. H. Crusz

An Aptitude Test for science students entering the university has been proposed. I would like to know why the practical examinations were done away with - they were by and large a good way of eliminating language differences. If there were any defects in these practical tests they could have been remedied but the universities were never asked or even ordered (and here we were even prepared to take an order) to improve on the tests and give a wider choice for example. It is true that rural areas have poor facilities but these shortcomings could have been taken into account and overcome in devising the practical tests.

I also think that we have to be careful in talking of raw marks. Personally I do not believe in them and I am in favour of a sound system of standardisation. I agree that the main criterion should be merit.

Prof. K. Arudpragasam

I wish to congratulate Prof. C. R. de Silva for his masterly analysis of the subject of selections for university admission. Whatever we do with university education, certain things cannot change. For a long time to come the numbers that apply will always be much higher than the numbers that can be admitted. Also the disparity in facilities available in different parts of the country will continue for some time. Thirdly we have to assume a normal distribution of intelligence and capability throughout the island. A university system which does not take into consideration all these factors is a failure and will be partial to one group or another.

The construction of Aptitude Tests is a highly skilled operation and should not be taken lightly. They have to be designed very carefully and accepted only if we are absolutely sure that they could be relied upon to provide a better assessment than the present system. We must not permit any half-baked schemes to be foisted on us. I agree that the present G.C.E. Advanced Level examination can only be used as an attainment examination. A special multiple choice paper could be added on to the Advanced Level examination. Admissions could be restricted to those who have got minimum requirements in the other papers and also done well in the special multiple choice paper.

Prof. S. R. Kottegoda

I agree that the G. C.E. Advanced Level is not a good university entrance examination. I would like to ask Prof. Jayaweera to comment on what effect the change from a university-held to a government-held entrance examination has had on the numbers admitted. The myth that the Advanced Level is a qualifying examination started with the Aswa Vidyalaya in 1964. I am horrified that the Biology Syllabus for the Advanced Level in Physiology for example is much higher than the Physiology course taught in the Medical College.

Prof. A. Halpe

There is a need for an Aptitude Test which like the interview held in our time could help in selection of candidates for admission. However there is need for caution in introducing an Aptitude Test; it should not be used merely as a device to eliminate students. The test may in fact reveal that a large number of those who are suitable for admission are being shut out. There must first be agreement on the aims and objectives of university education and the aptitude test must be designed in relation to these objectives.

Prof. K. Dissanaika

The question of using Aptitude Tests for university admissions has been proposed and some opinions regarding this have been expressed here today. I happen to be a member of a Committee which considered this question. I fear to think of the use of an Aptitude Test in place of the present G.C.E. Advanced Level examination without prior testing. The proof of the pudding is in the eating. If we were to use an Aptitude Test for university admission I think the 'test' has to be first tested on the students who have been undergoing undergraduate studies in the university. In other countries where tests are used for admission, data is collected on students' admission test marks and their performance at the University. Statistical procedures are used to correlate these performances and derive equations for selecting students for future admissions. What we have to do then is to devise a test, administer it to the students who have gained admission, collect the marks at the test and marks on their university performances and derive equations on the basis of the relationship between these marks. The research for this kind of activity should go on for a number of years and the test tried out on several groups of university admissions before such a test can be used for actual selections. The difference between the present tests and an Aptitude test is that the Aptitude test is only concerned with basic abilities, rather than specific subject matter on which they are tested. The weakness in the present system is that the examination performance of students, who are able by any standard, could be distorted by the fact that they have to sit for a very competitive examination. Those students who can memorise and cram facts stand a better chance of being selected than those with real abilities who can make a definite contribution to the future of the country.

In the Aptitude tests we are concerned not with the crammed facts but with the general abilities and future potential of a student and by this means we may be able to devise a better method of selection.

Dr. V. Ramakrishnan

I would like to raise the issue - whether we are going to allow the demand for admissions or consideration of the country's needs to determine who is to be admitted. If it is only the market demand the politician will then have his say but if the country's needs are considered then the statesmen will come into the picture. Perhaps a significant new trend in this country might solve the problem somewhat - that is the plight of the fixed income groups. In the past people aspired for university education because it was a sure guarantee of a fixed income. Now the situation has changed and people who are trained in skills such as carpentry and masonry are making incomes comparable or even higher than the university trained fixed income groups, barring of course the medical and legal specialists.

Another point I would raise is whether we have studied the possibility of optimum use of existing institutions before we set up new institutions which require capital expenditure and large resources. Can we not expand the universities of Peradeniya and Colombo, the established universities, and let the other universities specialise in particular fields rather than set up full-fledged universities all over the country, one of the implications of which would perhaps be the reduction in the social status of university dons.

Prof. Sultan Bawa

The Aptitude test must be related to the question of total admissions to the higher educational system. It should not be used as a means of keeping students away from the university. The university system should be placed within the context of the total higher educational system so that there is an overall plan whereby one group go into the university and the others by their own choice to other higher educational institutions. There should be an option for a student who is performing well to transfer from one system to another system of his choice at a later stage. At present once a student gets into a stream he has no choice or opportunity to change. If we can work out an overall system with the possibility of interaction and transfer between the different streams depending on performance the Aptitude test can then perform a useful function. But I am strongly of the view that the Aptitude test should not be used merely to keep students away from the university. The function of the Aptitude test is to test something more than the examination performance of a student so that he gets another classification which will make him productive in an area in which he has the greatest ability.

Mr. Y. Duraiswamy

I will not go into the details of the Aptitude test. I will leave that in the hands of the educational experts. The information given by Prof. Jayaweera and Prof. C. R. de Silva shows that out of 105,000 students seeking admission only 5000 enter the universities. Even if there is an Aptitude test there will still be a large number of students not able to get into the university. My main contention is that quality, should be the main criterion for selection to the university. In the present conditions no doubt we have to take into consideration the fact that certain schools are not well developed and adequate facilities are not available. By all means improve and develop these schools but the main consideration should be that any citizen in any part of the island should be treated alike.

I mention this in particular because standardisation which was practised earlier caused havoc and this was one of the major factors that created a feeling of separation in the North. We must therefore ensure that every citizen in every part of the island has the feeling that he is treated alike. The quota system that has been adopted is a good compromise, but I would suggest a variation in the sense that merit should be given greater weightage and the quota for merit increased from 30% to 55%, leaving 30% for the district quota.

Prof. A. A. Hoover

I want to emphasise one point that has been overlooked by the previous speakers. While everybody talks of the superior teaching facilities in certain areas in Sri Lanka, they forget that it is not the Colleges that are mainly responsible for the performance of the students at the Advanced Level but it is the private tutorials. I notice in Jaffna, where I am now working, that early in the morning and late into the night both boys and girls are attending these tutorials. This is a new feature. Is it because the G.C.E. Advanced Level examinations system has become so stereo typed that the private tutors have mastered the system and can coach the student to pass the exams successfully? There must be some truth in this because when sometime back the Practical examinations were also held, I was told that it was very difficult to pass the Zoology Practicals unless one went to a particular tutorial in Wellawatte. I asked a Professor of Zoology whether this could be true and she smiled and replied that she too went to this particular tutorial. If we have an Aptitude test we will probably find a new type of tutor coming up and new tutorials will be springing up like mushrooms, training students for this new Aptitude test.

Prof. W. M. K. Wijetunge

I wonder how practicable it is to restore Practical tests with the existing constraints - large numbers sitting, the limited facilities available at the universities and the pressure from the Ministry of Higher Education to release results as soon as possible. The second point is the question raised by Prof. C. R. de Silva - i.e. lack of equal opportunities in each district, but even in each district schools are not all of the same grade. Is it not possible to grade all the schools in the island on a reasonable basis and set a minimum mark for admission from each grade of school? This will give an incentive to upgrade schools. Today people say that only schools such as Visakha, Ananda and Royal are being developed by every government at the expense of other schools in the island.

I also have some apprehension and misgivings about the nature of the Aptitude test. At present there is a Grade V Scholarship examination held by the Ministry. There must be a formula used and criteria laid down for selecting these scholars, which could be adapted for designing some form of Aptitude test.

Dr. S. Bandaranayake

I would like to raise the problem of the poor quality of secondary education. A common experience of university teachers is that the standard of basic education of students who enter the university remains at a low level and is perhaps deteriorating every year. People dealing with educational matters both at university and secondary school level should give time for deliberations on this matter. The Centre of gravity is not at the university stage but at the secondary school stage where the pressures really exist.

Prof. Jayaweera summed up admirably the quantitative factors relating to demand for university education, but what about the qualitative factors. One must also pay heed to the post-university situation, employment avenues and other factors when we admit students to courses in the university. Students who are geared to specific professions i.e. follow career oriented courses appear to have a much higher level of commitment. The Architecture Faculty at Moratuwa University conducts an Aptitude test for admission and we find that the students on the whole are more committed. I think Aptitude tests work better in the case of selection to career oriented courses.

Prof. R. Peiris

The Aptitude test for Architecture students was started in 1968. We found that the test revealed that there was a good correlation between performance at the Advanced Level and Ordinary Level examinations. We have also designed our courses so that students entering through the Aptitude test are able to diversify at various stages. I shall elaborate on these tests when I speak later on this afternoon on the professional courses at the University other than Medicine, Law and Engineering viz. Architecture and related fields.

Prof. H. A. de S. Gunasekera

I would take issue with Prof. C. R. de Silva on his statement that students went to the University to increase their earning capacity. The position today is different. The daily wage of a mason is about Rs. 40/- It is now more advantageous to own a tractor than to become an engineer. Demand for university graduates has fallen even from the social point of view.

Prof. Kingsley de Silva mentioned that in the United Kingdom there was an uproar against the infringement of university autonomy when the salaries of the university staff were reviewed by the Prices and Incomes Board. I believe the general consensus here is that whatever happens to university autonomy, university teachers in Sri Lanka will welcome the prospect of a Prices and Incomes Board to review university salaries, as present incomes are totally inadequate. Prof. Kalpage has held forth some promises here and over the S.L.B.C. on salary increases. When I made inquiries I was told that the implications are being worked out by the Treasury. We will volunteer our services for this exercise if necessary and we hope that the implications will be worked out as quickly as possible.

I fully agree with the views expressed by both Prof. C. R. de Silva and Prof. Jayaweera. The statistics given by Prof. C. R. de Silva shows that there is something seriously wrong with the present system of admissions as well as the system of education and training which leads to university admission. Basically we must concede that the only criterion for university admission is merit. The District Quota system is a vicious system which was introduced to get over certain political difficulties. I raised my voice against it at the time it was introduced. It rests on a fundamental misconception that Colombo as a whole is well developed and other areas are undeveloped. It is true that Visakha and Royal, Ananda and Nalanda are developed but what about Maradana Central, Dematagoda Maha Vidyalaya and other poor schools. There is a gross injustice done to the underprivileged residents of Colombo by the quota system. Another injustice is perpetuated through the Navodaya scholarship examination where selected talented students are brought to Colombo and then deprived of university admission as they eventually become dropouts at the Advanced Level due to the quota system. I would therefore appeal to you to abolish the district quota system. It may have been introduced as a palliative to certain very real problems. But these problems must be solved by other means without perpetrating this gross injustice on the poor and underprivileged children who reside in so-called privileged districts like Colombo.

Prof. C. R. de Silva

I think it will be possible in the near future to do away with the District Quota system and I hope it will be done away with. But we have to face the realities of the situation today. Even if it were not possible to do away with it entirely, there are certain changes possible which may reduce its worst effects. One problem with the District Quota system is that it presumes that the entire intelligence of a district is represented by the students sitting the Advanced Level in that district. But a large number may not sit due to economic, social or other reasons e.g. in Nuwara Eliya with a population of 1/2 million less than 50 students sit the Advanced Level each year. But because of the Quota System, places in the Medical and Engineering Faculties are reserved for this small number of students and the minimum mark is set at a very low level.

I would therefore suggest that if district quotas are to be kept it should be on the basis of the number of students sitting the examination and not on the population.

Another possible solution which was mentioned by Prof. Wijetunge was put forward by the University Teachers Association some time ago-viz that all schools should be graded. But this may bring to bear political pressure to downgrade certain schools.

Dr. S. Kalpage

I would like to comment on two points raised by Prof. Gunasekera.

Prof. Gunasekera mentioned that he was against the district quota system when it was introduced and he had protested at that time. He knows that he could not influence the decision although he was a Secretary at that time. But he seems to think that the Secretary to the Ministry of Higher Education could do so. As a Secretary he would have realised that these decisions are not in the hands of the Secretaries but are decisions made by the government as a whole.

The second point is on the question of salaries. He implied that I made certain promises reported over the S.L.B.C. I listened to the S.L.B.C. broadcast - it merely announced that the U.G.C. had recommended certain increases to the government viz. 40% for academic staff and 40 - 60% for non-academic staff. If anyone said that Dr. Kalpage had promised a salary increase that is not correct. I did not promise anything. I only mentioned what the U.G.C. had recommended to the government and I feel it is important where the U.G.C. and the Ministry of Higher Education is concerned that the public is made aware of what is being done. Otherwise university staff will make statements at various forums that the U.G.C. is not doing anything about their salaries.

I will explain what the present position is, as I have nothing to hide in this matter. This government has increased the salaries of university teachers on three occasions - they were given a 10% increase, a Rs. 55/- increase and a substantial increase in salary as a result of the withdrawal of Income Tax. I hope that the record from 1970-1977 was as substantial with regard to university salaries. The situation right now is that having considered all the representations made through the Vice Chancellors the U.G.C. has recommended the increases I mentioned earlier. The Treasury has said that they are not in a position to implement these recommendations for the following reasons. It would be difficult to justify a salary increase if the reason given is the increase in the cost of living and these were in fact the reasons urged before the U.G.C. by the Vice Chancellors. The Treasury has also said that the financial implications of the proposal have to be studied as they had not been worked out by us. We have now worked it out and it is in the region of Rs. 35 million. We will be renegotiating with the Treasury on the 1st of April and, in order to make absolutely certain that the truth is known, not only the U.G.C. but the Vice Chancellors will also be present at the discussions and they will be able to urge before the Minister of Finance and his officials why it is necessary to give the university teachers a further salary increase.

Professional Courses At The University

(MEDICINE)

Dr. S. A. Cabraal

I wish to speak today not as the Director of the Postgraduate Institute of Medicine but as a clinician who has been associated with the teaching of medical students for a considerable number of years. What I say will not reflect the views of the Faculty of Medicine but they are some of my personal impressions during an association of about 35 years with the General Hospital, Colombo. I have been asked to talk about the Professional Courses in Medicine at the University. I would like first to define a professional. He is a person engaged in a vocation or occupation requiring advanced training in some specialised skill involving mental rather than manual work, such as Arts, Science, Engineering, Medicine, Law, Teaching, or Theology, the so-called learned professions. The emphasis on mental rather than manual skills is to distinguish them from professionals engaged in sports activities such as boxing and tennis professionals. They enter the university and like all professionals spend a lot of time, money and effort first in learning the basic theoretical principles of their profession and the basic techniques required in its practice. Then they spend more years acquiring more theoretical knowledge and perfecting their skills in the basic techniques and learning or experimenting with new or more complex techniques. Finally, yet more years in specialising in one branch of their profession till they become both authoritative and innovative in it. The medical profession could be summarised into that statement.

I have tried to picture the course of training that an undergraduate will take in the medical faculty. At the university entrance level he will study basic Physics, Chemistry, Botany and Zoology which has been dealt with earlier. Here, I must deal with one aspect which has come out during the course of discussions with the Dean of the Faculty and the non-clinical professors who meet the students when they first enter the university. We talked this morning about certain percentage of admissions on merit and district quota basis and 15 percent from backward areas. There seems to be a general consensus in the faculty that the 15 per cent admissions from backward areas are poor material and have to be pushed through every examination and ultimately they make poor doctors. In the future the university must do some rethinking in the light of the practical experience of the faculty with these students before formulating further policies of admission to the Faculties of Medicine, Science and Engineering.

Once a medical student enters the faculty he has to sit a series of examinations. From 1870 to 1942 they were called the first professional exam, second professional exam and the Licentiate in Medicine and Surgery. From 1942 they were called 2nd M.B.B.S., 3rd M.B.B.S., etc. The idea in this whole training programme is to make the student sufficiently experienced to practice the profession in any part of the country. For the first two years upto the 2nd M.B.B.S. he studies the basic sciences - anatomy, physiology and biochemistry. Every year the course content in these subjects is reviewed. The material available in these subjects has increased so much that two years may not be sufficient for him to grasp a sufficient knowledge of these three subjects. At the same time we cannot devote any more time to these subjects from the 5 years that is available for his training. The volume of work they have to study is sometimes so much that when we, as clinicians, meet these medical students in the hospitals in the 4th year they seem to have forgotten all the anatomy and physiology they have learnt and a lot of time has to be spent by the clinician recapitulating the anatomy and physiology related to that particular discipline. For instance in neuro-surgery I have to teach them neuro-anatomy and neuro-physiology all over again before I teach them neuro-surgery. Whether there is something wrong with the teaching process or the students are not adaptable to be taught are things which have to be taken into consideration. But the knowledge is so vast that it is not possible to learn everything and the students have to resort to cramming. After the first professional exam when they have finished with anatomy, physiology and biochemistry they go into the second professional exam and study the subjects of pharmacology, microbiology, pathology, community medicine and forensic medicine. In pharmacology they learn about the drugs in use but pharmacology does not stop with the second professional exam it goes on to the other 3 years of medicine

and surgery where they study therapeutics i.e. the use of the drugs in treatment of patients. Pathology is the basis of disease and they require a firm background of pathology, microbiology and pharmacology for the clinical subjects obstetrics, medicine and surgery.

Here again the increase in number of students entering the university has increased the workload on the staff of the university and it is no longer possible to give individual or even group attention to them. Unless the university authorities take note of the fact that staffing in the faculty is inadequate to cope with the 150 students a year that are admitted they will lag behind in teaching these students. Also Faculty members are called upon to do work for the Health Department e.g. the Pathology Department does all the the histo-pathological examinations for the rest of the island for the Health Department. As there are no facilities for histo-pathological examination in most of the provincial and base hospitals all the specimens are sent to Colombo to the Department of Pathology. Similarly the Department of Physiology has to undertake electro-myographic studies, systemetrography etc. So heavy demands are made on the Faculty by the Department of Health.

The students then enter the hospital for study of Medicine, Surgery, Obstetrics and Gynaecology. At any one time during the year about 450-500 students are doing ward work in the hospital. The staff in the hospital has not increased however beyond what it used to be when 40-50 students were admitted at a time. Physical strain on the teaching staff of the hospital, i.e. including professorial units and clinical units, is really heavy. The teaching staff has to be increased because the number of students admitted cannot be reduced as the demand from the Health Department is so vast they are short of 600 doctors at the moment. In fact a suggestion was made by the Ministry of Health to reduce the duration of the course by one year and this was quite rightly resisted by the Dean of the Faculty as even five years is barely sufficient to train a medical student.

When he completes the examination at the end of 5 years he has to serve an Internship of one year before he can be registered as a medical officer by the Ceylon Medical Council. The internship training is also a part of the undergraduate training and they have to do two appointments in medicine and surgery before they can become a full-fledged doctor who is in charge of patients. This internship training is solely done by the Department of Health to suit their needs at the request of the Ceylon Medical Council which then registers them as doctors.

The Dean of the Faculty of Medicine has been agitating for many years that the University should play some part in the internship training also. This is the one year during which the students should be taught patient care. What happens now is that the intern gets involved in the routine work of the hospital and he has no time to learn anything else other than the routine of that particular unit where he is working. As a result, when he finishes his internship, is registered as a doctor and sent out to a peripheral hospital he is lost and does not know what to do. The university should therefore be allowed some role in this one year of internship which is very vital to a doctor's training.

A doctor never ends his studies ; thereafter he can get on to postgraduate studies. Six months after the internship he can take qualifying examinations to enter into the training programmes for any of the 14 disciplines we now have at the Post-graduate Institute of Medicine. At the end of a 2-2½ years training programme he can take the M.D. or M.S. which is a university examination. Before he becomes a Consultant he must have two more years of apprenticeship - one year abroad in an institution which will be arranged for him and one year locally. He then qualifies as a Consultant. If we analyse this training the minimum period of time from the date he enters the university and becomes certified as a Consultant is 12 years and we cannot reduce this any further. So the minimum period to qualify as a doctor is 6 years and as a Consultant is 12 years.

Professional Courses At The University

(LAW)

Prof. T. Nadaraja

Mr. Chairman, I shall begin by tracing very briefly the history of legal education in this country and I shall then discuss some of the major problems that face teachers of Law at the University.

The two chief institutions which teach law are the Sri Lanka Law College and the Faculty of Law of the University of Colombo. The Law College, which was established about 1900, is run by the Council of Legal Education composed of lawyers. The students are charged substantial fees and the teaching staff consists almost entirely of part-time teachers, who are also practitioners. Some subjects are taught only in English, while others are taught only in the swabasha media, Sinhala and Tamil. The Faculty of Law of the University of Colombo began as a Department of Law in the Faculty of Arts in 1947 and became a separate Faculty in 1967. In the Faculty students pay no fees for instruction, there is a core of full-time teachers plus a few part-time practitioners, who are Visiting Lecturers, and every subject is taught in Sinhala, Tamil and English.

From 1950 graduates in Law were given exemption from some of the examinations conducted by the Law College. After 3 years at the University a graduate in Law can join the Law College and take the Final Examination there within a year. The other way by which a person may become an Attorney-at-law is by joining the Law College and passing all three examinations of the College. After passing the Final Examination of the Law College a prospective Attorney (whether a law graduate or not) follows the Practical Training Course at the Law College and after working in the chambers of some senior lawyer is admitted to practice as an Attorney-at-law.

In this historical sketch I should also mention two events which gave rise to some of the problems to which I shall refer later. In 1963 the Government introduced the system of external students being admitted to registration for the examinations leading to the LL.B. degree and in 1972 the Government required the Faculty to introduce Swabasha as media of instruction.

I should mention here that the Law Commission in a recent Interim Report has made certain recommendations that are relevant to the teaching of Law. The initiative for these recommendations came not from the Faculty of Law but from Mr. H. W. Jayewardene, Q.C., who first raised the matter at a meeting of the Council of Legal Education, which is responsible for education at the Law College. He expressed the view that it was wasteful for a small country like Sri Lanka to have two institutions side by side teaching basically the same subjects - at least with regard to two thirds of the courses - and that, as in many other countries - e.g., India, Pakistan, U.S.A., and Europe, every one who wished to join the legal profession should first obtain a degree in Law. The Law Commission considered the matter and suggested a scheme to extend the course of study for the LL.B. degree of the University from 3 to 4 years with intensive courses in English being given in the first year to compensate for the lack of a minimum admission requirement of English and also with the reintroduction of certain subjects like international law and commercial law into the curriculum. Incidentally, these subjects had been dropped when instruction in Sinhala and Tamil was introduced at the University, owing to lack of teaching materials and staff in the swabasha media; as every subject had, as a matter of policy, to be taught in all three languages, even the English medium lectures on these subjects had to be discontinued, much to the regret of the University authorities. After obtaining degrees in Law, those who wished to become Attorneys-at-law would go on to spend one more year studying practical subjects like procedure, conveyancing, trust accounts and book-keeping for the Final Examination of the Law College.

When the recommendations in the Law Commission's Interim Report were reported in the press, there were protests from students of the Law College and some alumni of the College who appear not to have been fully informed of the correct position. The Law Commission had no intention of downgrading the Law College, but on the contrary wished to expand the functions of the College. For example, the Commission proposed introducing, apart from an extended course of practical training, a system of Continuing Legal Education, which is lacking in this country. In modern society so many changes in the law, both statutory as well as judgement are continually taking place that even practitioners and judicial officers should have opportunities of continuing legal education in order to keep in touch with these changes. The Law Commission's recommendations also envisaged courses of instruction at the Law College for persons who needed specialised legal knowledge for their own work without wishing to be full-fledged attorneys-at-law e.g. businessmen, administrators, policemen, customs officers, etc.

I shall now mention some of the major problems faced by the Faculty of Law in its task of teaching Law.

The first problem is that of attracting to our teaching staff and thereafter retaining the services of young law graduates with good honours degrees. Very little attention has been given to improving the salaries of law teachers of the University, unlike in the case of University teachers in the Faculties of Medicine and Engineering whose importance has been recognised by the Government. The salaries of teachers of the Faculty of Law are on a par with those of teachers of the Faculty of Arts and it is very difficult to retain full-time law teachers in our service for more than a few years, because the salaries paid to lawyers in the private sector, in banks and even in Government law departments are much more attractive, quite apart from the financial rewards of private practice. Even part-time Visiting Lecturers in the Faculty of Law are paid only Rs. 21/- per hour, whereas the Law College pays Rs. 50/- per hour, so that the Faculty finds it difficult to get people of good quality to help with even part-time teaching.

The second problem is the lack of an admission requirement of a minimum knowledge of English, which (in the prevailing political climate of the early 1970s when instruction in the swabasha media was introduced) the University, an institution depending largely on funding by the Government, was unable to prescribe. The Law College was more fortunate in this respect, since it was run by an autonomous Council of Legal Education consisting of distinguished lawyers and having its own funds. Most University teachers will agree that, while instruction in the swabasha media is necessary, a knowledge of English is required by University students for the reading of background material. In the field of Law the problem is particularly acute, because the "background material" is very much more extensive by reason of the distinctive nature of the teaching techniques of legal study. Whereas in other subjects it is a question of the student being able to read a comparatively few textbooks in English, in Law the textbooks are only secondary sources of the Law. The primary sources of the Law are the statutes as well as the reported judgements of the courts interpreting statutes, texts and earlier judgements: and this vast array of legal material is unfortunately available for the most part in English only.

There are very few textbooks in swabasha. Where there are none, the lecturer could no doubt prepare cyclostyled material for his class, but every sentence or clause of a sentence in a textbook or a lecture in Law is based on a reported judgement or the sections of some statute. The task of the teacher of students who have little or no knowledge of English is no doubt easy in one sense, because he has merely to lay down a proposition of Law which the students will just accept as correct. On the other hand, the student who knows English well can, and indeed he is expected to, read the particular judgement of the section of the statute which is the authority for the proposition stated; and his reading of the judgement or the statute will enable him not only to contest the teacher's statement but also to obtain a much sounder grasp of the Law. It is impossible to get all the legal judgements of even the highest courts of Sri Lanka translated into Sinhala and Tamil, and, even if they were, the local judgements cite and rely on the judgements and statutes of English, Indian, American and foreign courts and texts.

The ultimate remedy for this situation is the formulation of a comprehensive Code of Sri Lankan Law formulated in the swabasha media, which will provide a new starting point for legal development without the necessity of recourse to the earlier authorities. Until then, those engaged in teaching the Law of Sri Lanka in its present form have no alternative to insisting (as the Law College does) on a reasonable knowledge of English before admission to the Faculty.

The third problem is that created by the ever-increasing number of external students registering for degrees in Law. Internal students enter the University on the basis of an aggregate of marks obtained at a highly competitive entrance examination and are for the most part young full-time students who attend lectures and tutorial classes and have access to the University Library. On the other hand, external students have not been admitted after a competitive examination and they are mostly middle-aged people who, being employed in earning their living and having to cope with the many problems of day-to-day living, have little time for study or access to law libraries. They are often charged big fees by private tutories which profess to cover the extensive syllabuses in weekend courses of instruction.

It is very difficult for a small Faculty like ours to cater to both internal and external students with the help of a few examiners from outside over whom the University has no control. The Dean of the Faculty is often unable to get these outside examiners to mark the answer scripts on time; he has to keep on begging them to return the scripts while the external students keep protesting to the University authorities and to politicians and in the press about the delays in releasing the results of the examinations. Nor can the University authorities compel even our full-time staff to take up the marking of the scripts of external candidates, as the full-time staff has to bear the burden of preparing lectures and conducting tutorial classes for their own internal students as well as doing their own research work, which is necessary not only for teaching but also for their promotions in the University's service.

The Faculty of Law suggests that the Open University or some similar body should arrange regular daily courses of instruction after office hours for external candidates for degrees in Law, provide them with adequate library facilities and access to at least the New Law Reports and local statutes, because the present facilities for study by external students are quite inadequate and the cause of much bitterness and frustration.

Professional Courses At The University

(ENGINEERING)

Prof. C. Patuwathavithane

Mr. Chairman, Ladies and Gentlemen, my topic today is Professional courses in Engineering but if at the end of my brief talk I leave you more confused than now I hope you will pardon me. The point was raised by Prof. Halpe whether we are giving an education in our universities in keeping with the needs of the country. In professional courses, Engineering being one of them, this comment is very applicable. I think what we are doing at Moratuwa University is very relevant to the country's needs.

To put this across let me give you a brief history of the need for engineers in this country. The early activities in engineering centred around the construction of roads and small bridges for which very qualified engineers were not required. At that time the country did not have an establishment for the systematic training of engineers. Then, with the introduction of railways, electrification and telecommunications the need for more qualified engineers was felt by the country. It was at this time, arising out of a recommendation made by the Executive Committee of Education of the State Council, that the necessity to introduce courses for the training of engineers was recognised to be of importance. In 1935 the youth of the country were given an opportunity to enter the Technical College and were given regular courses of training to sit the engineering degree examinations of the London University. It was in 1953 that the Faculty of Engineering was started in the University of Ceylon in Colombo and later shifted to Peradeniya. In 1953 when the Faculty of Engineering was started, the teaching programmes for training engineers to sit London degree examinations at the technical college were abandoned.

At the same time in 1960 the Institute of Technology at Katubedde was started and the middle level training programmes were taken over by Katubedde. In 1966, a College of Technology was started at Katubedde to train more engineers to meet the country's needs. Since at that time the College of Technology was not of university status it could not award degrees and the training programme was called the Diploma in Technology.

When the Faculty of Engineering was shifted to Peradeniya a four year degree course was started in Peradeniya. The new course at Katubedde College of Technology was a five year course comprising 2 years institutional training plus the third year full time in industry followed by a further 2 years institutional training. This 5 years training programme was able to produce an engineer more useful to society. It was at that time that certain Permanent Secretaries declared that Peradeniya should also follow the five year pattern and produce an engineer who comes out of the university with both knowledge skills and practical skills.

In 1972, Katubedde became a campus of the one university of Sri Lanka. Then due to student agitation we had to give up the 5 years course but while condensing the course to about 4 years and few months we retained the component of 9 months continuous practical training although term times sometimes got a little disarranged. We used to catch up the lost time by releasing the results earlier than Peradeniya.

This raises the question whether an engineering graduate from the University should have a practical training. The tendency now is not only knowledge and practical skills but also a training in attitudes. In fact two weeks ago at a seminar we discussed the possibility of teaching human rights to students. I had difficulty in convincing some of the participants that we at Katubedde do teach this aspect as duties of the engineers in safeguarding the human rights of others. This is particularly important in areas like Industrial Management, Environmental Studies and so on.

The question arises as to what steps are been taken to meet the demand for engineers in the country. The development schemes of the present government and the accelerated programmes require a large number of technical personnel at all levels. The government has felt the acute need for more engineers and requested us to double the intake to the Faculty of Engineering. But this will create certain problems due to lack of qualified staff,

With time, how did the programme of training started at Katubedde develop to meet the changing needs of the country? We had to change the emphasis on certain subject areas and introduce new courses. At present the traditional Department of Civil Engineering is thinking of splitting into three different departments viz. Department of Building and Structural Engineering, Department of Water and Environmental Engineering and Department of Transportation and Geotechnical Engineering. Environment, Transportation and Coastal Preservation are subject areas which are important to the country now, and hence we have proposed the creation of three new departments. Very recently we had a discussion in the Faculty and Senate on reducing the first year syllabus in subject areas like Physics and Chemistry - to the extent even of dropping them because we feel that the raw-material we get i.e. the students who come from the Advanced Level have sufficient background knowledge in these subjects. Of course, we have no hand in the selection of students but we have to do our best with the material sent to the Faculty. We have also received a directive from the Secretary, Ministry of Higher Education to give our views on the new system of Advanced Level examination, the International Baccalaureate system where there is a different emphasis of subject areas, but we find that this is not compatible with our thinking on these matters. So how do we cope with this situation? These are some of the problems we face as people responsible for engineering education at Katubedde.

Before I conclude I should mention the recent trend of events in the education and training of engineers-how the emphasis or focus has shifted. In the early days when society did not need high level qualified engineers we did not have even a scheme to train them. Then there was a stage when we prepared them for London University Engineering degrees. Then came the University Faculty of Engineering and the emphasis on undergraduate training. Now the emphasis is shifting to specialisation through postgraduate training. Of course we must also have the undergraduate training in even larger numbers to meet the demand, but the focus should be on post-graduate training if we are to establish proper liaison with the industrial needs of the country. We cannot do a proper job of educating engineers if we do not think in terms of industry into which these engineers will eventually be absorbed.

Industry and university cannot come into direct contact at undergraduate level because there are the specific traditional courses of civil, mechanical, electrical, electronic and telecommunication engineering at that level. But at postgraduate level we can have close liaison with industry.

Before I conclude I must read two or three questions asked from us in a letter received from WFEO/FMO Committee on education and training of engineers. (1). What are the modifications required in the existing pattern of postgraduate education and research to make it more relevant and purposeful? (2). How to involve industry in the organisation and conduct of postgraduate education and research? (3). How to achieve close co-ordination of postgraduate training and research with major developmental and engineering schemes of the country?

Thank you.

Professional Courses In The Universities

(ARCHITECTURE AND TOWN & COUNTRY PLANNING)

Prof. Rupert Peiris

Mr. Chairman and friends, the University of Moratuwa conducts courses in Environmental studies that lead to several professional areas such as Engineering, Architecture and Town and Country Planning. Prof. Patuwathavitane has already spoken to you about the professional Engineering courses. My task is to speak about the professional courses leading to Architecture and Town & Country Planning.

Briefly the Architecture Course started at Technical College level and later was established at the University of Colombo in 1968 under the Faculty of Natural Science. Subsequently with the reorganisation of the universities, this course was transferred to the 'Katubedde Campus', as it was then called. When the course was at the University of Colombo it was only an undergraduate course leading to a B.Sc. in Built Environment. The facility of sitting Part I examination conducted by the Royal Institute of British Architects was also available to students. After shifting to the Moratuwa University, it was possible to upgrade the course to Postgraduate level leading upto a M.Sc. (Architecture) and Final or Part II of the RIBA Examination. The Part III or the Professional examination is conducted by the Sri Lanka Institute of Architecture which in turn is recognised by the RIBA.

Therefore, it is now possible for the local M.Sc. (Architecture) students to obtain as well the final and professional qualifications of the Royal Institute of British Architects, without having to go abroad to qualify in Architecture at an internationally recognised level.

The Department of Architecture has future plans to include courses in Landscape and Interior Architecture, Urban Design and Historic Preservation of Buildings at Postgraduate level and courses leading to Ph.D. by research.

The Department of Town & Country Planning offers two Postgraduate courses. One leads to a M.Sc. in Town & Country Planning and the other to a Postgraduate Diploma in Urban Development. The M.Sc. course is of 2 years duration and could be gained by either full-time instruction or by full-time or part-time research. The Department has plans to include a postgraduate Diploma in Rural Development, a Ph.D. programme and short term Certificate Course.

Let me now deal with the planning and design of these postgraduate courses. In planning postgraduate courses and research in Environmental Studies, we must consider the professions, industries and sciences concerned with the environment and also how they interact.

The diagram on page 45 shows the spheres of interest of professions, industries and sciences concerned with the Built Environment in relation to one another. It is seen that these sciences, professions and industries are responsible for studying the environment, developing new methods for achieving society's goals, designing buildings, towns, cities and finally for carrying through these plans to execution. There are two scales shown in the diagram. The vertical scale shows the sequence from basic research through applied research and development, to design followed by production and execution. The horizontal scale shows the elements which have to be studied, designed and made. These vary in size as indicated in the diagram from simple building materials, such as bricks, through components and systems to single buildings, groups of buildings, towns, to the great metropolis and the region.

Using the horizontal and vertical scales it is possible to place the spheres of activity of the various sciences, professions and industries in relation to one another.

The diagram suggests a number of important relationships. First, note the symmetrical position which the construction industry occupies in relation to architecture. It occupies almost exactly the same place on the horizontal scale and is only moderately displaced on the vertical scale. If we compare the position of the architect with that of the structural and mechanical engineers an interesting contrast is apparent. The architect's sphere of activity is heavily concentrated around design with only moderate extensions upwards towards research and downwards towards the execution of the building project, while the engineers are more closely involved with research and with execution. There is a considerable overlap of activity and interest between the engineering profession and scientists, particularly physicists whose theoretical work provides the basis for new developments. Again engineers participate to a greater extent in construction work.

The architect's nearest neighbours on the other side, the various professions concerned with planning-occupy an unsymmetrical position above the horizontal axis. They are involved in research and have a substantial overlap with the social scientists, particularly with geographers, economists and sociologists. They touch, though rather lightly, on the problems of design.

The next question is: how are these relations likely to change? Looking again at the diagram, two questions arise. First, will there be any substantial shifts in the areas covered by the various professions and sciences concerned? Second, if there are such shifts, will this tend to change the nature of the education - in particular, will the education of each tend to become more specialized or more similar?

Let us first consider what shifts there may be in areas of interest and action. There is likely to be a shift of interest away from the design problems of the single buildings towards those of groups of buildings and towns. Thus the area of overlap between architects and planners seems to increase. On the other side the question we have to ask is how far will the building industry shift from its present pattern towards one of prefabrication and system building? In so far as it moves in this direction the overlap between architect and engineer will increase. So far we have been considering shifts on the horizontal scale. If we now consider the vertical scale it is apparent that the architectural profession has to step up in its relationship with science and research. It must be deliberately expanded upwards on the scale towards research.

Finally the architect will certainly have to take a bigger part in the actual construction of buildings through the building industry. The result of these various movements would be a general expansion of the circle of interest of the various professions and sciences thereby increasing the means of overlap.

Thus we have to look forward to a future in which the boundaries between the professions as now defined will become blurred and in which much, perhaps most, professional work will be in the areas of overlap. This work will need to be carried on either by teams of people from different professions and disciplines working in collaboration or by people whose education and experience cover more than one discipline.

How should the Universities and professions prepare to meet these new patterns of work? The answer of course is obvious. We must move towards closer integration in our education and produce persons who can work in teams and will have a capacity for adaptation, growth and initiative to deal with new ideas and developments in the context of the changing environment.

Flexibility of courses to meet the changing needs could be achieved by:

- (a) Offering a basic first degree and subsequent postgraduate courses leading to M.Sc. degrees in a variety of disciplines which will enable them to obtain relevant professional qualifications. A student can also enter into research work after either the first or second degree depending upon the career he has mapped out for himself.
- (b) Fostering joint education courses and joint research activities while maintaining separate educational streams leading to various academic and professional qualifications.
- (c) Allowing greater flexibility in course options creating a rich variety of course patterns. This encourages the student to select subjects according to his own interest and aptitude; so that students no longer follow only one set course, but are allowed to diversify.
- (d) Running sandwich courses where professional training and the schooling are in alternative slabs.

Diagram 2 on page 44 shows a course structure designed on above lines for the Faculty of the Environment.

FIGURE 1



**THE SPHERES OF INTEREST
OF PROFESSIONS, INDUSTRIES
AND SCIENCES CONCERNED
WITH THE BUILT-ENVIRONMENT.
IN RELATION TO ONE-ANOTHER.**

COURSE STRUCTURE FACULTY OF ARCHITECTURE BUILDING & PLANNING.

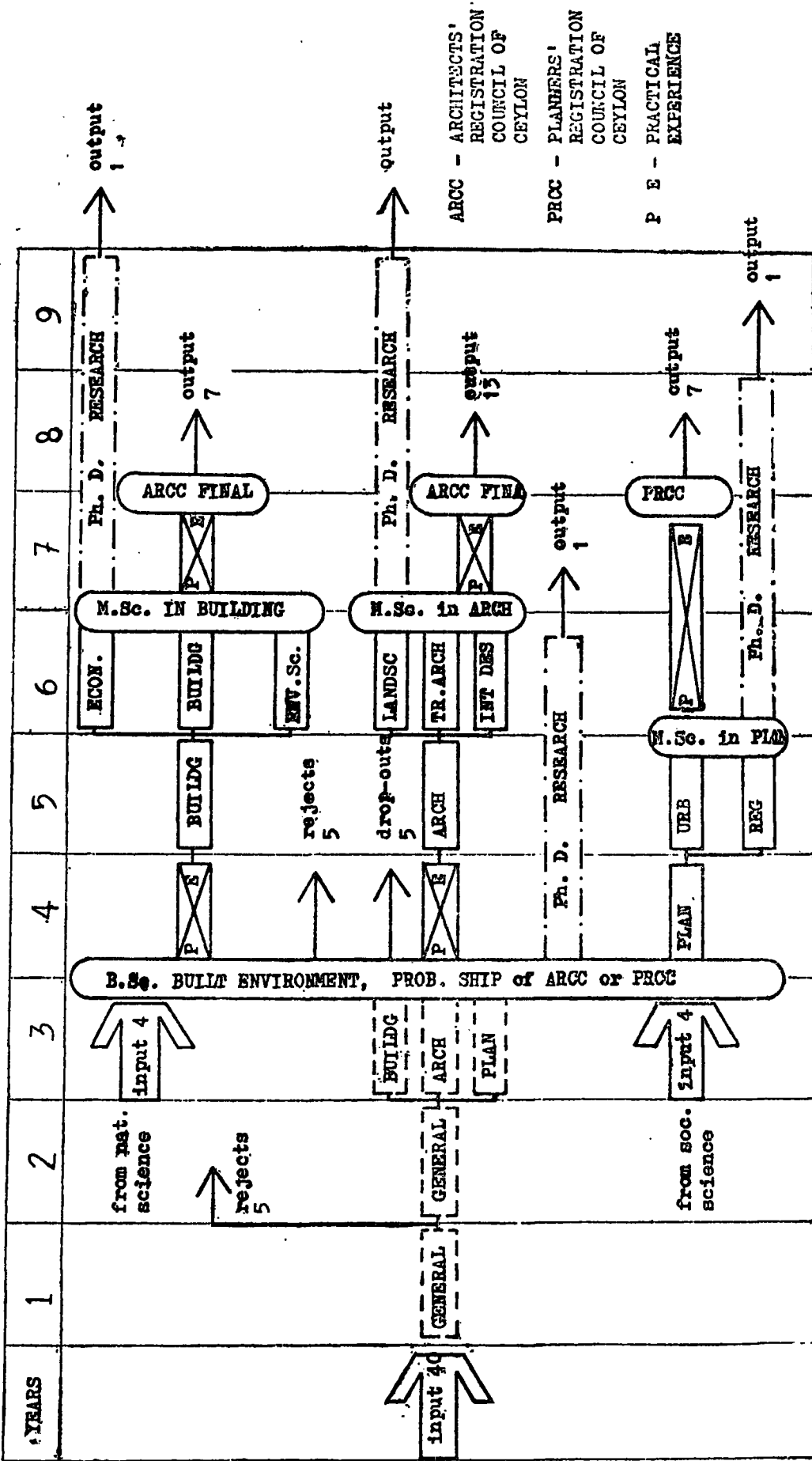


FIGURE 2

Sciences In The University

Prof. H. Cruz

The subject assigned to me seems to call for an exposition of principles rather than particularities. In any case there will not be time enough for any exhaustive treatment. The deficiencies could probably be made good at discussion time.

It is obvious that I can speak only from my own experience, with all its limitations and my 37 years of university service devoted to teaching and research in zoology. Since, however, I am going to come down more on the side of a fundamental, liberal, science education at the university, even if it be the university of a developing country, it might help to know that before I took to my speciality, I had an unsuccessful shy at the former Ceylon University College's entrance scholarship examination in Classics, and even before that, was unsuccessfully pressurised by some remarkable teachers of mathematics in my old school to do mathematics instead at the University College. That may account for my liberal tendencies which however were later counter-balanced by my graduate and postgraduate studies in zoology and parasitology both at the University College, Colombo, and at the London School of Hygiene & Tropical Medicine, where my work took me also to relevant departments at Oxford and Cambridge. The result of all this is that my work has become of interest, however slight, not only to zoology, but also to medicine, veterinary science, animal husbandry, and in recent years even to environmental science. I have said all this merely to remind you that I am not so pure a scientist after all, although I take purity for an ideal.

With that preamble and apologising for the autobiographical intrusion, I take another look at Science in the University, especially since in 1974 I had already outlined my position as regards the aims and ideals of university education.¹

Owing to the short time at my disposal, I shall deal only with what I consider to be basic matters relating to concepts and attitudes in university science, and leave out such matters as (a) the basic subject-wise constitution of a science faculty (see Appendix 1 for list of science faculties and their departments in Sri Lanka); (b) facilities for interdisciplinary studies, and such studies as the history and philosophy of science; (c) regionalisation of special studies and of diploma and certificate courses; (d) matching with university science departments and institutes, abroad and locally; and (e) the critical minimum of teaching and technical staff, and of laboratories, equipment, books, journals, research grants etc. I have a hunch that if we could convince the relevant authorities about the necessity and worthwhileness of our aims and objects, they would strive to give us these other things, or at least would suffer pangs of conscience for not being able to do so, for whatever reason.

What is basic to science teaching at the university, assuming that generally it is from here that science graduates take off to the country and world at large, to continue thinking and practising science in various places of employment? What is it that science faculty members should be doing by way of research and teaching, and what should they impart to students so as to give them the proper foundation upon which their future success in scientific activities would largely depend?

My contention is that students must be taught what science is all about, whatever their particular scientific discipline, and must be trained to adopt a scientific attitude of mind. This, I am also sure, is best done not by having foundation courses and what not, but by the continuous example, precept and influence, of the teachers themselves. I can vividly remember my teacher at the Ceylon University College, Dr. David Burt, telling some students who wanted special lectures on evolution, towards the end of their first year, that the subject of evolution had been taught by him right through the year, that it was the thread running through the entire course, and that it had been dinned into their ears all the time.

This is not the place to go into the nature of science and of the scientific attitude, both of which have been the subject of profound insights in recent years, from such philosophers of science as Karl Popper and Thomas Kuhn^{2,3}. Suffice it to say that if a science student leaves the university without having some knowledge of the earlier and current views of how science works and progresses, and without having acquired a genuine, intelligent 'feel' about what a scientific 'hunch' or 'imaginative leap' is, and how it originates, and if he does not know that a statement claiming to be a scientific statement must be falsifiable; that a scientific hypothesis is tentative, and lasts only so long as it fits the facts; and that central to the scientific attitude is critical assessment, the itch to falsify, as well as openness to criticism; and unless the student can illustrate these things by way of examples gathered during his theoretical and practical studies, he would not have received an adequate science education. To this we must add the drilling in methods and other disciplines that go with the actual doing of science in specific situations, and the way conclusions are validly drawn by using them. Last, but not least, by the time the student leaves the university he must be so oriented as to stand by any scientific conclusions he may come to in the course of his work in later years until they are shown to be false by himself or his peers. This attitude must be so ingrained in him that he carries it with him wherever he works later, be it in a university, a government department, an industrial firm, or elsewhere. There should be no yielding to pressures to manipulate facts so as to fit his employer's hypotheses. There must be courage and honesty in thinking up uncomfortable hypotheses and pursuing them if they have passed the appropriate attempts at falsification. Dr. Dillon Ripley the eminent ornithologist and Secretary of the Smithsonian Institution, has illustrated this vividly in relation to ecologists. His statement is worth quoting.

"Ecology is one of the most tedious of sciences from the point of view of planners and administrators or government bureau heads concerned with budgets. Nothing ever can be proven in a hurry..... Ecologists cannot come up with quick solutions. They may thus earn the displeasure or disbelief of their sources of support. It will probably still be years before this aspect of environmental understanding is fully comprehended. Meanwhile the environmental-impact firms, anxious for a quick buck or a quick "fix" often do a considerable disservice to the science of ecology by producing answers to the search for rationales in doing things, development especially, with a farrago of half-truths".⁴

One of our tasks as university science teachers is to steel our future scientists in good time against such pressures which they will inevitably experience in later years.

All these things could be best exemplified, in the first instance, in the students' theoretical, and laboratory and field courses, by means of project work, and by constant reference to the research activities and findings of the faculty members themselves. That is why constant and continuous research by university teachers is so fundamental to university teaching of the sciences. Teachers must not shy away from discussing their own researches, through any false sense of modesty, or through any fear that their work has been or will be criticised for not fulfilling scientific norms and criteria. Adverse criticism, as much as the confirmation and acceptance of research findings, should form an essential part of the fare given to students. It makes teaching vital and stimulating. It fosters the scientific spirit.

For years on end we have been hearing the refrain that university science teaching and research should be relevant, job-oriented, development-oriented, and so on. So strong has this campaign been that even matters like the language or languages to teach science in have been sacrificed to what could be described as national ends, rather than national needs.

This attitude has contributed its share to the erosion of scientists, if not of science itself, in the university. One example, which can be given without embarrassment, is the need to resort to terminological inexactitudes (to use a Churchillian phrase) when applying for research and other grants. This in itself may not be so harmful, if a greater good can be achieved by it. But there is a more fundamental erosion, namely that of taking for granted that in an underdeveloped or developing country like ours the primary concern should be to further economic development. University science cannot be 'pure science', and university scientists cannot be allowed to be 'pure scientists', 'theoretical scientists', 'fundamental scientists', whom Bertolt Brecht has called "a race of inventive dwarfs who can be hired for anything"⁵.

It took a Professor of Government in the University of Nairobi, and not a scientist in the usual sense of the word, to look at the problem with less emotion and to present a very balanced case for science in the University to be committed, rather than to be servile, to social goals. Colin Leys invites the University

itself, and university science in particular, to see development "not as a line of march but as a problem, a problem precisely of the kind the universities were invented to study"⁶. In this way the development ball has been put in the court of the university itself. And that is a good thing. By doing so, we can treat it as yet another problem, have 'hunches' or 'imaginative leaps' about it, try and falsify these hypotheses, and propose to the government and the people those that pass the test.

I do not think I am wrong in saying however that this has been going on, though imperceptibly, even in Sri Lanka. But do governments listen? I would let the Trade and Shipping Minister answer that question. He has just been reported as having invented a proverb at a symposium on the new "Inventors' Incentives Act", namely that "there's no other country in the world where prophets are less heard than in Sri Lanka". And the Hon. Minister made a clarion call for "believing in ourselves". for "getting away from the syndrome of servility", for the "spirit of creativity pervading all levels of Sri Lankan society, with inculcation beginning in the schools"⁷.

This brings me to the question of creativity, which ties up with freedom in science and with this so-called "pure science".

It was no small surprise to me, knowing the ways and whims of governments, when His Excellency the President not only wanted the establishment of an Institute of Fundamental Studies, but also ordered to be published for that purpose, as a Sessional Paper, the long-shelved report of the Mailvaganam Committee on "The Establishment in Ceylon of an Institute of Theoretical Studies"⁸. I foresee that this timely action will have far-reaching consequences for the good of sciences in the university. I can do no better than recall my reaction to it, which I expressed in a letter of reply to the relevant authority. It would form an apt conclusion to this presentation.

I stated that although the Sessional Paper dealt specially with theoretical studies (Physics and Mathematics) I found it to be a charter of liberty for conducting the scientific enterprise in the correct perspective even in fields such as Biology, and that such a statement was long overdue, especially since those of us who did dare to emphasize the importance of training in basic and fundamental scientific studies had been ignored for too long. I quoted the following from a document dated 31 December 1969 submitted to our Faculty of Science on the programme of work and staffing requirements in my own department of Zoology.

"Happily, however, owing to the foresight of my predecessors, the special fields in which my academic colleagues and I have been trained are linked with economic zoology, and these links could be further developed and consolidated in the future.

It is well, however, to keep in mind two important facts, namely 1) we are basically not a department for teaching and researching in the applied sciences; we have another role, namely the building of a sound scientific base. 2) 'the only way to put each scientist to the task to which he will bring the ability best suited for it, is to let all scientists freely search and attack the task in which they see the greatest chance for success. We must command them to pursue the lines of inquiry in which they are most interested. Such a command is the first condition of freedom in science; it co-ordinates to the highest possible effect all the acts of originality of individual scientists' (M. Polanyi)⁹.

Even more emphatic was the following paragraph, which I quoted from my preface to the "Proceedings of the Third Biennial Conference on School Biology Education", Manila, December 1970:-

"In this connection we must be warned that as long as we merely apply scientific knowledge obtained from other countries, we would still continue to remain in the colonial era, at least as far as science is concerned. There is a distinct need, therefore, for us to foster and encourage creativity in the scientific enterprise, in our countries, and for that it is necessary that the true spirit and technique of scientific inquiry be inculcated at the earliest possible grade level, without overdoing the emphasis on such aspects as 'relevancy' and 'applied biology'."¹⁰.

I continued in my letter to state that I had closely followed the arguments given in Chapter VI of the Mailvaganam Committee Report, regarding the need for a new research institute in addition to others in Sri Lanka, including the university departments; that I was nearly convinced by the arguments put forward to meet the criticisms and fears expressed by some (especially the fear of further impoverishing the universities) and by the assurance that the Institute "will serve to enrich the universities and stimulate interest in research at these institutions, rather than impoverish them", but that I was not convinced, in view of what was stated in Section 6 of Chapter VI, and in Section 8, that the tendency would not continue, if not increase in intensity, to let the universities get bogged down in undergraduate teaching, which would be of low quality if their research efforts and output were not supported and increased by all possible means; that the way financial priorities were set when it was a question of universities vis-à-vis the Institute of Theoretical Studies would surely determine the fate of science in the universities; and that it was worth remembering that the ultimate fate of all scientific endeavour in this country would be determined by what we put in and did at the sources, such as the schools and universities.

Allow me to end this brief presentation by expressing the hope of seeing a grander scientific elite in this country, the vital step in the creation of such an elite being taken at the university. Dillon Ripley once again has expressed, more pointedly than I could ever hope to do, the reason for fostering such an elitism, in the following words:-

"We extol elitists, i.e. 'the cream of the crop' in business, in sports, or the entertainment world, or even politicians, especially if they become statesmen. Somehow intellectuals get shafted with the slogan 'elitist' while golf champions escape. This is an abnegation in our rationale of culture, akin to the present problems with education testing. It would be a fore-taste of mediocrity".¹¹

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APPENDIX I**Science Faculties and their Departments in Sri Lanka****University of Colombo (1942)****Faculty of Natural Sciences**

Botany
Chemistry
Mathematics
Physics
Zoology

University of Peradeniya (1942)**Faculty of Science**

Botany
Chemistry
Geology
Mathematics
Physics
Zoology

University of Sri Jayawardenapura (1959)**Faculty of Applied Science**

Biological Sciences
Chemistry
Mathematics
Physics

University of Kelaniya (1959)**Faculty of Science**

Botany
Chemistry
Mathematics
Physics
Zoology
Industrial Management

University of Moratuwa (1972)**Faculty of Physical and Applied Science**

Chemical Engineering & Fuel Science
Material Science
Mathematics
Mining & Mineral Processing

University of Jaffna (1974)

Faculty of Science

Botany
Chemistry
Mathematics & Statistics
Physics
Zoology

Ruhuna University College (1979)

Faculty of Science

Botany
Chemistry
Mathematics
Physics
Zoology

Social Sciences In The University

Dr. S. Bandaranayake

Mr. Chairman, friends, I am very glad that Prof. Crusz has spoken as he did because with such a professional presentation of statistics this morning and a statistical presentation of the professions earlier this afternoon. I was getting somewhat apprehensive that my paper would seem far too general and wide ranging. I am greatly relieved, therefore, that Prof. Crusz anticipated me in a return to principles and issues.

Since I am dealing with the broad and amorphous subject, 'social sciences in the university' I would like to begin with a conception or definition of social science. I will go on to outline those social sciences that are actually available in our university structure and, finally, I will raise some of the problems that the social sciences face in our present context.

Any assessment of the state of the social sciences in the universities depends on our conception or definition of social science. Although we may trace the roots of its component fields of study back into the history of civilisation itself, the idea of a science of society is a purely modern phenomenon arising only in the nineteenth century. Deeply influenced by the natural sciences, social science consists essentially in the application of scientific method to the realm of human society. Social science includes, therefore, the systematic observation and documentation of social phenomena, its measurement, quantification, analysis and classification, the development of theoretical frameworks and of methodologies appropriate to the various disciplines and the formulation of laws relating to social processes. Unlike with the natural sciences, however, the use of experimentation by which I mean the isolation and reproduction of particular phenomena in laboratory conditions, is greatly limited and is replaced by the observation, prediction and evaluation of ongoing social processes. Thus, the laboratory of the social scientist is society itself.

Like the natural science, social science starts from a material basis and is established on the premises that, depending on the development of knowledge, the social world is as totally accessible to man's understanding and mastery as the natural world. Of course, social science focusses on various forms of human activity, which have a much greater day-to-day variability than most natural phenomena; human society, as we all know, is generally subjected to far more rapid changes and transformations than the natural world. Moreover, the social scientist is himself part of the processes that he is studying. For these reasons social sciences lack the exactness or 'hard' character of the natural sciences, and are often referred to as 'the soft sciences'. Part of this, of course, is due to the very recent evolution and undeveloped state of various social science disciplines.

Youthful in its stage of development, unformed, backward and inexact, in practice two outstanding features distinguish the social sciences from the natural sciences, a distinction of particular relevance to the state of the social sciences in the Sri Lanka universities. In the first place, the social sciences are continually expanding in scope, bringing into their realm many fields of study in those areas which we usually refer to as the Humanities or the Arts. The borders of what we mean by social science, in an academic sense, are therefore continually changing. Secondly, society itself is rapidly changing, so that the very focus and fields of operation of social science are always shifting.

It is for these reasons, amongst others, that we do not have in our university traditions in Sri Lanka, an integrated concept of social sciences, as we have of the natural sciences. In connection with the latter, we speak very easily of 'science' or of 'the Science Faculty'. We clearly differentiate this realm from everything else, while that 'everything else' from the study of, let us say, Shakespeare to the study of the balance of payments is loosely lumped together as 'Arts'. It is only in recent times in Sri Lanka and not so much from the universities themselves but from professional and other institutions such as the Sri Lanka Association for the Advancement of Science that the concept of social science as a distinct category of scientific knowledge and practice has been put forward. Significantly, this is despite the fact that the University Commission report, as far back as 1959 recommended strongly that a Faculty of Social Sciences should be established in the University.

At this point it is worth rehearsing exactly what general fields are brought together under this as yet purely conceptual realm. Central to the field of social sciences, of course, are the twin disciplines of Sociology and Social Anthropology, which in many ways have actually given us the concept of a science of society. Equally unambiguous in its location within this field but with its own 'classical' origins is Economics - today one of the most mathematical of the social sciences. Historically linked with the study of Economics is what we call Political Economy or Political Science. Equally distinctive and self-defined a discipline, and one as old as history itself, is the study of history, or that much broader category, the Historical Sciences, which also includes my own discipline, Archaeology as well as Epigraphy, Numismatics, Cultural history and so on. As we shall see, the inclusion of History within the field of social sciences is one that is not always accepted, least of all by historians themselves. For instance, until two or three years ago the Sri Lanka Association for the Advancement of Science admitted Archaeology graduates to its Social Science Section but not those with degrees in History while the universities sometimes reversed this classification, encouraging links between Sociology and History but placing Archaeology—a discipline increasingly linked today with the natural sciences—firmly in the realm of the Humanities. No such ambiguity exists in relation to subjects such as Modern Linguistics although its roots lie in traditional philology and the study of languages and literature. Education is also another large subject area today occupying a central role in the social sciences; although it encompasses many social science disciplines, it is so much an applied science and exists in such a specific professional context, that it remains more or less a realm unto itself, not unlike Economics. The same conventions apply to Law and Jurisprudence, while a more 'scientific' status is granted to related fields of study such as Criminology and Penology. On the other hand disciplines which exist in a transitional realm between social science and natural science are such

University Subject Area	Colombo	Jaffna	Kelaniya	Moratuwa	Peradeniya	Ruhunu University College	Sri Jayawardanapura
Sociology	xxx	xx	xx		xxx	xx	xxx
Social & Cultural Anthropology			x				
Social Studies				x		x	
Economics	xxx	xxx	xxx		xxx	xxx	xxx
Political Science	xx	xx	x		xxx		xx
Business Management/Commerce	xxx	xx	xxx		xx	xx	xxx
Town and Country Planning				xxx			
History	xxx	xxx	xxx		xxx	xxx	xxx
Archaeology		x	xxx		xxx	x	x
Linguistics	x	xx	xxx		x		xx
Geography	xxx	xxx	xxx		xxx	xxx	xxx
Psychology	x	x					
Education	xxx	xxx					
Law	xxx						

- Key**
 xxx — independent department preparing students for special (i.e. honours) and/or general degrees in the subject listed.
 xx — sub-department or section of department preparing students for special and/or general degrees in the subject listed.
 x — supporting subject, taught as part of a course for a special and/or general degree in some other principle subject area.

FIGURE 1

subjects as Psychology and Geography both of which are as deeply rooted in the study of social processes as they are in biological and environmental phenomena. Almost unknown as academic subjects in Sri Lanka, and equally undeveloped in the national context are other hard science disciplines such as Physical Anthropology and Palaeontology which have a close bearing on parallel areas of study in the social sciences. Finally, to conclude this somewhat sketchy and incomplete listing, we must refer to studies in the field of Communications, for example Library Science and Mass Communications, which belong broadly to the realm of social science but which serve both hard and soft science alike.

What we see from such a demarcation of subject areas, is that the social sciences cover a much broader field than some of us would be ready to accept and that its acknowledged borders are continually changing and expanding. It is scarcely possible within the limits of a paper such as this to make any comprehensive survey of the state of these disciplines as they exist in our seven universities but I present in Fig 1 a summary of the subjects taught at undergraduate level, which gives us some idea of the general situation.

A summary of this sort conceals the extremely uneven levels of development that actually exist amongst the various disciplines, both in quantitative and qualitative terms, but, at least, it provides a broad picture of the incidence of different subjects and the basic social science resources that the universities have created. Going beyond this table, three general tendencies may be noted: the persistence and stability of the older, established fields, some of which have the underpinnings of existing in a professional context; the weak and tenuous existence of some of the more specialized disciplines, where the emphasis should lie on research and the production of a small handful of specialists, rather than on large student numbers and extensive professional training; the increasing demand and sudden 'boom' conditions which arise in certain subjects where employment possibilities directly affect student enrolment and create rapid expansion and development, not always backed by adequate academic resources and standards. An integrated concept of social science in the formulation of university courses and departments may well help to counter some of these imbalances and would be in keeping with the increasingly interdependent character of the field as a whole.

A brief glance at some specific subjects might make the point more clearly. In terms of faculty representation and longstanding traditions of development within the Sri Lankan universities, History and Economics are undoubtedly the most evolved of the social sciences. They are each fully-fledged departments in all the universities, Moratuwa excepted; while certain related subjects such as Political Science have a fairly developed status only at Peradeniya and to a limited extent in Colombo. In terms of quantitative research output historical studies, I think, must take pride of place above all other social - and I would even say natural - science disciplines. Largely due to the decline in job possibilities for history graduates, student numbers in History have declined considerably in recent years, while for the same kind of reasons Economics has seen a tremendous increase. The weakest representation on the other hand is in Sociology and Social Anthropology, although those are central disciplines in the fields of social science. While the Departments of Sociology exist at Peradeniya and Colombo and it is taught as a subject elsewhere, often in the Economics Departments, the failure to establish a strong national tradition of sociological and anthropological studies is one of the most significant deficiencies in the social sciences both within and outside the universities. It is only in very recent times that some progress has been made in these fields by research institutes outside the university structure. The failure of the universities in this respect is best reflected in the fact that no senior sociologist or anthropologist has remained within the university structure-the majority have gone abroad, while a few have left to work outside. More specialised studies such as Linguistics, Archaeology, Psychology etc. are also extremely weakly represented, largely due, I would say to the lack of institutionalized research facilities within the universities. Specialised subjects such as these cannot develop on the basis of student numbers alone. The influence of employment possibilities and student demand on the other hand is a major factor in the development of courses and disciplines such as Business Management Studies where we have seen in the last few years, a development which outstrips, at least in quantitative terms, the expansion in all other areas. On a much smaller scale, this is also true of the demands made recently in physical planning and of the type of investigative social research required by development planners. In such conditions, the deficiencies existing at both an academic and professional level by the state of the social sciences in the universities, are being thrown into sharp focus.

It would, I think, be worthwhile to try to list some of the general problems that the social sciences in the universities face. The first of these is undoubtedly the lack of a unified concept of social science as an integrated body of academic disciplines. The second-an ironic corollary of the first-is the strongly independent

tradition that exists in such fields as Law, History and Economics and the 'classical background of many of these subjects where the practitioners themselves often see their discipline as belonging to the realm of the Humanities and the Liberal Arts, rather than to the Sciences.

Thirdly, in a society such as ours in which traditional and hierarchical norms are still dominant in everyday life, those elements of scientific dynamism such as the challenge to existing ideas and institutions and the criticism, the questioning and the objective analysis of existing structures of thought and organization are not encouraged. Thus, the social sciences, which have historically evolved in exactly such a framework of scientific criticism, do not have in a society such as ours a readymade and fertile field for development.

Fourthly, the problem of teaching continuously expanding subject areas in a situation where there is a hopeless lack of even basic reading and reference material in the national languages. This is particularly disastrous in the social sciences where it is especially necessary for the student to learn to think and act for himself or herself, rather than to operate within an already established framework of observation and experiment, as is often the case with the natural sciences. The note-taking and note-reproducing type of education which dominates our universities today serves only in a very basic transmission of knowledge, but does not help at all to train an effective and productive social scientist. I would add that one of the features related to this is the lack of the professionalization of the social sciences. This, however, is a trend which we are just beginning to see now in some fields where various kinds of social scientists are required on a professional basis. The influence of this can also lead, negatively, to a narrowing of academic development, turning university education into a mere training programme for technocratic functionaries and data-gathering research assistants.

This brings me to my final point which is the lack of a tradition of institutionalized research. Individual research as we know has a considerable momentum in the university, and university employment at least gives the individual scholar, a fair amount of time to pursue his or her own research. But it is only in rare instances that we have officially sponsored research programmes in the universities in social sciences, and virtually no research institutions or research fellowships. It is ironic, that the Institute that we are sitting in today, has in less than ten years, established an institutionalized structure and momentum of research, that-whatever its character and quality - is not matched anywhere in the universities. This problem is not merely a financial or a budgetary one, it is a problem of academic perspectives and traditions and of structural impediments and incentives.

Of these various problems, I would single out the first as the most significant: the lack of a concept of social science. This omission is often one that is inbuilt into our university system, and derives in part from the British traditions that we have inherited and where the same weaknesses can be found. Unlike in the natural sciences, the practitioners in the social sciences are themselves uncertain about the status and objectives of their respective fields. Many of the social sciences, while being very highly developed as academic disciplines are still in the womb of their classical or liberal arts origins. For instance, as an example of the kind of attitude that prevails in certain branches of the social sciences, I would like to quote the opening words from a British-orientalist historian's inaugural address on taking up a chair of History at London University. Speaking of the study of history he says:

"In my view the major purpose of the historian is simply to satisfy the intellectual curiosity of himself and his readers. The historian may also sometimes succeed in writing books of wide scope and brilliant perception, which appeals to the aesthetic sense of his public and thus his works has affinities, with that of the poet and the artist. I have reason to believe that there are some people who derive from good historical writing of certain kinds, experiences almost religious in character....."

This is a lecture given not so long ago, and by an eminent authority in the field and gives us an idea of the kind of confusion or indeterminacy that the concept of social science would have to face in such contexts and traditions.

A significant aspect of this British influence is the dominance of empiricism in our academic traditions, where the social scientist merely observes and classifies and analyses data without any reference to a consciously formulated theoretical framework, which can itself be tested, questioned or replaced. The lack of a theoretical tradition and the failure of our social scientists as a body, to develop a generalized concern with what in the natural sciences one would call fundamental research - I mean research and reflection on the theoretical structures

that underlie any field of science-represents, I think, one of the central weaknesses of social science studies in the university, and has contributed largely to the emaciation of the concept of social science and the non-integration of social science disciplines.

In the final analysis, the development of the social sciences within the university or outside it is inextricably linked with the development of the society in which they exist. In other words, the development of the social sciences is itself, a sociological phenomenon. The origins and development of the social sciences in the 19th century were determined to a very great extent by the crisis of the industrial-capitalist societies of that time. They were, at one end of the spectrum, modes of social control and social engineering, where the objectives were to protect and reproduce the existing social structures, to create equilibrium in situations of contradiction and crisis, to pre-empt the growth of conditions that would bring about fundamental social change; at the other end of the spectrum, they had a critical corrective and transformational role to confront existing views and ideas to provide impulses and perspectives for development and change. It is an expression I think, of the low level of development of the social sciences in our country that neither of these tendencies are operative in Sri Lanka to any significant extent.

We have made considerable progress in acquiring the basic tools of various social science disciplines, but we have scarcely begun a creative process of developing a social science which has responded to the needs and demands of our society. The state of the social sciences in the university is a reflection of that situation.

Discussion

Prof. S. R. Kottegeda

The needs of the country as pointed out by Prof. Patuwathavithane regarding professionals have not been looked into by the Ministry at any time. There were no projections of the manpower requirements of doctors, apothecaries or even of the number of post-graduates, which placed us in a difficult situation.

The Medical Faculty here has not blindly followed the British syllabus which does not have for instance Parasitology or Forensic Medicine as special subjects. Also the requirement of doctors in the country has not been assessed regularly. In 1968 we had an excess of about 300 doctors and today we have a deficit of 600 doctors. This is a result of the deficiencies in manpower planning. Also the type of doctor that is required and the types of post-graduate training that is required have not been planned at all. Dr. Cabraal pointed out the difficulties experienced during internship training. Now 8 per cent of all doctors who pass out after internship work as general practitioners in the Department of Health but their internship training is not geared to the tasks they have to perform as general practitioners. The rest work as O.P.D. doctors and they also require a general training. Again, there are a large number of trainees who complete their internship period without getting a training in Paediatrics or Obstetrics. Fortunately, 6 months ago the government established a Health Department Committee in which the Secretary, Ministry of Higher Education, Secretary, Ministry of Health and the Secretary, Ministry of Plan Implementation are represented and it is hoped that by this method liaison will be established and the requirements of the country both in terms of quantity and quality of medical manpower will be met.

Prof. M. U. S. Sultan Bawa

Some of the points that I wish to raise have been partially indicated by some of the previous speakers but I think they require further emphasis. First of all I wish to take up the question of availability of library facilities in the science faculties. Knowledge in science doubles itself over a period of 7 years but unfortunately in our universities the vote given to the libraries is quite inadequate both for text-books and for journals. In my own department we subscribed to over 100 journals up to 1972; from 1972 to 1976 we got nothing and after 1977 we got just 10 journals. From 1980 we will be getting only the Chemical Abstracts i. e. only one journal for the entire department. So if the university is going to start any areas of research which are necessary for development there is no library base for our teachers to get the background information. We were fortunate that 10 years ago there was a sound base in the university library system but now this base is no longer available.

The next problem is text-books. The university has a dual function to perform i.e. to do research as well as teach. To be able to teach, teachers must be in touch with current developments in their subjects and the students need an adequate number of text-books. Our departments of science have not been able to purchase sufficient text-books for the past several years. We get something like Rs. 10,000 per annum i.e. about \$ 600 - from which you can buy only about 10 books.

There is also lack of money for consumables. There is plenty of money available for new building programmes in the university but for day to day expenditure there are no funds. The problem is aggravated because now we are getting students from the schools without adequate practical training and this has to be provided in the university. It is a vicious circle - when the country is undertaking a rapid development programme we cannot give adequate training to our students which means we have to recruit personnel from outside to man our industrial development projects as our future graduates will not be competent enough.

I can say that a large number of industries that are coming up in the country are chemistry-oriented. The number of chemistry special graduates that are being produced in the country at the moment is quite inadequate to meet these needs. Even if we double our present output in all the universities, I believe that the output will still be inadequate to meet the industrial needs of this country. This is another development in the direction where our graduates could be of immediate use to the country.

Prof. A. Halpe

I would like to revert to the point raised originally by Prof. Crusz and also referred to by me this morning i.e. that we have not really explored adequately the aims and objectives of university education. Related to this is the question of the Humanities. We have not really asked ourselves the question what is the quality of the graduates we want to produce. We have talked about various special aspects of professional expertise and some of the organisational problems that we face in university education but we have not discussed the relationship between the education we provide and the quality of the undergraduate. This is inextricably related to the quality of life and it could be that in our society today we are paying lip service to the idea of the 'quality of life' but reducing it in actual practice. When it comes to the question of dealing with university education we are reducing it to merely enhancement of the G.N.P. I do not say that I have a solution but I submit that this is an important problem that we ought to discuss, whether the question of values and value systems should come into the discussion or not but you cannot conduct a seminar on university education without confronting this issue.

Another point I would raise is that the question of medium of instruction should be taken as an open and not a closed subject for discussion. It is rather invidious for me to raise it that is why I have been silent for so long, because I am professionally involved in English studies. However, it seems to me in the highest degree ironical that we have heard so many learned, interesting, flexible discussions today conducted in the English Language and we know that our students are not capable of that kind of discourse, are not capable of understanding us and could not care less. In fact they would be antagonistic towards you if they were to listen to you today. What are you going to do about it? Are you going to equip the students with that kind of ability or even a concern for it? Prof. Nadarajah in his presentation made the point very clearly that the study of Law is not possible without close attention to English. It is a misfortune perhaps of history that the knowledge of the English Language is one of the base requirements for practically all our studies and we are not really doing very much about it. We must ask ourselves the question, do we require the knowledge of English Language not as a technique of handling words but as a means to understanding our own subjects when it comes to teaching.

Dr. W. Ratnayake

I have to thank Prof. Crusz, my former teacher, for having elevated his talk today to a very high level and also Dr. Bandaranayake for following in the same vein. But I think we have to occasionally come down to the practical level of implementation. If I may speak about the Sciences that Prof. Crusz covered, I have to point out one thing that over the last 30 years of university development in this country science departments of study have remained fairly static. We have had about 10 - 15 lecturers perhaps in each department giving certain undergraduate courses of study in the basic disciplines Botany, Zoology, Physics, Chemistry and Mathematics. The number of staff may have increased somewhat to cope with the increase in students. But as Prof. Sultan Bawa said the doubling of knowledge occurs every seven years yet over the last 30 years we have not developed our courses. For instance in my own field, zoology we could develop into physiology, ecology etc. In the Department of Biology at Sri Jayawardanapura University, we are thinking of developing certain areas like microbiology, genetics, fisheries and forestry. Only last month we got permission to start a M.Sc. course in Forestry. Developing these new areas by putting further burdens on the existing staff is not quite healthy. We should start developing new units of study with the help of specialists devoted to these fields as they do in most countries, even underdeveloped ones. We have tried to develop course content but it is very difficult to conduct research due to lack of facilities and lack of time. I hope the U.G.C. will take these factors into consideration when devising new schemes to develop science in the universities.

The Role Of The University In Society

Dr. H. N. S. Karunatilake

We are now in a position to look at the role of the university over a thirty year period of development. Several speakers have discussed in detail particular aspects of higher education. I have been asked to speak on the role of the university in society. I would like to discuss the question whether the university has met the basic academic needs of society and whether it is adapting successfully to the changes that are taking place in the country.

In the 1940s and 1950s we had a university which was functioning on a sound base. Our professors at that time were on par with the most distinguished professors in the world. The products coming out of the university at that time were of high quality. They could hold their own with their peers in other parts of the world and they stood out at academic gatherings and international conferences, where their contributions were considered to be outstanding.

Now we have a situation where the quality has declined considerably. One reason was that in the early 1960s when the transition took place to the national languages as the medium of instruction we did not have teachers who were bilingual and who could teach and write or translate textbooks into the national languages. As a result, the university students suffered and there was a drop in academic standards. If the universities had responded at that time to the felt needs of education in the country this situation could have been avoided.

One event that enabled the university to broaden its activities was the introduction of free education in 1946. Unlike in most other countries at that time, our universities had to throw open their doors not only to privileged groups in society as in the 1940s and 1950s but to the large mass of people in the rural areas. This is one thing that we can take pride in. No other country in Asia, not even India, has gone to this extent. Generally in Asia the flood of entrants to the universities have been from the upper classes who have the capacity to pay. Our university then has been unique in that it has catered to the betterment of the poorer sections of the community and drawn its student population from a much wider spectrum of society.

As a result it has had an impact on the spread of literacy and on economic development. Also we find that today the majority of those who hold key posts are not from the elitist sections of society but are from the ranks of the vast body of ordinary people. Even in the Central Bank I find that over the last 15 years our recruits are not from the good schools (only 1 in 20 fall into this category) they are from the rural areas; but their main deficiency is the lack of knowledge of English. I am not advocating that everything should be done in English and I am not at all convinced that English should come back as the principal medium of instruction; even though it is essential as a mechanism to give access to knowledge it should be a subsidiary. In Japan even Nuclear Physics is taught in Japanese and even their top scientists cannot communicate easily in English. There is a lot of discussion to the effect that this lack of knowledge of English has put the clock back and brought down quality. I agree, but that is due to certain administrative and academic shortcomings which were perpetuated and which were not corrected in the 1950s when the change-over occurred. The government did not pay much attention to the problem at that time and the universities themselves did not accommodate to the change. No text books were written and there were a few scrappy translations. The universities did not assist in the translation because whether it was in the Sciences, Social Sciences or in Arts the University teachers did not know the national language.

If we had a combination of circumstances in the 1950s where the teachers were bilingual i. e. proficient in English and Sinhala or Tamil the transition would have been so efficient that the criticism that is now levelled against the present Sinhala or Tamil graduates that they cannot read, cannot discuss or that they cannot attend a closed circuit seminar like this, would not have been valid. To that extent, I think that the university is patently to blame for these shortcomings.

The other area is the lack of a tradition of research. Historically a large amount of research that has been done in the country and all the books that were written before the 1940s, were by people who were directly not associated with universities. Even the histories that were written were by outsiders - there were historians without a university degree who wrote. I can recall the name of Mr. C. W. Nicholas who never went to a university but was a first class historian and Mr. R. L. Brohier fell into a similar grouping. There were also geologists who fell into this category. All the old books on Sri Lanka which are now treasured in libraries and traded at premium prices are written largely by non-university of Sri Lanka men whether it was in Science, Geology, Economics or History. One great weakness that is evident in our university is the lack of a tradition of research and the paucity of publications. As an independent observer who tries to purchase and read practically every book that is published on Sri Lanka, I find that there is a paucity of publications coming out of the university at the official level. However, groups of social scientists or scientists bring out occasional publications. But official publications like the University of Ceylon Review which was in existence up to the early 1960s have completely disappeared. The excuse given by university teachers today is that they have no time for research because they have a heavy teaching load and several hundreds of examination papers to correct. But this is not a problem that is peculiar to our universities. The number of students in all the universities in Sri Lanka today is less than 18,000 and this is much less than the total student population of a big university in the United States.

The number of teachers and number of researchers, in the sense that they hold university posts, have increased with the proliferation of universities. There are more professors in Sri Lanka than in most other countries. What is the sum total of their research output? The volume of research is the hallmark of a university and as Prof. Cruz mentioned pure research is essentially the basic activity of a university. Even the pure research, not related to practical problems, which is claimed to be the rightful province of the university does not come out in sufficient volume in relation to the number of universities and the output of graduates with first class qualifications. Today there are an increasing number of first class graduates but their capacity for teaching and research is limited. We are at the receiving end of these products. We serve on interview boards which stipulate the minimum qualification of an upper second and of those coming up for interview about 90 per cent are lecturers and assistant lecturers at the university. The unfortunate thing is that they have not even read the basic textbooks which in our time we found too simple. I know History honours graduates with first class who have not heard of some of our historical monuments and texts and cannot take part in an intelligent discussion on the history of the Sinhala kingdom and its survival upto 1815. Then we have Geography Honours graduates who know nothing about the monsoons or the basic climatic conditions in Sri Lanka and who have not travelled in the island. These examples illustrate that of late, the quality of the graduates and the quality of research has deteriorated; and I would say even the purposes for which the university exists have virtually got lost. If the purpose is to produce men and women of ability, people who could hold positions of responsibility, whether in the academic, administrative or technological world, then we are not getting that type of graduate.

Most of you are probably not aware of the repercussions which are taking place quite subtly in the country now. Due to the fall in the quality of the local graduates the foreign consultants are reigning supreme. They are coming back again through the back door in increasing numbers. Even for a simple thing like the construction of an earth filled dam we are now getting foreign consultants despite the fact that we have had a 2500 year old tradition of building tanks, dams, bridges and all kinds of irrigation works. These are the consequences for which the universities must hold themselves responsible. All this costs the country valuable foreign exchange and the frittering away of a fair proportion of the foreign aid received on maintaining foreign experts and their families. You see these foreign consultants attached to every big project - one project I visited last week had as many as 72 specialists and the very fact they have rented houses in that area have shot up rents to levels in excess of Rs. 4000 in a town upcountry.

What does all this mean? The university has a renewed role to play in this country which has had a fairly long tradition of higher education. If the technological skills that the country needs are not being developed vigorously then we will have to go back to square one, as in 1948, when we were dependent on foreign expertise not only academically dependent but technologically dependent. We are now on the threshold of that era and many who are within the universities have not been adequately sensitive to these developments. The remedy no less lies in your hands.

His Excellency's statement that there is proliferation without consolidation is very apt. It may be very necessary to quickly review the current programmes for extending university education with little or no emphasis on quality. In order to reverse the trends that are incipiently emerging consolidation and raising academic standards is very important. Proliferation means we are dissipating resources, diluting the quality of staff and students and making sacrifices at the national level in terms of low quality manpower. What is the input expected from the universities if not in the past at least in the future. The universities must get more directly involved in development projects which are close to your own discipline. You might not agree. Some of the old university teachers belonging to the old school and who are now living in a world of their own may not agree with this. They may advocate that universities should concentrate on pure research and isolate themselves from the problems of the society. The Zoologists or Botanists in the university might think that they should not be bothered about the forest cover and the ecology of the Mahaweli area but should engage in primary research to see whether certain species of satin wood is 300 years or 400 years old. A poor country like ours cannot afford to engage exclusively in pure research. Let us leave much of this to the rich countries which have the manpower and resources for this purpose. I got the feeling today that the academics were trying to get back into their shell of pure research without attempting to make any impact on society.

From what I have seen of universities in other countries there are two facets to their work. Pure research is not ignored - universities like Harvard for instance, have a strong component of pure research but at the same time, they get very much involved in a wide range of practical work which is significant from the point of view of the nation. Many universities in the United States undertake strategic and defence contracts, do research on space travel and nuclear energy for war and peacetime uses. We are not always in a position to do this because we are not funded as lavishly as these universities which have two sources of funding, the private foundations and also government and other official agencies which are interested in defence contracts etc. But this does not preclude our universities from getting involved in development problems because we are not going into areas of high cost technology where sophisticated equipment and laboratories are needed. Our technological needs are relatively simple and we can harness available resources to do pure research and also applied research which can contribute to promote development in some of the major irrigation, construction and land settlement projects.

As a member of the National Science Council one disappointing fact is that some of the applications for research grants that come from the universities have little practical orientation and poor planning. In one instance, we found several people wanting to do research on the reproductive system of the buffalo. The point I wish to emphasise is that although research grants are given liberally the final output is minimal. In some cases the National Science Council has funded research work to the extent of Rs. 600,000 for a single project but no results have been forthcoming so far. This means that even where funding and resources are available the output is not satisfactory. One reason given for not completing research projects is the lack of time, in spite of the fact that university teachers enjoy long vacations and many of them do not need much time for preparation because year in year out they repeat the same lectures. Of course, it is true that they have examination work, but the fact is that they enjoy a three months vacation which we public servants do not have.

The other aspect is the lack of emphasis on postgraduate studies. We have become dependent on foreign universities for our higher degrees and training facilities are so limited that those who do not get scholarships from foreign universities cannot get postgraduate degrees here. This has had serious repercussions because it gives rise ultimately to the heavy dependency on foreign educational institutions. In relation to our needs, only about 0.5 per cent of those capable of doing higher studies get the opportunity of doing postgraduate work. Even today foreign resources are not freely available and there is also the question of releasing people from key posts. If the tradition of having postgraduate studies in key subjects like Science, Economics and Statistics existed, our dependency on foreign advice would be gradually reduced. Even after 35 years of university development the number of local Ph. D.s are few and far between although there have been several Masters degrees. We have under-rated the capacity of our senior staff to supervise research and their general quality. We feel that if a graduate goes to U.K. and writes on Agricultural Credit in Sri Lanka the supervisor there, who has never been to an eastern country, is more competent to supervise a Ph. D. candidate while people in our own country who are very much involved and know more about the subject are overlooked and even if the names are put up to the University Council they are rejected on some flimsy ground. There are cases even when the degree has been recommended it has not been awarded because university authorities feel that although the candidate has done good work he hasn't got the capacity to write a thesis because his supervisors have

not been teachers at the University of London or Cambridge. I, therefore, appeal to you not to under-rate the quality of our own staff.

Only yesterday I was at lunch with an eminent Professor in Statistics from the U.S.A. who has come here to advise on the design of a sample survey on tea and rubber, While speaking to him, I discovered his limitations and the researchers came to me and said they should have discussed the project with me because the consultant could not give much useful advice. It must have cost the World Bank at least U.S.\$ 8,000 to bring him here for one week. It is up to the academic community to take corrective action in all these areas.

DISCUSSION

Prof. Cruz

I would like to answer just three points. The applicants for research grants on Buffaloes were not from the Department of Zoology - we are only interested in buffaloes in a metaphorical way.

On the second point, I agree with Dr. Karunatilake that we have a tradition of building dams and all the expertise is there but never forget that we need the money to build them. Attached to the loans and grants we have certain conditions - and the experts come under these agreements. Taking the question of Mahaweli Development, the Departments of Zoology at Peradeniya and Colombo are involved in the assessment of environmental impact of the accelerated Mahaweli project. Some of our scientists including two Senior Ph. D.s are involved and one junior teacher, an M.Sc., is out there on the field for weeks and sometimes nearly a month. We have to make adjustments in our teaching schedules to undertake these assignments. That is the extent of the sacrifices we make for it and we find it worthwhile. So the whole bogey that we are not connected with development work is wrong. They use our scientists to do the research but when the reports come out from these consultants we are hardly mentioned.

The third point - NSC research grants. For goodness sake monitor them and see that you get regular reports from departmental heads or senior staff and make sure that research work is going on satisfactorily. I have documented proof that grants have been given to people who have been bluffing in their research and no monitoring has been done. Reports of the head of department and senior supervisors have been by-passed by the National Science Council of Sri Lanka.

Fourthly, Dr. Karunatilake accused us of not providing enough Ph.D.s. Come and see our library facilities that Prof. Bawa complained of, see our equipment and our facilities for research. You will never get those Ph.D.s for a long time until these basic facilities are given to us, although I agree with you we have all the wherewithal to originate ideas and get the research done.

Prof. K. Arudpragasam

A lot of important matters have been raised by Dr. Karunatilake and some of his criticisms cannot be justified. Dr. Karunatilake referred to the lack of Ph.D.s - I produced the first Ph.D. in Natural Science in this country way back in 1968 and my department produced two M.Phil. students last year. I am sure that some of the other departments have also produced post-graduate degrees in spite of the limitations that Prof. Cruz mentioned. This year we have been given the princely sum of Rs. 35,000 for six departments to buy books. There is a statement somewhere to say that it is necessary to monitor the activities of university teachers to see whether they are keeping in step with present developments in their fields of study. How does one do this without money to buy books.

Dr. Karunatilake also spoke of the lack of research. The Journal of Science is one which the University continues to publish and there are other journals too. The Vice Chancellor, Colombo will confirm that we have been working as Advisors to the Ministry of Fisheries for some time and collaborating with the Department of Fisheries. I personally have a Rs. 80,000 grant from the International Foundation for Science. The Swedish officials who came to monitor progress were so impressed that they have written to the Vice-Chancellor that they are sending another person out to ensure that we get enough support from institutions and from government. I am quite sure there are a number of other university staff members who have also collaborated in similar research projects.

On the question of writing books - I wrote a book for the Advanced Level in Zoology that was published in 1968 in Sinhala. I have now written another book for the Advanced Level which is awaiting publication. If I devote some time I will be able to write a book of reasonable standard for use in the university. But is this a viable proposition? How many books will be bought? Who is the publisher who will undertake publication?

The attitude that Dr. Karunatilake takes is simplistic. He is talking of the University in society but he forgets that we have to function in society and we have to think in the context of funds, publishing facilities and demand. I speak for the University community as a whole. We are getting a little tired of being criticised at various places by people who make damaging statements without bothering to find out the true facts. Dr. Karunatilake says that he has read every book published in Sri Lanka. I don't think that this is possible.

Regarding foreign experts there is now a proposal to set up a Mariculture station in the country and a grant of \$ 42 m. has been made by Japan. They are bringing experts from Japan to carry out the programme as part of the package deal, although there are sufficient qualified people in this country.

Dr. S. Bandaranayake

I think that those of us in the University will agree with some of the points made by Dr. Karunatilake. But on the subject of research I am afraid I have to contest his statement. In fact in any quantification of research output in this country in absolute terms the university will account for at least 70-80 per cent of the published and unpublished research. This is certainly true of the Social Sciences and I think it is also true of the Natural Sciences. The difference is that university research is mostly individual research, a point made in my paper and it is not institutionalised. I don't want to inject any institutional rivalry into the argument but I must say it is different from the research done by say the Research Department of the Central Bank. It is research which has an extremely low visibility and that perhaps accounts for the feeling that it is inadequate. It is certainly inadequate from our point of view but from a viewpoint outside the University we can say that we still produce the bulk of the research in this country.

Prof. A. Liyanagamage

Dr. Karunatilake raised some issues which we should have discussed ourselves. Not all of them, but in particular the declining standard of education at the university should cause serious concern. Sometime back we discussed the question of the Special Arts Degree in Economics at Kelaniya University. There were 200 applicants and we had only one Ph.D. in Economic History and a few M.Sc.s. The staff were against such a large intake of students and advised that we take a lesser number of students and do justice to them. The Head of the Department replied that although there were only a few qualified staff in the Faculty some of the best persons from the Central Bank would be coming as Visiting Lecturers and Dr. Karunatilake's name was also mentioned. Some of these students got Firsts and Upper Seconds and they were probably the students who came up for interviews at the Central Bank. So that you have also to take some responsibility on this matter. Of course the entire blame cannot be put on you, there are also lapses on our side. On the question of admissions to the Special Arts Degree in Economics, the Department advised restricting the intake to 100, which was still too many, out of the 200 applicants on the basis of aggregate marks. The question was discussed in the Department, Faculty and finally the Senate and all of them decided against increasing the number of admissions, but the Head of the Campus, not the present Vice Chancellor, took a decision on his own responsibility to admit all the applicants. How can we then maintain quality?

Dr. V. Ramakrishnan

Dr. Karunatilake raised the question of supply and demand and also the other issue of national needs. I think he is measuring us by both standards. On the one hand he wants us to open the gates which will result in lowering of standards. On the other hand he is trying to measure our output in terms of national needs and finds it of low quality. It is a pity that both standards are being coalesced into one. I hope the contents of Dr. Karunatilake's speech will be presented in the form of a paper so that we can reflect on it and reply to it.

Prof. H. A. de S. Gunasekera

We have all been stimulated if not provoked by Dr. Karunatilake. May I ask why the Central Bank does not send its research officers for postgraduate degrees to the local universities? You know that we have a real problem in the shortage of books and other facilities.

Dr. Karunatilake also mentioned the lack of research papers emanating from the universities. There are several reasons why the Sri Lankan universities do not produce sufficient research. We expect Dr. Karunatilake to be aware of some of the myths like University professors enjoying long vacations. He should know that with increasing numbers of students the load of examination papers to be marked is very heavy and it has become a real problem to keep to deadlines - in fact the long vacation is not long enough for marking papers. The reason for the lack of publications is that it is no longer a viable proposition to publish books since the reading habit has declined considerably.

Regarding the influx of foreign consultants I think the Central Bank is itself an offender. The University community is willing to take part in development projects but has the Central Bank tried to involve the university in their research projects? How many research projects has the Central Bank farmed out to university personnel? The blame does not lie entirely with the university in all these matters and I think the Central Bank is also vulnerable in these respects.

Panel Discussion

Prof. A. W. Mailvaganam

Mr. Chairman, I rise to the defence of universities and university personnel. It is quite easy to throw insults at University men by persons who are themselves in a vulnerable position. I would like to ask the Alternate Chairman, Dr. Karunatilake, whether the controlled price of onions is realistic. Have any of the Central Bank officials purchased onions and vegetables in the Pettah? The price of brinjals according to the daily newspapers and the broadcasts of the S.L.B.C. is 80 cts. in the Pettah market. The following day I pay Rs. 1/80 for brinjals in the local market. Has the Central Bank or any other authority done anything about this difference in price? Is the Cost of Living Index prepared by the Central Bank meaningful? Everyone treats it as a joke.

Please therefore refrain from criticising men who if they wished to could have secured jobs at a much higher remuneration elsewhere. But they have preferred to stay here more because of job satisfaction and out of a sense of duty to their country.

If today in Sri Lanka we do not have a bank of personnel on whom the government can depend based on their accumulated service and experience in various government departments and services, it is because till about 1945 the top personnel who ran the government departments were all Englishmen, who retired and left the country. Sri Lankans took their places and in the course of time their experience and expertise will be available to the government. At the moment, all the expertise gained in Sri Lanka is at the disposal of the colonial office in London.

I wish to set the record straight regarding the criticism levelled at the Universities. I am not talking now as a member of the University Grants Commission but as a University teacher who has been associated with the University College and the University of Ceylon for over a period of 51 years, before the parents of those seated round this conference table had thought of these off-spring. I also had the benefit of five years learning at the feet of eight Nobel Prize winners at Cambridge, Britain's foremost University. I would appeal to university personnel in Sri Lanka not to be discouraged by this uninformed criticism. It makes me angry. I and several of my colleagues could have gone abroad in the 1940s and we could have got well paid jobs. But money was no concern of ours - we wanted job satisfaction. It was not love of the country that kept me here. I was interested in my studies, my research and my teaching. I am proud and happy to find not only around this conference table but throughout the length and breadth of Sri Lanka my own students doing well and happy in the choice of their profession.

I wish that the people who attempt to criticise universities would take the trouble to read 'The History of the Universities of Europe, by Rashdall in four volumes or at least 'A University for Ireland' by Cardinal J. H. Newman, books that I read in Cambridge after joining the staff of University College. These critics should know how the idea of a University originated and the concept of 'studium generalis' from which it arose. The oldest Universities are those of Padua, Sorbonne, Uppsala, Oxford and then Cambridge. The main purpose behind every one of these foundations was to create a community of pure thought, not a community interested in applications of knowledge gained within the four walls of the classroom to the outside world. If there are immediate day to day problems to solve let us set up polytechnics as France did. In U.K. too there are polytechnics and institutions like the London School of Economics which are concerned with practical day to day problems.

The ancient Universities produced people of the calibre of Erasmus and Abelard. To them the world was one of pure thought. A more recent incarnation of Erasmus and Abelard was the late Professor G.H. Hardy, who was Sadlerian Professor of Pure Mathematics at the University of Cambridge. Hardy was the purest of Pure Mathematicians. He set up a Society of Pure Mathematicians and he insisted that anyone tainted with

the least bit of Applied Mathematics should be kept out. An applicant for membership of this society had to submit his research papers before a Screening Committee and if there was the slightest trace of Applied Mathematics in the research work the application was rejected. At the end of every year there was a gathering followed by a dinner at which Hardy proposed the toast to the society thus: "Here's to Pure Mathematics may it prove to be of no damned use to anybody". I want the Physics, Chemistry, Botany and Zoology taught in the Universities of Sri Lanka with which I am now associated as a member of the University Grants Commission to be of no damned use to anybody.

I want the staff of universities to exercise pure unadulterated thought because it is such unadulterated thought, paradoxically enough, which leads to fundamental research which is eventually going to solve the country's national problems. Because the moment you gear yourself to national needs you put on blinkers like horses who cannot see on either side but only straight ahead. A university teacher or professor must be free to let his mind roam at will over the areas of his choice with no limitation whatsoever. It is indeed strange and Professor Hardy who sought to keep Mathematics pure, were he living today, would be shocked to find that the entire civilisation of the mid-twentieth century is based on the purest of Pure Mathematics viz. Linear Algebra. Therefore the purer the scientist, the purer and less adulterated the subject is with the day to day problems of government, the greater the contribution it will eventually make. I don't want you gentlemen to make any mistakes and I do hope that no one in this country will talk the utter nonsense of gearing university teaching and research to everyday life.

I would like to overwork Hardy a little more to drive the point home. Professor Hardy was once asked what is University Education. I mentioned this recently at a meeting with the Vice Chancellor and staff of Sri Jayawardenapura University and I would like those present here, especially the members of the University, to pay special attention to Professor Hardy's reply. He thought for a while and said "University Education is that which remains after you have forgotten all that you have learnt at the university". There is a substrate which remains after the knowledge has disappeared. This knowledge does not of course disappear in the case of university teachers but it does evaporate in the case of graduates who become administrators or take up other jobs outside the university. What is this substrate and what remains in it? It is the ability to think from first principles, the ability to solve a problem. Most of us bypass problems. The man who has had a university education in the real sense of the word, has the ability to smell and sense a problem and see it in a wider perspective. He approaches the problem not as an isolated one but in relation to a number of other problems, solved and unsolved. This substrate is not the peculiar property of any discipline-Physics or Chemistry, Botany or Zoology or the Humanities. Once the subject knowledge has evaporated, the residue is independent of the discipline.

I must speak my mind out because I cannot sit and listen to my colleagues being unjustly accused. The primary requisite for research is the freedom of atmosphere. We had that in the University of Ceylon in the time of Sir Ivor Jennings. We are now beginning to have it again since 1979, at least in the University of Colombo, I cannot speak for the other universities. By and large from the time Sir Ivor Jennings left us, the hands of the vandals fell upon the University - not only power seeking individuals who sought to be Vice Chancellors, but also politicians and their stooges were responsible. I feel that things are brightening up now and the Head of the University Grants Commission is doing his best to restore freedom and order in the universities. I am happy to work as a member of the U.G.C. because the Chairman, Dr. Kalpage feels the same way as I do, otherwise I would have left the U.G.C. by now. I hope I have not offended anybody but I felt it my duty to speak out. Thank you Mr. Chairman.

Mr. Bradman Weerakoon

Prof. Mailvaganam has just dealt with some of the criticisms made by Dr. Karunatilake and put up a good defence of university personnel. I feel that I have been invited to speak today not because of my involvement with the university but perhaps because of my involvement with the government and the possible relationship that exists between the university graduate and the government as an employer. As I mentioned to the Secretary of the Social Science Research Centre when she invited me, I could perhaps make some observations on this aspect. Without getting involved in the internal activities of the university, I will try and look at what the university produces from the point of view of a consumer of university products. I feel this may be of some use in a discussion which, during the short while that I was here, ranged over many interesting and important issues.

One of the points made both here and outside is about the quality of the product. This product, that is coming out of the university to be used as material for the government machine seems to be generally subject to a lot of criticism. There has been recently a newspaper controversy on this issue and a number of letters published regarding a statement made by the Secretary, Ministry of Plan Implementation about the quality of graduates coming for interviews for jobs. This point was also raised by Dr. Karunatilake today. The general impression is that the quality is below par or at least not what it used to be sometime ago.

I like to make this my starting point because it is not entirely a position that I would share. I am not saying this because I am afraid of being attacked by the university teachers present here but because I really believe it. I have had an opportunity to work both in Colombo and at the district level. I can say this about the quality of the recent graduates recruited to the administrative service, however much they may not fit in the Colombo set-up there is undoubtedly a great deal of fit when they work in the field at district level. This is certainly a plus point.

Another point I would like to make is that when we interview these graduates and subject them to the kind of interrogation that we do, we are perhaps guilty in some way of putting into our questions our own perceptions of what is good and valuable and how we expect them to behave. I don't really know why these graduates should be expected to know some of the things we ask them. We might fire a question at them - who the President of France is and how his name is pronounced and even I wouldn't know the answer to the second part, although I might know the answer to the first part. This kind of reflection of one's own perceptions on our judgement of quality is something we should guard against as administrators, when interviewing these university products.

Then there is another factor that has come up in the discussion-the kind of pressures which the graduate is subject to while he passes through the factory. He comes from a much wider circle now that the net has been cast very wide with the introduction of free education. In the 1950s when, to take just one statistic, the population of Sri Lanka was only 6.5 million while the population now is 15 million, the type of student who entered the university came almost exclusively from the upper and middle classes. The average undergraduate played cricket and tennis, took part in the Dram Soc and other activities, passed the degree as something in his stride and was considered to be a product of quality whatever that may mean. He was a mixture of many things and whatever he picked up at the university was probably marginal, much of his education took place outside the university at home and through various other contacts. When we judge the present products we are going back to this kind of situation which existed in our time and saying we were much better than they who are coming out today. This may be true in one sense but there are very complex reasons for this situation. We should try to keep in focus the difficulties faced by the undergraduates today-the constraint of large numbers, the intense competition, financial problems, lack of textbooks and the difficulties faced by the universities themselves lack of library facilities, language problems, shortages of funds, personnel etc. We cannot keep hoping for a return back to that golden age. We must try and think of what we could do to improve the quality of the product which is willy-nilly on our hands and make it better adapted to the present needs of the economy and of society.

Here, while not going all the way with Prof. Mailvaganam who was totally against the idea of a university producing people for the needs of the country or of society I would perhaps go half way and see what kind of a person we are trying to produce and for what purposes. If there are development goals and we require degree qualified people to achieve them, that could perhaps be a limited objective. Often we come across foreign consultants who say that we are training people too much at too high a level. Particularly in the medical field we are often criticised for spending our limited resources in training very good people who are up to international standards so that they get easily absorbed into hospitals and research institutes abroad. At the middle level eg. that of a medical assistant, we don't have enough training programmes and consequently our development programmes particularly in the rural areas are hampered by a shortage of staff. In my opinion what we really need is not very high quality people, we might need a few of them but in the main we need large numbers of middle level trained people for routinised jobs to meet the needs of the society. We don't need high intellectual quality but we do require other traits, the ability to think conceptually and analyse a problem and to work in a disciplined manner. Possibly these are the things that remain after you have forgotten all that you have learned in the university - a general ability and training without perhaps a great deal of professional knowledge. What we need is probably this kind of semi-processed product coming out of the universities at the graduate

level. It is then up to the government to recruit these graduates and have a sufficiency and adequacy of training programmes to make them fit into the needs of society or the economy. Thank you Mr. Chairman.

Mr. Sarath Amunugama

I wish to briefly focus on two major areas. Since the subject of this discussion is the university and society, I think we should pay more attention to the relationship between the student and the teacher in the university context. Given the reality of free education in Sri Lanka and the huge investment by a large number of parents in sending their children to the university - we should examine the relationships that exist inside the university as they play a crucial role in the formation and development of the university undergraduate.

Prof. Mailvaganam very correctly defined the classical type of university where a very personal relationship existed between the teacher and the student and information and knowledge was imparted in a close atmosphere. How much of this classical relationship obtains in our Universities today? This is a major area of concern. It did exist in the University of Ceylon in the 1950s and 1960s but it does not exist any longer. There are two aspects. One is imparting information and here we must recognise that due to advances in technology, availability of different media of teaching etc., this aspect need not exclusively be performed within the classical university pattern. But certainly in the other aspect i.e. the free exploration of ideas - the very intimate relationship between the student and the teacher is of great importance. If we analyse in depth some of the problems that were highlighted by Dr. Karunatilake and Mr. Weerakoon, the reasons for these shortcomings can be found in the nuts and bolts of the educational system. This is something that has to be analysed and corrective action taken.

One is a little diffident to go all the way with what Prof. Mailvaganam said that the University should pursue knowledge for its own sake, not to cater to the outside world - i.e. the town should not intrude on the gown. We all respect this point of view but this is only one model. There are other models which the realities of modern times compel us to examine and perhaps adopt. I am not saying that these latter models are in any way superior but today we live in a very complex world and we have to take note of these realities. One factor which disturbs me is the lack of institutional access to enable areas which are developing in our economy to have an impact on university education and curricula. I was fortunate to study at the University of Calgary in the heart of the oil fields in Canada, a university which developed almost entirely as a result of the pressures of the city and the community. For instance in determining the establishment of departments and chairs the intake of staff and students, the city exerted its influence through the Senate which consisted of leading business men and entrepreneurs. There was always pressure on the university to produce chemical engineers etc. to accommodate the developing needs of the particular industries that were coming up in the area.

At present if one takes a critical look at our higher educational structures, one finds that there is not enough support for the new industries. After all none of the Gnanams and the Dasas - the entrepreneurs who are providing employment have any say on the type of courses we fashion at the university. There seems to be a lack of dialogue between the people who are finding employment and who will feel the need for certain types of training and disciplines and the courses offered in the university.

For the sake of argument suppose the government sets up Private Universities (a horrendous thought perhaps); we will find the interplay of forces in the community working on the University and various pressures to make the University more adaptable and realistic to the needs of a changing economy. These are the two areas which we have to take very seriously because we find, as Mr. Weerakoon mentioned, a large number of graduates seeking employment and trying to influence politicians and administrators. Some of them we have taught and know personally and it is a human tragedy. But it is the institutional problems which have to be tackled first.

A major problem then is to allow this access to the demand sector i.e. those who are creating the jobs and are consumers of university services - to enable this sector to have an impact on the decisions made in the University.

The second area which I have a personal interest in, is the impact of university research on policy making. Policy makers do not have enough access to university research and here the policy makers are at fault and not the researchers. Whenever there is a research component built into a project we don't always look into the prospect of university personal doing the research for us. Even existing research is not made use of in policy

formulation. I would agree with Dr. Karunatilake that we cannot in the context of present realities accept the classical model of the university which works in total isolation from the pressures of that society. It may have its virtues but we are dealing with a large number of young people and what we do as policy makers or university teachers have a real meaning for them in the sense their lives depend on the decisions we take. Therefore I think that there is a need for a close dialogue between the policy makers and the university personnel. Thank you.

Dr. D. A. Kotelawela

Mr. Chairman, I will confine myself to comments on some of the discussions that have taken place today, emphasizing certain aspects which I feel are of importance.

Prof. Halpe brought out the question of aims and objectives of University Education. I think Prof. Cruz's paper laid down some of the primary objectives of university education and they agreed broadly with Prof. Mailvaganam's views.

Another viewpoint was expressed by Dr. Karunatilake and supported partly by Mr. Amunugama, which I feel is not directly opposed to the views of Professors Cruz and Mailvaganam. While adhering to the classical objectives of university education it is still possible for the university to perform its social and other functions. It has been clearly and emphatically stated by Professors Arudpragasam and Cruz that the universities are in fact directly involved in research projects that have a direct bearing on the development efforts of the country. Therefore, I see no direct conflict between these two ideals and aims of university education.

Another matter I would like to draw your attention to is the need for strengthening secondary education as a prerequisite for remedying certain defects in the education imparted at present in the universities. Prof. Jayaweera pointed out that in the schools now there is a tendency for the Arts stream to get the rejects from the Science streams. It was also pointed out that there is a serious inadequacy in the knowledge of English among the university students for which the schools are primarily to blame. The standard of teaching at the secondary school level is poor and we should take note of this at the university. Some remedial action should be taken in consultation with the Ministry of Education to evolve solutions to the problem of poor standards of secondary education in general and English in particular.

Prof. Jayaweera brought out another important point-the explosion of numbers of those seeking admission to the universities. Not only universities but also social planners and statesmen should take serious note of this problem which calls for immediate action. The present capacity of the university system to admit students is severely limited and as a result there is a large percentage of those who have qualified for admission being left out without adequate avenues of access to other forms of higher education. There is a proposal to expand technical education and this may be a partial solution to this problem.

Prof. Nadarajah mentioned a proposal to amalgamate the Ceylon Law College with the Law Faculty of the university. In Sri Lanka we have the tendency to bring under the university umbrella all forms of tertiary education that do not come under the secondary school system. For instance the School of Aesthetic Studies and the Ayurvedic Institute were for some strange reason brought within the university structure creating a large number of problems. Similar problems could be created by the amalgamation of the Law College and Law Faculty within the university system and I feel that this is a matter that should be carefully examined.

With regard to the teaching of Social Sciences, Dr. Bandaranayake made some comments which are primarily valid but I don't know why he was looking for a centralising concept in promoting social science research in the universities and I am not sure whether there was a crying need for establishing institutionalised research. There has been a fairly high output of research in a number of social science disciplines - geography, history, politics. As Dr. Bandaranayake pointed out in two key areas - sociology and social anthropology - there is a paucity of research. This is due to the fact that these two disciplines were introduced into the country relatively recently and also the migration of our best talent in these two fields. I feel that solutions will evolve with time, perhaps within the university structure itself, once these disciplines become well established and the staff trained gradually. I don't see the need for a centralising concept to develop these two areas within the social sciences.

One thing that strikes me as a university teacher is that there is no proper curriculum development work in the social sciences at the university. We should take serious note of this and perhaps the U.G.C. might consider setting up a separate unit for this purpose.

Finally coming to Dr. Karunatilake's criticism of the universities, I am inclined to agree with Mr. Weerakoon on the question of replies given by graduates at interviews. I feel that Dr. Karunatilake himself might not fare too well at this kind of interview as he was not aware of the exact number of campuses.

Prof. K. Kailasapathy

Of those who spoke today and took part in the Panel discussion probably I am the only speaker belonging to the Faculty of Humanities. Without getting into the controversy of Dr. Karunatilake's and Prof. Mailvaganam's polarised views, I would like to say that as a person representing the Humanities, listening to Prof. Mailvaganam was like reading some of the works of the Renaissance artists with a passion almost elemental in force. He defended university personnel and we are thankful to him. I came to this seminar with a standpoint somewhat similar to that of Dr. Karunatilake: the need for greater social awareness and responsibility on the part of universities. But I have changed my position after listening to Prof. Mailvaganam. In the face of wanton attacks on the universities, we need to defend ourselves and our values. There is no doubt that the universities need to be defended.

With the clarity of a perfect executive the Vice Chancellor of Colombo University has argued that the various bodies of the universities that have come to being with the new Act have cleared the decks, in the words of the Chairman of the U.G.C., and serious thinking and planning can now take place from the long term point of view.

As an insider and not as an outsider like Mr. Amunugama, I will have to accept the position that basic structural changes have been made to enable smooth planning for the future. Today's seminar itself was perhaps such an exercise beginning with the Act and the various structural and operational changes and implementation and thereafter the analysis of the different courses in the various faculties. In fact either by design or by omission the Humanities were somewhat left out although Dr. Bandaranayake would perhaps like to encompass Humanities in the Social Sciences. I hope it is not uncharitable to say that downgrading of the Humanities was also reflected in the earlier administration, the Senate House and the Board of Governors of the University and now the U.G.C. Even though it may not be expressly stated this attitude emanates from the U.G.C. and percolates down to the university - the Humanities and Arts Faculties are given low priority. This is consciously or unconsciously manifested in the seminar itself by not giving an important voice to the Humanities or seeking their opinions on the various aspects in which the faculty could contribute to the development of university education.

Having mentioned these points, I feel that since this session is one of summing up my approach should be to bring some of the points mentioned into closer focus. While the need for various applied sciences, medical and engineering faculties is clear, the total need for culture in society is not clearly defined - although we often talk of the advancement of science and culture in the same breath. Prof. Kalpage might say that this is a matter for the individual universities and faculties to work out. I have often heard him say that we are so used to working in slavery that we are unable to map out our destinies, which may probably be true to some extent. But that is not the whole truth.

From my experience in Jaffna, I think that there is a certain amount of no-man's land, and it is not peculiar only to Jaffna, in the fashioning of new areas of study, new courses or the extension of existing subjects or establishing of new centres of learning where it has not been clearly demarcated as to whose responsibility it is. Even the present autonomy is insufficient. The total effect on culture and society has to be considered I think it was Dr. Karunatilake who mentioned the science syndrome. I think that the Faculty or Senate of a single university is not strong enough or may not have adequate resources to think in national terms of the relationship between the arts and the sciences. I would refer you to the late C. P. Snow who started the debate of the two cultures in Cambridge a couple of years ago. As a teacher interested and involved in university education, I think these matters are beyond the purview of a single faculty or university. An individual university will not be able to take a decision or set the pattern in the priorities to be given to various

subjects and the relationship between them. I don't mean just the money allocated although that question is always there. How are we going to create the so-called quality education of which we talk so often. The substratum or what eventually remains of university education as Dr. Mailvaganam said is very important and that substratum has to do with the concept of culture and the men we are going to produce. This cannot be left entirely to a Faculty or Senate. In the context of present priorities, Dr. Swarna Jayaweera mentioned that the Arts Faculty gets the drop-outs from Medical, Engineering and Science and it is from these so-called backward or less 'intelligent' university students that we have to produce the communicators, linguists, administrators and policy makers of the future. Then there are the problems of teaching in Swabasha and the decline in knowledge of Sinhala and Tamil, not just in terms of numbers but the attitudes being developed towards the language. This is reflected in the fall in the number of candidates sitting the Sinhala and Tamil papers in the G. C. E. (A.L.). An individual faculty or senate cannot take significant steps in developing a meaningful attitude for example to what the role of language should be in the teaching of all subjects in the university. We have to rectify the lack of interest and the falling of standards in Sinhala and Tamil right from the schools to the universities. These are the things which affect the quality of education.

Finally, some universities may in the context of their resources, the availability of staff and personal inclinations for research, wish to carve out certain centres of learning not strictly within Departments or Faculties. I am not certain whether the present structures will enable a University Senate to create such centres. Grants for these ventures have to come from the U.G.C. May be within the Financial Code and Administrative Code the structural aspects of the university set up is fairly clear. But this is not enough and in these matters as Prof. Cruz said, "We are even prepared to receive an order". I won't go so far but I will say that although the concept of freedom is very valuable and idealistic, we should also keep in focus the larger visions of education and the needs of the country and the U.G.C. should give more practical thought to how the universities can implement these ideas. One of the functions of the U.G.C. is to evaluate co-ordinate and even create and influence certain areas which are necessary for the further development of the cultural and scientific aspects of the country. While the hierarchical set-up is clear for universities to plan and implement programmes in most areas like syllabuses and curricula the larger visions of education and society and problems of national language and culture should be the concern of a central body like the U.G.C. and it must clear a path. It can come from bottom and go upwards or start from the top and go downwards or meet halfway. Whatever method is adopted some serious thought should be given to these matters and that will ultimately help to solve some of the problems and accusations that Dr. Karunatilake has made. Thank you.

Dr. S. Kalpage

There is a mechanism whereby the larger visions of education and the relationship between various disciplines can be discussed and these are the five standing committees of the U.G.C. Each Committee is chaired by a member of the U.G.C. There are about 6 or 7 members in each committee and more can be co-opted when necessary. The Chairman of the Standing Committee for Humanities and Social Sciences is Professor Kingsley de Silva. I will be happy to ask Prof. Kingsley de Silva to invite you also to give your views.

Chairman - Dr. R. P. Jayewardene

I wish to thank all of you for participating in this seminar and joining in the discussions. We had a very long day with a lot of useful discussions and some heat has been generated too. I hope the discussions will prove to be fruitful and some useful ideas will come out of the seminar. Thank you very much.

LIST OF PARTICIPANTS

1. Mr. S. Amunugama
2. Mr. D. Arampatta
3. Prof. K. Arudpragasam
4. Prof. (Mrs.) Daphne Attygalle
5. Prof. Wimal G. Balagalle
6. Dr. Senaka Bandaranayake
7. Prof. I. Balasooriya
8. Dr. S. A. Cabraal
9. Dr. M. S. A. Cader
10. Miss. Diana Captain
11. Prof. H. Crusz
12. Prof. C. Dahanayake
13. Prof. (Mrs.) L. L. Devaraja
14. Prof. R. N. D. de Fonseka
15. Dr. S. R. de S. Chandrakeerthy
16. Mr. L. C. A. de S. Wijesinghe
17. Prof. D. D. de Saram
18. Prof. C. R. de Silva
19. Mrs. Daya de Silva
20. Prof. K. M. de Silva
21. Mrs. C. de Silva
22. Prof. W. A. de Silva
23. Dr. H. W. Dias
24. Dr. K. Dissanaikē
25. Dr. J. B. Dissanayake
26. Mr. Y. Duraiswamy
27. Prof. P. W. Epasinghe
28. Mrs. C. M. Fernando
29. Prof. H. V. J. Fernando
30. Dr. J. N. O. Fernando
31. Dr. M. J. Fernando
32. Dr. Neil Fonseka
33. Dr. S. Gnanalingam
34. Dr. R. D. Gunaratne
35. Prof. H. A. de S. Gunasekera
36. Dr. H. D. Gunawardene
37. Prof. Ashley Halpe
38. Prof. A. A. Hoover
39. Dr. K. H. Jayasinghe
40. Dr. F. L. W. Jayawardene

41. Sq. Ldr. M. R. Jayawardene
42. Dr. R. P. Jayewardene
43. Mr. W. A. Jayawardene
44. Prof. (Mrs.) S. Jayaweera
45. Dr. F. S. C. P. Kalpage
46. Prof. K. Kailasapathy
47. Dr. H. N. S. Karunatilake
48. Dr. D. A. Kotelawela
49. Prof. S. R. Kottegoda
50. Mr. J. Kulatilake
51. Prof. A. Liyanagamage
52. Dr. R. Mahalingasivam
53. Prof. A. W. Mailvaganam
54. Prof. M. Maheswaran
55. Prof. S. Muthulingam
56. Prof. T. Nadarajah
57. Dr. (Mrs.) F. S. Niles
58. Prof. B. L. Panditharatne
59. Prof. C. Patuwathavithane
60. Prof. K. R. S. Peiris
61. Prof. K. Jinadasa Perera
62. Mr. Bogoda Premaratne
63. Dr. V. Ramakrishnan
64. Prof. S. Ranawella
65. Dr. (Mrs.) K. Ratnayake
66. Dr. W. Ratnayake
67. Mr. M. S. M. Refai
68. Dr. (Miss) Mano Sabaratnam
69. Dr. S. Satkunanathan
70. Mr. C. E. S. Seneviratne
71. Miss H. K. Seneviratne
72. Prof. K. N. Seneviratne
73. Dr. Percy Silva
74. Prof. K. Tuley Silva
75. Prof. M. U. S. Sultanbawa
76. Prof. L. Tilakaratne
77. Dr. P. Udagama
78. Prof. P. L. D. Waidyasekera
79. Mr. R. B. Weerakoon
80. Prof. (Miss) C. Wickramasooriya
81. Prof. R. H. Wijayanayake
82. Prof. S. Wijesundera
83. Dr. W. M. K. Wijetunge