SENATE

Tuesday, February 29, 2000

The Senate met at 1.30 p.m.

PRAYERS

[MR. PRESIDENT *in the Chair*]

LEAVE OF ABSENCE

Mr. President: Hon. Senators, leave of absence has been granted to Sen. The Hon. Finbar Gangar for the period February 26 to March 2, 2000.

SENATOR'S APPOINTMENT

Mr. President: Hon. Senators**,** I have received the following correspondence from His Excellency the President of the Republic of Trinidad and Tobago:

"THE CONSTITUTION OF THE REPUBLIC OF TRINIDAD AND TOBAGO

By His Excellency ARTHUR N. R. ROBINSON, T.C., O.C.C., S.C., President and Commander-in-Chief of the Republic of Trinidad and Tobago.

\s\ Arthur N. R. Robinson
President.

TO: MR. DAVE COWIE

WHEREAS Senator Finbar K. Gangar is incapable of performing his functions as a Senator by reason of his absence from Trinidad and Tobago:

Now, therefore, I, ARTHUR N. R. ROBINSON, President as aforesaid, acting in accordance with the advice of the Prime Minister, in exercise of the power vested in me by section 44 of the Constitution of the Republic of Trinidad and Tobago, do hereby appoint you, DAVE COWIE, to be temporarily a member of the Senate, with effect from 29th February, 2000 and continuing during the absence from Trinidad and Tobago of the said Senator Finbar K. Gangar.

Given under my Hand and the Seal of the President of the Republic of Trinidad and Tobago at the Office of the President, St. Ann's, this 22nd day of February, 2000.**"**

OATH OF ALLEGIANCE

Dave Cowie took and subscribed the Oath of Allegiance as required by law.

PAPERS LAID

1. Third Report of the Auditor General of the Republic of Trinidad and Tobago on the accounts of the Arima Corporation for the year ended December 31, 1981. [*The Minister of Public Administration (Sen. The Hon. Wade Mark)*
2. Third Report of the Auditor General of the Republic of Trinidad and Tobago on the accounts of the Arima Corporation for the year ended December 31, 1982. (*Sen. The Hon. W. Mark*)
3. Third Report of the Auditor General of the Republic of Trinidad and Tobago on the accounts of the Arima Corporation for the year ended December 31, 1983. *(Sen. The Hon. W. Mark)*
4. Third report of the Auditor General of the Republic of Trinidad and Tobago on the accounts of the Arima Corporation for the year ended December 31, 1984. *(Sen. The Hon. W. Mark)*

ORAL ANSWER TO QUESTION

Millennium Concert
(Expenditure Incurred)

9. **Sen. Nafeesa Mohammed** on behalf of Sen. M. Shabazz asked the Minister of Tobago Affairs:

A. Could the hon. Minister state:

(i) What was the exact cost to the Trinidad and Tobago Government through the Tobago House of Assembly to stage the Millennium Concert in Tobago on December 31, 1999;

(ii) How were the moneys disbursed to companies and individuals;

(iii) The amount of money the Trinidad and Tobago Government through the Tobago House of Assembly paid to the Copyright Organisation of Trinidad and Tobago.

B. Could the Minister state whether Josanne Lennard was ever employed with or was on contract with the Tobago House of Assembly? If the answer is in the affirmative could the Minister state the terms and conditions of employment?

The Minister of Tobago Affairs and Minister in the Ministry of Finance (Dr. The Hon. Morgan Job): Mr. President, hon. Members of the Senate are reminded that this question originally qualified for the Order Paper of January 26, 2000. As a consequence, in order to respond promptly to the question posed by the hon. Senator, the Permanent Secretary in the Ministry of Tobago Affairs was instructed to write to the Chief Administrator of the Tobago House of Assembly on January 6, 2000 requesting the pertinent information on the recently held Millennium Concert in Tobago and also about the employment of a Ms. Josanne Lennard by the Tobago House of Assembly to enable the hon. Minister to prepare an appropriate response.

It is my regret, Mr. President, that, despite verbal reminders, no response to this request has been forthcoming from the Tobago House of Assembly. The Permanent Secretary in the Ministry of Tobago affairs on January 28, 2000 wrote a reminder requesting that the information be sent for the purposes that it was originally requested. Hon. Members of the Senate are therefore informed that this request has not been fulfilled as I stand here this afternoon.

Sen. Montano: I understand the hon. Minister's explanation but can the Minister let us know if the question will be answered at all. If so, can he give us some kind of estimate when? What means will the Minister use to ensure that the question is answered in a reasonable period?

Dr. The Hon. M. Job: Mr. President, my own judgment of the circumstances is that I have an insufficiency of means of leverage to persuade an answer to be sent. I think this matter is linked in my own mind to the question of interpretations of the Tobago House of Assembly Act and the relationship between the Tobago House of Assembly and the Cabinet and the central government. To the extent that different interpretations permit different kinds of behaviour, I think therein lies the necessary answer for which the good Senator is asking. I therefore cannot say specifically what I must or can do in terms of forcing the people on the other side to respond to legitimate requests.

Sen. Montano: Mr. President, I would have thought that at least the goodly Minister could, at this point, instruct perhaps the Auditor General to make an inquiry. After all, he has unlimited access. He can at least extrapolate the information for us because I find it unacceptable for a Minister to say that he cannot get the information. That is in breach of the Constitution, Mr. President. Can he, in fact, ask the Auditor General to make an inquiry for us?

Dr. The Hon. M. Job: Mr. President, this latter request is in process. I came to this Parliament on a similar matter in the Lower House and did commit the Government to asking the Auditor General to investigate the very said matter and that process is in train.

Sen. Daly: Since the Minister has suggested that the Tobago House of Assembly Act may be the problem, is it the intention of the Government to bring us amendments to resolve those interpretation difficulties?

Dr. The Hon. M. Job: Mr. President, I do not know that the interpretations which I refer to as being connected to the particular issue will be addressed in the amendments to come to the Parliament, but I do know that there are other matters that must be addressed that occasion the necessity for amendments. The Attorney General has, in fact, prepared amendments that are soon to come to the Parliament.

Sen. Mohammed: Hon. Minister, I am not too clear on your reply just now about the involvement of the Auditor General. Can you tell us if, in fact, the Auditor General has already been requested to look into this matter and, if so, can you tell us when we can expect some answer to this question?

Dr. The Hon. M. Job: I am trying to answer this as truthfully as I can. I had intended sometime last week to formally write the Minister of Finance to set the process in train and I spoke to him about it. I will promise you that no later than tomorrow I will make sure that he does write the Auditor General, or at least I will tell him that he needs to do that, on the matter of the investigation into the Ringbang Concert, okay.

ARRANGEMENT OF BUSINESS

The Minister of Public Administration (Sen. The Hon. Wade Mark): Mr. President, today is not Private Members' Day. However, I seek the leave of the Senate to deal with "Private Business" instead of "Government Business".

I also seek leave of the Senate to deal with "Bills Second Reading" before dealing with "Motions".

Agreed to.

NATIONAL CHUTNEY (INC'N) BILL

Order for second reading read.

The Minister of Culture and Gender Affairs (Sen. Dr. The Hon. Daphne Phillips): Mr. President, I beg to move,

That a Bill for the incorporation of the National Chutney Foundation of Trinidad and Tobago and matters incidental thereto be now read a second time.

Mr. President, a Special Select Committee of the House of Representatives was appointed to consider and report on the Bill. The Committee's report was adopted by the House and the Bill was passed.

Mr. President, I beg to move that the Bill be now read a second time.

Question proposed.

Question put and agreed to.

Bill accordingly read a second time.

Bill committed to a committee of the whole Senate.

Senate in committee.

1.45 p.m.

Clause 1 ordered to stand part of the Bill.

Clause 2.

Question proposed, That clause 2 stand part of the Bill.

Sen. Daly: Mr. Chairman, I would like to ask a question. If I understand this clause, this body that is being incorporated is going to carry the word "National" in its title. Am I right? I wonder whether this is a good thing. When we were a colony, it was not possible to get permission to incorporate a company using the word "royal" except in very special circumstances. I am wondering why we are conferring on what is essentially, a private group of people, the title "National". It is not an entirely academic question, because a lot of these organizations that we incorporate make very good money with a lot of their promotions. I am concerned, if we give the word "National" to any private body—it could be a religious body, a cultural body—we are in some way, at least, sending a subliminal message that they are official. I have a little problem with incorporating any body with the word "National" in its title. *[Interruption]*

Sen. Prof. Kenny: Mr. Chairman, we have had this problem with the incorporation of the Safety Council of Trinidad and Tobago which had originally proposed the name of National Safety Council. We sought legal advice on it and the advice was, that it was inappropriate to name this body "National" and it became the Safety Council of Trinidad and Tobago which has passed through this Senate.

Sen. Cuffy Dowlat: Mr. Chairman that is exactly the point I wanted to indicate. I chaired that committee and we did seek advice from the Solicitor General's Department who advised that it was inadvisable to use the word "National" in private organizations.

Sen. Mark: So we will have to delete that.

Mr. Chairman: Madam Minister.

Sen. Dr. Phillips: Mr. Chairman, on the basis of the comments, then I would suggest that we remove the word "National" from the name.

Mr. Chairman: The amendment is that the word "National" be deleted from the Bill wherever it appears.

Sen. Daly: Mr. Chairman, may I receive your guidance? Does that mean that it would come out of the short title?

Mr. Chairman: Wherever it appears on the Bill.

Sen. Daly: Thank you very much.

Sen. Mohammed: Just one question. The name of the organization will now be—

Mr. Chairman: The Chutney Foundation.

Sen. Mohammed:—The Chutney Foundation or should it be that we are replacing the word "National" with the word "The".

Hon. Members: No. *[Interruption]*

Sen. Prof. Ramchand: Mr. Chairman, would calling it, The Chutney Foundation of Trinidad and Tobago have the same effect of making it look like, the only?

Question put and agreed to.

Clause 2, as amended, ordered to stand part of the Bill.

Mr. Chairman: In the light of the point made, I think we will revert to clause 1, make the amendment there and say "all subsequent places where "National" appears, it shall be deleted". So with your permission, shall I revert to clause 1?

Hon. Members: Yes.

Clause 1 recommitted.

Question again proposed, That clause 1 stand part of the Bill.

Mr. Chairman: The word "National" at clause 1 and at all subsequent places where the word "National" appears, should be deleted.

Question again put and agreed to.

Clause 1, as amended, again ordered to stand part of the Bill.

Clauses 3 to 9 ordered to stand part of the Bill.

Preamble ordered to stand part of the Bill.

Question put and agreed to, That the Bill, as amended, be reported to the Senate.

Senate resumed.

Bill reported, with amendment, read the third time and passed.

SCIENTIFIC RESEARCH
(POLICY GUIDELINES)

[THIRD DAY]

Order read for resuming adjourned debate on question [November 23, 1999]:

> *Be It Resolved* that Government states and elaborates its policies and priorities for the general direction of scientific research and technological development in the country and measures which it might take to ensure more efficient use of resources in the pursuit of these policies. [*Sen. Prof. J. Kenny*]

Question again proposed.

Mr. President: Several Members have spoken already and those Members know who they are.

The Minister in the Office of the Prime Minister (Sen. The Hon. Lindsay Gillette): Mr. President, thank you for giving me the opportunity to participate in this debate on such an important issue moved by Sen. Prof. Kenny, with respect to science and technology as it relates to Government's policy. Government recognizes that the quality of life of its citizens is greatly influenced by the extent to which scientific and technological innovations are utilized. In light of this, it will seek to strengthen, invigorate and guide the national capacity in this sphere so as to support and enhance the critical pillars of economic advancement. The focus and emphasis will be the creation of wealth through the knowledge-based industries.

In 1995, Niherst prepared a draft national policy on science and technology for Trinidad and Tobago. The policy envisioned that this country will use science research and technology as the fundamental ingredients to advance itself into the grouping of industrialized countries by the year 2020. Instruments to achieve this goal include an industry driven focus for research and development, education and training, and the establishment of a competitive pool of funds and fiscal incentives to industry for promoting research and development.

1.55 p.m.

In order to create knowledge wealth and an economy that moves away from gas and oil, to an economy that depends upon knowledge base, we must really look at some statistics. If you look at 1976 and you look at Jamaica, Malaysia, South Korea, Singapore and Trinidad and Tobago, you would see that secondary education enrollment in Jamaica was 58 per cent with a per capita income of US $1,150; Malaysia was 45 per cent enrollment with a per capita of US $930; South Korea was 63 per cent enrollment in secondary education with a per capita income of US $2,880; Singapore was 55 per cent with US $820, and Trinidad and Tobago was somewhere around 40 per cent with US $2,380.

When you look at 1996 now, what you actually see is that Jamaica has gone to US $1,600; just about a 40/50 per cent increase; Malaysia, US $4,370; Singapore, $30,550; South Korea, $10,610 and Trinidad and Tobago $3,870. What this can be attributed to really is what has happened with tertiary education and enrollment.

For example, Jamaica only had 6 per cent enrollment in 1995; Malaysia, 11 per cent; South Korea, 52 per cent; Singapore, 34 per cent and Trinidad and Tobago, 8 per cent. This was taken from the World Development Report. So, clearly, for us to create a knowledge base industry, we have to have some sort of level of education at the tertiary level.

The establishment of the College of Sciences, Technology and Applied Arts of Trinidad and Tobago, which is now known as COSTAATT, was named by a Cabinet decree in January, 1999, with a view to launching the college as a fully functioning entity by September, 2000. What is hoped to achieve, really, is that students having five O'levels or more passes and who cannot get access to tertiary education at the University of the West Indies, COSTAATT would play a very pivotal role in doing this.

Seven institutions will come under COSTAATT—the Eastern Caribbean Institute of Agriculture and Forestry; Government Vocational Centre; John S. Donaldson Technical Institute; Joint Services Staff College; Metal Industries Company; San Fernando Technical Institute; the Niherst Colleges, of particular emphasis will be the School of Languages, College of Health Services, School of Nursing and General Education Division.

The establishment of a permanent national science centre operated and managed by Niherst will also facilitate the implementation of a rich, diversified programme of informal science education activities for the entire population. Government will continue to facilitate the upgrading of the Caribbean Industrial Research Institute (CARIRI) by providing funding for further capacity building and expansion of technical support services. The goal here, really, is to assist in economic development by carrying out industry driven applied research leading to new product development and providing expert advice.

Mr. President, over the medium term, Government will develop and implement a national science and technology plan and will seek to develop greater coherence in the national system of science and technology using a partnership approach involving both state and industry. In order for that to occur, we must have fair competition and we must establish a regulatory framework to ensure that there is fair competition. To date, intellectual property legislation—a requirement under the Uruguay Round—has been passed by Parliament and will be enacted shortly.

Sen. Mohammed: Those laws were already done.

Sen. The Hon. L. Gillette: Information technology—the delivery of services assumes an efficient and modern telecommunications sector, hence, there is need for development of this sector. A national policy on telecommunications has already been prepared which seeks to promote the establishment of a legislative and regulatory framework that would allow for improvements in the pricing and quality of the telecommunication services in Trinidad and Tobago. Complementing this policy will be the National Information Technology Plan (NITP). What this will really do, is target information technology oriented industries. Government, through the Office of the Prime Minister, the Ministry of Industry, Trade and Consumer Affairs and Tidco, will formulate plans in the NITP to promote information industries in Trinidad and Tobago.

The objectives of the NITP would be three-fold:

(i) enhance the infrastructure for increased competitiveness by focussing on areas such as telecommunications, research and development;

(ii) encourage strategic alliances between local and foreign firms involved in information technology; and

(iii) generate capabilities in individuals through skills training and management development.

At present, Trinidad and Tobago has the human and technical resources to enter low-end areas of the telecommunications industry areas such as call centres areas, telemarketing services and voice-based help desk services. These ventures do not require a significant amount of IT training, nor do they require any sort of high-speed digital access to the telecommunications PSTN, which is the local network. However, to become internationally competitive in a high-end export service, such as internet-based applications and web designs, policies will focus on developing modes providing advanced training.

A necessary requirement to compete in the high-end areas of the information services involves upgrading the telecommunications system to a digital standard. We must be able to accommodate, embrace and harness the existing technologies of today, such as internet, voice, data, video conferencing, hence, we need to impose on our network a digital backbone that would allow and have the capacity and band width for easy connection to international networks, such as the ISDN which is the Integrated Systems Digital Network.

A national policy on telecommunications was prepared by a Government-appointed working group. The working group recommended, in addition to the amendments to the 1991 Telecommunications Act, the creation of a new regulatory body called the Telecommunications Authority. Aspects of this policy would encompass universal service guidelines, interconnection policies and a level playing field for both local and international people who wish to participate in the telecommunications environment of this country.

This legislation would replace the Telecommunications Authority Act, No. 40 of 1991 and the Wireless Telegraphy Ordinance and has already been drafted by the Ministry of the Attorney General and will be laid in Parliament shortly. This Act will establish conditions for two things, namely:

(i) an open market for telecommunications services, including conditions for fair competition, at national and international levels; and

(ii) the facilitation of an orderly development of a telecommunications system that serves to safeguard, enrich and strengthen the national, social and economic fabric.

The Government has already entered into negotiations with Cable and Wireless with the aim of ensuring an easy transition to a competitive environment. One of our main concerns, really, is the interconnection policy and the universal service—interconnection meaning mobile to mobile; mobile to fixed; and fixed to fixed telephony. We have to ensure a fair and transparent means of interconnection. Also, we have to ensure that universal service is properly adhered to.

As you know, right now, Trinidad and Tobago has a teledensity of approximately 21 per cent, as compared to countries like Barbados that have roughly 44 per cent and the United States which is 66 per cent teledensity. You will see later on in my contribution where teledensity is directly related to technology and technology-driven industries.

Trinidad and Tobago, for the most part, Mr. President, is a user and not a developer of science and technology. The major users are concentrated in the energy and manufacturing sectors as can be seen from the development of these industries over the past 10 or 12 years. To promote competitiveness and efficiency, we must conform to ISO 9000 and 14000 standards, hence it is necessary for our local sector to embrace and use the best available appropriate technologies.

The mobilization of science and technology as a driving force for economic and social advancement will only flourish in a receptive environment. The creation of a science consciousness and a technological culture is, therefore, crucial for the development of a thriving and growing economy. Our education system must develop an understanding of industry needs in order to properly equip students to participate in the labour market of the future.

The National Institute of Higher Education, Research, Science and Technology—over the last few years, activities at Niherst dealt with sensitizing the general population to the benefits of science and scientific research. To this end, Yapollo was created. Yapollo really comes from an old Amerindian term that means “discover” and it is an interactive travelling science exhibition that moves through the country from mall to mall, place to place, school to school, sensitizing the public with respect to what technology is and what technology can do for this country.

In 1997, Niherst hosted the first science and technology festival and was also instrumental in funding and securing international aid in the following areas: energy—enhanced oil recovery; plant species—tissue culture; technology—agricultural research evaluation; in the construction industry, it dealt with expansive clays; disaster preparedness—landslide hazard mapping; remote sensing; post harvest technologies in agriculture and horticulture, and biological pest control.

In collaboration with the National Gas Company, Niherst formally opened the temporary home of the National Science Centre in 1998, which is really the home of Yapollo right now. I think it is located up at Maloney.

In a similar vein, Government will introduce the Prime Minister's Award Scheme for Innovation and Invention and this initiative is intended to foster a culture of creativity, innovation, invention and entrepreneurship throughout this country.

Building on past achievements and institutional strengths, as well as an assessment of challenges and needs, the strategic vision of Niherst is to achieve the following:

- provide informed opinion and advice including policy options to the Government on matters in both science and technology;
- manage and direct public investments in Trinidad and Tobago;
- promote science and technology.

The establishment of COSTAATT, of course, will require an amendment to the Niherst Act, where some modifications to cater for the organization's enhanced role in research and development will be made.

The vision of the Caribbean Industrial Research Institute for the new millennium is to be the best independent testing facility in the Caribbean area. The Institute has become one of the major suppliers of environmental service to the environment, to the Environmental Management Authority. There exists already in this company an excellent skills base and the focus now is to provide the necessary equipment support. It continues to play a major role in the energy sector as the major petroleum laboratory within the region and as the main ministry of energy laboratory.

The chemistry laboratory continues to play a critical support role for the food, chemicals and pharmaceuticals industry and also light manufacturing sectors of this country.

2.10 p.m.

Its UKAS accreditation also enhances the services and provides timely and quality support to exporters. To achieve its objectives, the Caribbean Industrial Research Institute (CARIRI) has embarked on the procurement of specialized testing equipment in the areas of environment, petroleum, chemistry, industrial materials, calibration and biotechnology.

The Metal Industries Company Limited (MIC) is to function as a catalyst for the growth, development and diversification of the local industrial and manufacturing sector by operating a seeding institution to develop and launch new products. This company developed the commercial production of the steel pan and has the capability of manufacturing a wide range of agricultural and industrial machinery. To date, MIC has approximately 300 customers within the local manufacturing sectors and 12 regional customers outside of Trinidad and Tobago.

Mr. President, there is going to come on stream the National Energy Skills Centre which would be known as the Trinidad and Tobago Institute of Technology. This would provide specialized and professional levels of technical training to engineers, technicians, managers, supervisors and employees of the energy and industrial sectors.

Sen. Prof. Kenny, with respect to the University of the West Indies, in the field of agricultural research, the Faculty of Agriculture and Natural Sciences has made and continues to make, major contributions through its academic programmes. It is home to the world-renowned journal of *Tropical Agriculture* and *The International Cocoa Genebank* and has an outstanding record for research on several important tropical crops. It falls into three main categories:

- plant and crop sciences;
- livecrop science, which involves animal nutrition, forage production, livestock production and wildlife farming; and
- agricultural economics and extension.

Sen. Tota-Maharaj: Sen. Prof. Spence has an interest in this.

Sen. The Hon. L. Gillette: With respect to information technology we can level the playing field. In order for us to really become a knowledge-based nation, we can level the playing field right now with technology. It takes us quite a bit of time when we have to attract people into this country to do big energy projects,

and it is good, we can do that. But when one speaks about our knowledge-based industries, with the advent of the Internet—I am going to read, for Members, something which came out in the *Caribbean Business News* by Michael Bloomberg, Mr. President. It says:

> "…if he were in charge of a developing country, one of the first things he would do is encourage competition in telecommunications. 'Because only if there's competition, do the companies give you better value, lower prices, and better service which maximizes changes."

We have an absolute golden opportunity now, with the advent of the Internet.

If one looks at Microsoft—*[Interruption]*

Mr. President: Hon. Minister, can you name the publication and the date please?

Sen. The Hon. L. Gillette: All right. It is Thursday, February 17, 2000. It is called *Caribbean Business*, Mr. President.

We can get into technologies. We can invest in technologies. When one gets into research and development like genetics and micro processes one has to have a huge amount of capital and one also has to have a huge market to sustain growth. I will speak later about the development of a science technology park which attempts to harness these technologies. In the meanwhile, I would speak about knowledge-based industries.

When we look at Microsoft as an example, they, in 1998—this is the annual report, Mr. President—had US$6.84 billion in content-based applications. What does the Internet do for us immediately? There is no reason, at all, why Microsoft, Earth Link, or America-on line cannot be resident in this country once they deregulate, because the same technologies that they utilize, we utilize. The same knowledge they have, we have, and all that is preventing us from doing this is bandwidth: whether they use the America's I cable underground, whether they use satellite services just to move data to and fro, we have a unique window of opportunity in this country right now with Internet-based applications to really develop the future for our nation.

With respect to the development of a science, technology and innovations park, science and technology and specifically information technology are spreading across the Caribbean at a rapid rate. Technology parks are generated and have generated jobs in excess of 3,500 within the smaller islands of the Caribbean. Trinidad and Tobago, presently, is competing with technology parks in Cuba, Santo Domingo, Jamaica and Barbados.

As a comparison for Cuba over 170 companies quickly located within the first two years of the park's operation in that country. The Dominican Republic has 200,000 employees working in 27 industrial free-zone parks. Technology-related employment is approximately 10,000 where over 30 firms are involved in electronic assembly. These firms such as: General Electric, Westinghouse, Brundy Corporation and Allen Bradley. Approximately 7,000 employees are involved in the information-related industries, particularly call centres. Interestingly Jamaica, through the digi-port service at Montego Bay, employs right now, 10,000 persons in the informatics division and that is growing. We have to decide either to participate in this new information economy and do it right now, or through no action, decide not to participate.

Sen. Daly, this is really for you. Earlier this year, the Tourism Industrial Development Company (TIDCO) together with Lockwood Greene Engineering, hired this firm to really develop a new economy for Trinidad and Tobago. What do I mean by that? The Government is trying to move away from dependence on oil and energy and develop an economy that is based on technology or develop an economy that is all knowledge-based. To this end, feasibility studies have so far been positive for this country to proceed with the establishment of a science, technology and innovation park.

This project proposal calls for the park to be located on an 1,100 acre site at Wallerfield. That is in close proximity, of course, to Piarco International Airport as well as the University of the West Indies. Estimates by TIDCO and Lockwood Greene indicate that employment will be in the region of 5,000—9,700 over ten years and approximately 10,000—20,000 indirect jobs over the same period. Government investment is also projected to be US$107 million over the long term.

Phase I of the project involves the development of an initial 200-acre site of the 1,100 acres. This phase would consist of the development of site infrastructure and the construction of:

(i) an incubator multi-purpose facility;

(ii) a technology institute; and

(iii) 11 single user buildings.

We hope this could actually come on stream in 2000/2001.

For the science, technology and innovation Park to be successful, it must be professionally marketed.

Sen. Prof. Spence: You mentioned a technology institute, I am asking if that is the same one you referred to earlier or is this another technology institute?

Sen. The Hon. L. Gillette: It is the same one.

A marketing workshop was held in February of this year between Tidco, Lockwood Green, Government agencies and other stakeholders with a view towards developing a marketing plan for full implementation during 2000. So committed is the Government to this project, it has already allocated $5 million under the Public Sector Investment Programme (PSIP) to begin work on this project.

Electronic government is defined as the way government uses information technology to stay relevant in a knowledge society. There are four distinct aspects or phases of electronic government.

1. using information technology to store data digitally;
2. getting public servants networked;
3. developing an Internet-based public service; and
4. fostering digital democracy through the use of information technology in the political process.

2.20 p.m.

To this end, Government is committed to developing a wide area backbone from ministry to ministry and state companies; that would have sufficient data bandwidth to do calendering, e-mail services, video conferencing and, into the future, probably voice and voice over IP circuits. We will have one big network and I envision that one day this network would probably be the largest of its kind within the Caribbean. This network can be used as a conduit for e-commerce in Trinidad and Tobago connecting automatic teller machines (ATM) and other debit machines and linking them with machines outside of Trinidad and Tobago.

Distance learning: A new socio-economic paradigm is currently unfolding through knowledge-driven industries and the promotion of free trade and mega trading blocs. A highly skilled human resource complement is an imperative for development in this technology-dependent age. In light of this, distance learning is both a distinct alternative and an obvious complement to traditional education and training methods.

A distance learning secretariat has been established to promote, manage and monitor various offerings to a variety of different modes including broadcasting and the Internet. The distance learning offerings in initial years would be sourced from providers with international credibility. One of the major responsibilities of the secretariat is producing and reproducing licence or lease print and non-print materials in support of specific programmes and providing resource materials and documentation electronically or by print.

Telecommunications: Presently, the telecommunications sector generates approximately $1.4 billion in revenue, which is roughly 3 per cent of the gross domestic product (GDP) in Trinidad and Tobago for 1999. It employs roughly 3,000 people. Basic telecommunication services are provided by the Telecommunication Services of Trinidad and Tobago (TSTT) which is a company owned 51 per cent by the Government and 49 per cent by Cable and Wireless. The country has a teledensity ration of 21. This is what I was referring to. [*Senator shows graph*]

When you look at teledensity, which really is the amount of communications that the public has per 100 persons, in the United States, for example, there are 90 million Internet users, you have a teledensity of 66.13 per cent. In Europe, there are 42 million Internet users; you have a teledensity of 55.64 per cent. If you look at the South American countries, Mexico has 800,000 Internet users, teledensity, 10.36 per cent; Argentina, 300,000 users, teledensity, 20.27 per cent; Venezuela with 8,000 Internet users has a teledensity of 11.67 per cent, which is roughly .3 per cent of the population. So in order to really have a rich economy, Government must focus its efforts on deregulation and open up the telecommunications industry to everyone.

Telecommunications Services of Trinidad and Tobago is currently upgrading its infrastructure facilities and among the projects is the Americas II fiber optic underground cable which is intended to meet future demands for international voice communications and data traffic. Over the past 20 years we really have been using and relying upon Intelsat for voice and data transmission. However, over the next five years new satellites in orbit are coming on stream which are Globalstar, the Iridium project, Teledesic and Skybridge. With deregulation and proper interconnection policies we can access these technologies and we would have no problem.

Also, there is the new Oxygen Fiber Optics Cable System that is going to link 175 countries throughout the world and they are proposing a hub in Trinidad and Tobago with Government or private sector participation. This would actually

cater for the huge demands of the Internet and e-commerce into the future, total communication. What is really happening—and this is really interesting—is that right now we are trying to become the financial hub of the Caribbean, but by having a telecommunications port in Trinidad and Tobago linking North and South America with respect to traffic, we can become the telecommunication hub of the Caribbean.

If this comes on stream by the year 2003, we can actually be hubbing traffic between North and South America; plus we have the five birds in the sky like the Teledesic Globalstar Iridium project, and the sky is the limit with respect to that.

Interconnection policies, of course, would cater for new technologies, such as INT 2000 standards in Europe which will accommodate CDMA technologies, the CDMA backbone and will allow total interconnection among other technologies, so the whole thing would just open and be free. You can then do Internet wired services and Internet wireless services.

The Government sees the development and effective use of the information infrastructure as the key national objective. Indeed, East Asian countries have made effective use of information technologies the key thrust of their national development strategies. Malaysia, for example, has defined its information technology objectives and included them in its development strategy. The ultimate goal for Malaysia is to make itself into a global information hub. The ultimate goal for Trinidad and Tobago is also to make itself a north and south regional information hub.

Many developing countries are seeking opportunities to provide even wider and broader access to reduce gaps in the availability and affordability of information and to connect their people to each other and the world. We see this as a way to leaping and developing as quickly as possible. However, to keep from being passed by, countries have introduced competition in the telecommunications sector as a prerequisite for advancing into the information economy.

Interestingly enough, the La Horquetta South Government Primary School was selected to take part in what they called the AT&T virtual classroom concept. They were selected to take part out of 300 schools all over the world. The project entailed communicating via the Internet with other schools on a specific topic and the school chose as a topic, the environment, and developed a web page on that theme. As part of their social studies programme, the students designed and built a biosphere with animals and posted the results on the Internet, actually using

Java language. Mr. President, do you know what happened? They came within the top 10; 9 to 12-year olds. Imagine taking that and developing it further into content-based industries; young kids, 9 to 12-year olds—remarkable!

In the final analysis, this Government is committed to the concept of the learning nation defined as a community in which skills, innovation and knowledge creation are systematically promoted, rewarded and intensively applied to the problems of economic and social development.

I thank you, Mr. President.

The Minister of Tobago Affairs (Dr. The Hon. Morgan Job): Mr. President, I do believe that this is one of the most interesting and timely Motions to be debated in this august Senate, and the fate of Trinidad and Tobago depends on how much the issues raised by Sen. Prof. Kenny are internalized in the rest of the society and are converted into projects.

I think that this is the reason that the good Senator articulated the Motion which says:

> "**WHEREAS** it is widely accepted that the scientific research and technological innovation frequently driven by individual human curiosity and creativity, has contributed immensely to social and economic development of human societies;"

In that paragraph lies more than a mouthful. I have to congratulate the Senator on his delivery on the ideas and issues raised, but in order to articulate and explain the Government's position I would have to take some time to go into some of the analysis.

For example, where it says, "it is widely accepted that scientific research and technological innovation" it begs the question: What is the difference between scientific research and technological innovation? Indeed, what are these categories?

Mr. President, I live in a society where I have often had occasion to make comments that because people do not understand them they thought I was putting them down. As I stand here, I know that there are citizens of Trinidad and Tobago and, indeed, the Caribbean and all the developed countries of the world doing yeoman service in areas of science and science-related activity.

There is a son of a gentleman in Trinidad by the name of Selwyn Ryan who is now the conductor of a city orchestra somewhere in Germany; a very high honour, and it says something about what the young people in Trinidad and

Tobago have always been doing. Once upon a time, there was a young Capildeo. Once upon a time, there was a young Dr. Pawan. Once upon a time, there was a young Dr. Brown. I cannot remember what was his first name; Brown the soil scientist. He used to work at Centeno. [*Interruption*] His name was Cyril Brown, Mr. President.

I remember when I was completing my Ph.D. at Purdue University, Professor Brown wanted me to take up an assignment as a research economist on a project he was managing. He was controlling, I think, US $20 million per year on a project to assist in the development of the Sahelian region in Africa where desertification and climate change was wreaking havoc and causing millions of deaths. If I had wanted to go to Africa I would have gotten the job, but I had already spent almost five years of my life in Africa and I thought that I did not want to stay there.

I am saying this because Cyril Brown, from anecdotal and other evidence, was literally run out of Trinidad and treated with very much contempt. He left here and got a job at a prominent American university and ended up as Professor of soil science, head of his department and a renowned international scholar, to the extent that the Government of the United States of America put him in charge of their money to help develop a region in Africa. Brown was a Trinidadian. He is not the only one. I cannot remember the name but there was some Trinidadian in the 1960s who helped the Americans to build guided missiles.

I am saying this because I want to reiterate what I have always said and people never understood me. The problem in Trinidad and Tobago has nothing to do with who is black or white, who is Indian or who came from Calcutta. It has to do with culture. Let me repeat that, Mr. President, there is absolutely no scientific evidence to say that if a baby is born in Trou Macaque it has less prospect to be a mathematician, a physicist, a scientist, a statistician or a biometrician, than any baby born on the same day in Hamburg or Dresden, Osaka or anywhere. What makes the difference is the kind of culture and circumstances under which he or she grows. I will deal with more of that when I deal with the comments of some of the speakers here, but it is important in my introduction to raise these issues so that the mind could be guided to the substance of what this Motion is about.

The Motion is about a way of thinking. Most politicians are not scientists. Their mission in life is to spend all their lives using language to influence people and by that I mean to manipulate them, not to guide them, that is what they do. That is not what a scientist does. Mr. President, you will never hear or, at least, I

have not heard, as a matter of course or necessity, that two scientists want to hate each other or go to war because one scientist said, "What you were talking about is nonsense, I do not agree with that, and here is my evidence." Very often what is likely to happen is that if one scientist had a position and new evidence came up to overthrow his paradigm or ideas, the fellow who has been so worsted will join him in propagating the new ideas, because that is the nature of science; it is a culture—a way of thinking.

When we use the word "technological" in this Motion, what can we mean? That is one of the most important words in this whole Motion, because when the Senator speaks about "contributing immensely to social and economic development of societies", I have asserted and I want to repeat it for the benefit of this Senate, that one of the reasons which explains, more than anything else, the decadence and social backwardness in places like Guyana and Jamaica has to do with the fact that the leaders of those countries in the post-independence period, the intellectual so-called elite, the politicians, never understood the meaning of words like technology.

I would offer as advice and guidance to the national audience that what is meant by "a technology" is a way of combining inputs in which one of the most important inputs is time. You combine these inputs to create output. A change in technology must mean that for a particular set, call it "Set X-", if you can find a way to produce more output than "Set X-" with the same set of inputs, or if you could provide the same amount of outputs with less inputs, you have had a technological change. Technological change and technology have to do with production, with using inputs and outputs and with time and ideas. Simply stated, that is what it is.

All these things that we are hearing about wavebands and so forth, are new technologies because they are different ways to store, retrieve, generate and supply information. Electromagnetic waves were always there, but it took new innovations and ideas—Maxwell and all the people who went before him, Faraday, Galvani and Volta, all these people years before in the 16th or 17th Century, Benjamin Franklin, had to come to terms with what was electricity and electromagnetism, and then to be able to manipulate it, to use it to create generators, dynamos and electrical equipment—and we go on and on, until we have the new technology now, digital computers and things like that.

2.35 p.m.

First of all, we have to deal with the ideas; we have to understand where these ideas are coming from. When I am dealing with the contributions of Sen. Dr. Mc

Kenzie which will be, in my judgment, the most substantial of the contributions that I have to discuss here this afternoon, I will elucidate in my own way, why I think Sen. Dr. Mc Kenzie's contribution is, in my judgment, one of the best contributions on the subject that was made. Maybe I should go into that before I go into other things. Mr. President, if I might remind you, the good Senator from Tobago—this is not the reason I am partial to her contribution I am just partial to it because I honestly and sincerely believe it hits at the kernel, at the core of what the issue is about in this Motion. Most of the other contributors talked about their technologies and scientific research and so forth, but I think there is a foundation underneath that, that we need to look at, and if we do not look at all the debates and all the projects, all the grandiose ideas would come to no good fruition.

The good Senator said things like, for example:

> "…I start with the education system at the schools, to say that I think we should encourage scientific research and technological innovations from the primary school level.
>
> It brings me back to our own childish, playful ways where we, as children, invented a number of things. Little did we know at that time, how much we were using the principles of physics, chemistry and biology in what we were doing."

We made our tops to spin, and I guess what the Senator was saying is that we did not know anything about dynamics and Newtonian physics and so forth, but we made our tops to spin.

It reminds me of a conversation I had with the Senator at my side here a while ago where he was talking about pan and I will deal with that: The question of whether we invented pan in Trinidad and Tobago—and we say that we have the best pannists in the world—are we the ones, in terms of the way the art form and the instruments have evolved, that must necessarily be the greatest beneficiaries of this new innovation in musical instruments? If we would not be, why not? That is the question I am asking. [*Interruption*] If the hon. Senator was listening carefully he was not going to ask that question with that voice tone because I am not really saying that we should not, and the question is a genuine one.

The hon. Senator goes on to say things like how she tried to play priest and used a goblet or something to give the sound a greater resonance; made tractors out of cotton reel and rubber.

"What I am saying is all we had to do was get 'ah' piece of rubber, get 'ah' cotton reel—your parents throwing that away when they sew—and we were using these things..again, somebody could have explained the tension and all that; why you had the grips on the cotton reel so your tractor would not slide.

What I am saying is very simple. Instead of highfalutin type of exhibitions and competitions that we have, for Christmas time, why can we not bring the old-fashioned toys and so forth with an explanation of the physics, why these things were working and how they were working? I am sure that we would be starting from primary school to put into our children a love for science and a love for inventions because after that, children started to invent and improve on the simple inventions."

I am extending that idea as explanation and as policy. I think I am in a Cabinet in this country where people are empathizing with the good Senator. I sense that the country is at a juncture where they have a fortunate opportunity where people understand that you have to go to school and you have to go to children and you have to change the culture down there to provide a foundation on which you can build.

The good Senator, in his presentation of the Motion, talked about the wastage at the University of the West Indies. I was there when he was teaching and I did a three-year honours degree in agriculture doing the agronomy or the crop's option and I took three years to do it. I think it would have been a cause of much shame if I had to repeat or if I had to do something else. It seems to me from what the good Senator is saying, nobody goes to UWI to do a three-year degree expecting to finish in three years; the average is five years and some people are taking six and seven years to do an engineering degree or something like that. So that the explanation for that wastage is the kind of culture that has evolved away from the one that we had 40 or 50 years ago where the stimuli, the culture, the arrangement for excellence and using time efficiently, is no longer there. And it starts in the primary schools.

One of the most burdensome legacies of the PNM regime on this country is the way the primary school education was neglected, in favour of concentrating on the political benefits of spending an enormous amount of money on secondary education. As I stand here speaking to you, debating a Motion on scientific and technological development—we are in the year 2000 and it would shock you to find out how many children, who do the Cambridge high school certificate examination, do it in physics, chemistry, further mathematics or additional

mathematics—well, they would not do additional mathematics at A'level, they would do applied or pure mathematics or some other, because I do not know what the curriculum has now. I myself did A'level pure mathematics some years back. [*Interruption*]

[*Cellular telephone rings*]

Sen. Daly: That is technology.

Dr. The Hon. M. Job: My apology, Sir.

The issue is that while we are here talking about scientific change and technological development and what we need to do to make scientific research more efficient and more productive, many people in this country are not understanding that this is a wasteful discussion and an argument if we are not dealing with our primary schools and our secondary schools and the way they prepare children to get into the first round in terms of doing a first degree and in terms of doing research after that in science and technology.

Mr. President, I was on the point of saying—when I was interrupted through my own fault for which I apologize—that if you look at the profile of the students who take A'levels in this country, what proportion of them do physics? Perhaps, 2 per cent; of that 2 per cent, what proportion of them get a good pass? How many of them at CXC do physics, and what proportion of them get a good pass? How many of them do chemistry and what proportion of them get a good pass? How many of them do—at that level—additional mathematics and what proportion of them get a good pass? You will see a disaster that laughs at the intentions of this Motion. Why is it we want to be bothering about scientific and technological research when we do not have a foundation and a basis for creating a scientific and a technological society, a culture where people understand these things?

This is why I am saying that this contribution of the good Senator is so timely. Indeed, Mr. President, when you consider the substance of what Sen. Dr. Mc Kenzie is saying, all around every little child is every manifestation of what scientists do. You do not have to go in a library to get it. When she is talking about the cotton reel and the rubber she is talking about energy. If you have the appropriate teachers in the classrooms they would know how to use that example to talk about the conservation of energy, and that you do not destroy energy. When you tighten up the cotton reel on the tractor you are using power, you are using your own arm and you are storing it, as potential energy, in the rubber that you are winding-up. In every sense, the same way when you wind up a clock, you

convert the energy from your muscles into energy in the coiled steel spring, which causes the clock to work. A child could understand these things.

If you had teachers who knew about these things they could get it into a child's mind from primary school and they would develop on that. They would understand if I took a stone from the ground and lifted it up, that stone would have a different energy level from when it was on the ground, it would now have potential energy that can do damage—because if I let the stone fall on your head on the ground it can cut you and do damage, and that is work. All of that. You do not need to do a Ph.D at a university to learn these things, you can learn them at primary school. I did not learn this at primary school because I did not have teachers who could have helped me. I learned these things later on as I went on, and it is because of that I feel so hurt, so chagrined, and so pained by the waste that is going on, and the loss of vast opportunities to educate people. This is what is going on in this country and I have to keep speaking on this.

Essentially, I am saying that I am in agreement with the good Senator because the opportunities are there. If you look at the sun, the trees, the plants around you, the wind, the waves and the sea—I did mention to the children in Tobago that every Tobago child should have an ambition to be an engineer or a physicist. Every day, nature is laughing all around them, telling them stories; the beating of the waves against the rocks, against the sea-shore; that original energy comes from the sun that is in the wind that drives the sea; a whole story, a whole lesson is there. Children do not get the benefit of it because they do not have the teachers who can do it.

2.45 p.m.

We are here talking about science and technology without understanding that our system of primary school education is one of the most destructive things that we have invented in this country and, indeed, in the Caribbean. Imagination: That again to me was about an invention. It breeds in one that type of attitude, quoting from the Senator again, to substitute and to use one's knowledge and skill of how things work to make an invention. Every child is an innovator. Everyone knows there is no research that will give you a contrary opinion. Children are always experimenting because nature, apparently, after millions of years of evolution, properly encoded in the genes of every human being, of every child, that will to innovate, to experiment. That is why we learn languages.

Long before a child is known to speak a word that child has been listening and toying with these ideas in its mind. So if the child lived in Germany the child

would speak German perfectly well at three years of age. If the child lived in Caracas at three years of age he/she would speak Spanish perfectly well. If the child was like me and was born in Zion Hill he/she would speak the vernacular perfectly well at three years of age. Later on I learned English so I could speak English here properly, but my first language was the vernacular.

There is a tale in that also, Mr. President. When we gained independence from the British, at that time—for hundreds of years, since 1795, I think, with Sir Ralph Abercromby—we were a British colony in Trinidad and in Tobago for a bit longer than that and English was the official language. Then, at the University of the West Indies there came some people, some wise men, who thought that they needed to massage the ego of these natives who have ascended to the high plateau of independence. "We run a country now, you know. "We have a Prime Minister and a Governor General, or President", and all of that. They thought that a necessary thing was to tell them that English was the language of the oppressor, it was no longer our language.

However, Mr. President, there is no physics textbook that any child in Trinidad and Tobago would ever read that is written in any vernacular of the Caribbean. There is no chemistry textbook that is written in any vernacular. As a result, through the good instrumentation of these wise men and women at the University of the West Indies and their political helpers, there are thousands of children who have been locked into a prison of Ebonics, of zombiedom and of vernacular so they cannot access the knowledge of the world because they do not know the language with which to decode it. They have spoiled and destroyed their own people through their own paranoia, their own insecurity and the passionate intensity of their own grievances that they have converted into policy, Mr. President.

It is important that we deal with these issues in the context of a Motion like this [*Desk thumping*] because, the child who is not exposed to that world of adventure in ideas, does not understand that he/she is equally capable to do what Faraday, Heisenberg, Einstein, and Dirac did. Children need to feel confident that they could do the same things as Dr. Pawan, Dr. Capildeo or all these doctors and physicists who we have at UWI and elsewhere teaching people's children. We have to instil in a child very early the confidence that such is their inheritance. Leibniz, the man who invented the calculus together with Newton, was asked, "How is it that you could always come up with these brilliant ideas?" He said, "If I see further than others it is because I stand on the shoulders of giants". We need children to understand these things at a very, very early age, Mr. President.

I am belabouring this point not because I just want to talk about primary school education and the way people learn, but because it is essential that a Motion like this be properly connected and grounded. We cannot talk about social and economic development and scientific progress in the Caribbean without understanding that our level of living is a necessary, ineluctable and direct consequence of the fact that there were false, flawed and erroneous ideas which were converted into policy 20, 30, 45 years ago. Those ideas gave us the Burnham regime and its economic policy, the Manley regime in Jamaica and its economic policy, Bishop and Coard and even in Trinidad and Tobago, we are suffering from wrong ideas.

I have said many a time, and I want to repeat it, long after the last state farm was abolished in Cuba and Viet Nam and, perhaps, North Korea, the Government will still be planting cane and growing pumpkins at Caroni (1975) Limited. Ideas—how did it come to be like that? You have to go to the ideas and the beliefs. When we are talking about economics, what do we mean, Mr. President? Do people, when they speak about economics, understand that there is an economic science every bit as germane to the understanding of our world as, indeed, there is physics?

Do people understand that there are ideas in economics that have a permanence and pertinence every bit as relevant to life, policy and action as, say, a Newtonian law? For example, the law that says, the masses of two bodies are inversely proportional to the accelerations that they generate in consequence of their mutual action and interaction, that was a core idea in Newton's principia which explained the movement of the planets or the movement of a stone when pelted in order to knock down somebody. Do we understand that there are things like that in economics and that economics is not only about "What I believe", "What I think ought to happen"—these normative prescriptions?

Besides normative prescriptions and normative ideas, Mr. President, there are economic laws and economic facts, like the law of demand, which cannot be repealed by our prejudices. For instance, if the price of normal goods is lessened, we will buy more of them. I do not know that if a Mercedes Benz costs less than half a million—if, for example, the price comes down to $100,000—that we would see more Mercedes Benzes on the road, Mr. President. If the price of gold trebled from what it is now will we see less calypsonians with less gold on their chests? That is the law of demand. Sugar Aloes might wear less gold because it will cost him more and, if the price went down, he would wear more.

That is the law of demand. That has a series of implications in terms of taxation policy, in terms of government intervention in the economy, in terms of

subsidies and in terms of so many things that governments do and do wrongly and create costs for generations to come. That is because they do not separate in their own minds the difference between positive economics or the laws of economics and the normative prescriptions by which people's prejudices are informed. We see that in education policy in Trinidad and Tobago, Mr. President.

As I speak to you, Mr. President, there exists a parallel private education system in this country where, those who can afford it, give their children a good prep school education. They then go from prep school to a private primary school—they pay their money to go to Blackman's or some other primary school. They then sit the Common Entrance Examination, pass for their first choice, Mr. President, and then they attend St. Mary's or the Convent or one of the good denominational schools. They get lessons when they are there too. They then win government scholarships, Mr. President, so they get taxpayers' money to pay for them. Their parents could afford it.

If you look at the scholarship list for the last year, the year before and even further back, you will see that an inordinate amount of the people who win scholarships, Mr. President, are not people who are poor by Trinidad standards. They are not people from the ghettoes, as they say. They are people from the middle class who could afford it, but they were in a cultural circumstance that gave them an advantage from birth. So you have a market operation there and the laws of that market are inexorable in their consequences and their outcomes and people need to understand that.

When people are trying to change the education system to bring in zoning, this, by the way, is something which the Constitution prohibits. If you read your Constitution properly, Mr. President, you will see it says that a parent or guardian has the right to send their child to a school of their choice. So anyone who gets up here and says they want the Government to pass a law, a rule or a regulation on zoning, regulating that children born in Toco must go to a school in Toco, or children born in Charlotteville must go to a school in Charlotteville, I am not going to support that. I think the lawyers will support me and there is a good reason why it ought not to be so. What people need to be focussing on, instead of all these kinds of narrow-minded Marxist, socialist, statist, fascist ideas is how to get markets to work so that people's choices are manifested in their decisions and that everyone benefits from them.

I cannot spend all my time talking about Sen. Dr. Mc Kenzie's contribution. By that I mean there is so much that I need to say that I do not have enough time

to deal with everything, Mr. President, so let us move on a little. We are talking about science and we are talking about technological changes and I explained what I meant by technology and innovation.

The other phrase that the Senator used in his first paragraph was "technological innovation". Now, what do we mean by "innovation", Mr. President? When people moved from the bow and arrow to the crossbow, that was an innovation. More energy was stored in a crossbow and an arrow could then be sent further, killing more people. That indeed was an innovation. When the poisoned arrow was developed, that was an innovation, whoever did it. I do not know who did it first but that meant that when someone was wounded with an arrow, that person might have gotten away, but if the end of the arrow was poisoned and one managed to scratch someone, the poor bloke would die. So that is an effective innovation if one's intention is to kill many people with arrows.

So what do we mean by "innovation"? An innovation is information that is added to information that is already there to create a more effective and efficient process, and that process can just be a way of doing things, or it could be a new implement or instrument. Many of the innovations that explained the Japanese and the Far East Asian economic miracle, Mr. President, had nothing to do with new ideas, it had to do with process engineering where more effective and efficient ways were found to produce things. Added to that, there was the addition of new information incorporated in gadgets.

So that a patent was bought from America, Germany or somewhere and in that patent was an artefact, a piece of equipment, which had so many parts in it. It was then found that if one part was taken away and modified or another part added to it, one could make something that is more efficient in doing a particular thing. So that was an innovation that incorporated a technical change. However, what the Japanese and these people also did was in terms of how they manufactured things. They organized their labour, equipment, procurement and marketing procedures differently.

When I was a little boy, Mr. President, people rode BSA motorcycles. There were also Norton and Triumph motorcycles. These were made by the British. People rode them around in Trinidad and Tobago. I challenge anyone in this House to find a BSA or a Triumph motorcycle anywhere in Trinidad and Tobago or any part of the planet except in a museum. What happened? It is not that the British forgot how to make motorcycles but that the Japanese made the same motorcycle more efficiently, cheaper and improved on some aspects of it. So what people are riding now are Kawasaki and Honda and these kinds of Japanese

gadgets. That is all that happened, new processes incorporating other people's ideas.

This brings me to a very important matter to do with technological innovation. With your permission, I will quote from a statement I made at the Holiday Inn on February 21 that occasioned a lot of grief to some people from South Africa. This is grief that was not intended on my part at all, another case of the particular problem that I have. When I say things and people do not understand me, they interpret them wrongly. It was a lecture to the Commonwealth Science Council's opening ceremony. The purpose of the meeting was to promote champions of innovation in the Commonwealth countries.

I will quote a few paragraphs, Mr. President, because I want to make this point of what we mean by innovation and why it is my considered opinion that the last people who should have anything to do with innovation is either a government or a government bureaucracy in Trinidad and Tobago. When I say that, Mr. President, I do not want you to imagine that I am saying that governments cannot be instigators or part of a process that causes innovations to come to be. In fact, the recently demised Soviet Union is a good example of how government procurement and government intervention could put people and resources together to cause innovation, albeit at an immense cost to their societies. That begs the question again: Could it not have been done cheaper?

In the age of the 17th, 18th and 19th Centuries, but mainly the 17th and the 18th, the age of mercantilism where governments literally controlled every aspect of life and trade, there were also many innovations in shipbuilding, science, technology, the building of clocks and so forth. So that I am not saying that we should banish the government from the process, and I will explain what I mean. I mean that governments and government bureaucracies are about the *status quo*. They are about protecting particular interests. They are not about innovating. If they were, we would not have the education system that we have in Trinidad and Tobago today that is a process of destroying innocent children.

We would never have in our schools children being exposed to teachers who cannot teach, who do not know the subject matter and who have no nurturing, parenting behaviour, with the result that many innocent children at every level, from primary up to secondary, are being unfairly injured by the school system and, in particular, some teachers in it. So we are talking about innovation and I was particular to make some very searing comments that I knew would provoke

resentment in some people—my objective in a Socratic manner to provoke them into thinking.

3.00 p.m.

Mr. President, so I said, "slavery is not the cause of the production of illiterates in the Caribbean. Colonialism was a benefit to India. It was a benefit to Africa and, indeed, the Caribbean because it provided direct access to languages, to culture and institutions of Europe for millions of people who were isolated in their own regional or ethnic self-sufficiency. Colonialism exposed feudal and traditional societies immersed in magic to the iconoclastic spirit of capitalism. Capitalism and the multinational corporations driven by profits are not the reasons for poverty, ignorance and disease in Africa, or India or the Caribbean/Latin American region. Innovations made ship-building profitable. They made commerce and trade flourish to create a global market-place; and private property and capitalism protected by law were essential to the evolution of the culture and institutions which generated the innovations which reduced poverty and increased wealth in a global market-place—innovations."

Sen. Prof. Ramchand: I must have missed a sentence. Is the Minister saying that when he said that, he was making a joke and just trying to tease people?

Dr. The Hon M. Job: Mr. President, no. I am very serious. What I am saying here are assertions of statements which can be taken not as axiomatic or dogmatic, but as hypotheses that you can go and test. I am sure in my own mind that what is going on in Nigeria today, would not have happened when the British were there. The whole African continent is a slaughterhouse. One of the main explanations for it is the retreat of colonialism. So all those animosities, rivalries and ethnic peculiarities are now giving free rein to themselves. The same problem there is in the Balkans, so it is not just an African problem. You see it in the Balkans; you see it in Sri Lanka; you see it all over the place. What I am saying, and I want to repeat, colonialism exposed feudal societies to languages and institutions which link the whole globe into one market-place, long before we had the World International Corporation and, indeed, as I would say later on—I better quote that now, because I think it is the appropriate time to do that.

When we are talking about innovations and exposing children to ideas, I said, to talk about African science is to talk foolishness. This is another nonsense phrase like "African socialism". There is physics, not African physics. The Zulu, Shona, Xosa and other ethnic groups of southern Africa had no use for diamonds in industrial processes. They came from an economy where cattle-raising and

transhumance agriculture was the rule. They did not need any diamonds to make a tool so they kicked it on the ground like another stone. Cecil Rhodes came from a different culture where industries needed diamonds to make tools. Mathematics is not ethnic specific. There is no German chemistry, no Japanese biochemistry. There is chemistry and biochemistry.

Mr. President, when people in India and Africa and the Caribbean are ignorant of modern science they will remain unemployable and poor. It is knowledge, not minerals in the ground, which makes individuals and countries wealthy. The Germans in the 19th Century and the Japanese in the 20th Century played the game of catching up with the leaders of technological convergence and they did it successfully. They participated in the global market-place for knowledge and of information. They participated in the global pool of knowledge and the market systems produced by capitalism. Poor countries have to join this world or continue to keep the people ignorant and poor. That is what I am saying.

Mr. President, we have had the advantage of inheriting certain things from the British and we spent a lot of time destroying them, like our education system, and we are now talking about promoting science and technology when we have a population immersed in obeah. One of the first things that the previous government to this one—the first official act that I knew that they committed was to involve themselves in obeah, to change the dragon from on top the Red House and put a dove, because they were leading people into the belief that this piece of metal had something to do with accidents; it had something to do with fire; it had something to do with "who die". That is involving people in necromancy and obeah. *[Laughter]* It is promoting the kind of culture which is totally antiscientific; that kind of numinous beliefs that we have no power over what goes on in our world.

Mr. President, they would not investigate. Like someone said: if you worship the sun you will never learn the laws of heat. So if you want to encourage a population that is dedicated and devoted to critical thinking, and to that culture which is scientific and innovative you do not do as your first official act, an act of obeah; an act of necromancy; an act of mischievously manipulating the people's minds—

Dr. Griffith: That cost $40,000.

Dr. The Hon. M. Job: —and spending a lot of taxpayers' money to do it too. That is even the worst part of it. I am saying in my paper to these people that innovation, in fact, has to do with a certain kind of culture. I went on to explain to them—Prof. Kenny and Prof. Spence and all these people who have done science

themselves will know that. A lot of the original ideas, the innovative ideas on which their science is founded—not physics or chemistry; all these people with lovely innovative ideas—had nothing to do with university.

Mr. President, in fact, when Newton was at Cambridge and the period before that—Newton was born in 1642, we are talking about the 17th Century—you could not go to Cambridge, you could not go to Oxford: the two universities in England, if you did not believe in the state religion. You could not go there if you did not belong to a certain kind of class, but at that time, innovations and technological changes were going apace—Josiah Wedgewood, Trevithick and Wilkinson—all these people were there inventing things and doing things on which the civilization was based. When they threw out the Huguenots from France in the 16th Century, they went to England.

I remember in the Desert Storm war, the General that was in charge of the British section of the United Nations forces in the desert in Kuwait was a descendant of the Huguenots. A lot of those people who are British and you hear their names sounding French are descendants of these people. From what I have read—I think I read it somewhere in one of Arthur Lewis' works—they were people who were at the foundation of the development of the industrial revolution, in terms of the cotton industry and using waterpower and all of that. All these people were simple men. So that when we are talking about innovation, we do not necessarily have to lead people to the belief that innovations can only take place at the University of the West Indies in St. Augustine. A lot of the innovations that are taking place in the world market—this Bill Gates, for example, was a high school dropout, a university dropout as far as I understand. It is not Bill Gates alone. All over the world there are these people.

Mr. President, look at Japan! I did not know that the Japanese, in order to create the Japanese miracle, or the Koreans had a lot of people doing degrees in—what they used to call it at the University of the West Indies—management studies. After a while people at the University of the West Indies thought, all these Syrians and all these people—they used to call them in the early PNM days, buyers and sellers. What are these people? It was not honourable to buy and sell things to make money. It was not honourable at all. That is a pejorative thing. But you go to Japan and find out how many of these people did a degree in management studies. They have an Institute of Business and they are going to be MBAs. They are going to get their MBAs and their degrees in management studies, and then they will go and look for a work with Sabga, or somebody like that. You see what is happening! Let us be realistic and honest!

Mr. President, we are talking about pan again. When I was telling people in this country 30 years ago, to convert all the pan yards into schools and teach the pan men to read and write, those who cannot read and write, because many of them cannot—and teach them numbers. When you get them to read and write, and they know how to do their tables from 2 times to 10 times, you start to teach them marketing and music. Thirty years ago I was telling them that. To this day they have not done it. What is pan? What is this great music industry? How are people going to use the technological innovation that is pan, in terms of the marketing innovations that they need to make a living from it? It is not a secret to me that Andy Narell, a Jew boy in New York, probably makes more money as an individual than any pan man in Trinidad. Because he comes from a culture where Jews are businessmen and innovators in commerce and so forth, and he knows which door to knock on and how to put things together.

Sen. Daly: Mr. President**,** on a point of order, is the expression "Jew boy" parliamentary language? I would like to know.

Mr. President: No. Just to remind you, when another speaker stands, you take your seat. Go ahead.

3.10 p.m.

Dr. The Hon. M. Job: I did not say it in a pejorative sense, I meant this young man, Mr. Narell, is a New York Jew. Maybe, I should say a Jewish gentleman, if that would be more parliamentary.

The point I make is that innovations do not necessarily have to come out of a university and innovations that are important, in terms of social and economic welfare, do not necessarily have to come from the bright. You do not have to have a PhD, an MSc, or a university degree, to innovate in the sense of creating a new product, a new idea, a new process, to make a living.

I think we need to have a semantic and a language that explains all these things to people, so that words like "technological innovation" become less intimidating, less forbidding. I can imagine somebody who did not have any CXC passes, listening to the radio, hearing myself, or some other Senator, or some politician, talking about how technological innovations are going to change Trinidad and Tobago. What does that mean to me? What do I have to do with that? That has nothing to do with me. I went to some junior secondary school; I do not have any passes; I cannot speak English properly. Lo and behold, they will take me in a fried chicken place, give me a job for two weeks, then fire me. What does "technological innovations" have to do with me?

I am saying this, Mr. President, not because I want to put Andy Narell down, or put "Boogsie" Sharpe or anybody down, but to make a very profound and important point, that when we are talking about innovations, we better understand that we are talking about shifts in ideas, new visions and new ways of seeking and exploiting opportunities that can create products, commodities or services which are worth something in a market-place. That is what I am trying to get at. I am not at all trying to put anybody down as, indeed, I started off saying, that the problem is that many people do not listen carefully, so they do not understand what is being said. Sometimes, even if they listen carefully, they cannot understand because they bring, as some famous person said, "We get from art what we bring to it. We get from life what we bring to it. We get from language what we bring to it." Some people bring so little to the matter of interpretation, that they would not understand even if they listened carefully.

It is for that reason I make these points, that when we are talking about technological innovations, scientific research, creativity and human curiosity, we ought not to limit it to just the University of the West Indies as, indeed, some of the debate went. People spoke about Niherst, the University of the West Indies and how money is spent on cocoa research, fisheries and things like that. We have to look at the broader aspect of things. How can we involve and incorporate all of the society? All the people of Laventille; Bayshore; Sea Lots; the train line; Red Hill, D'Adabie; Pinto Road. How can we make them part of the culture of innovation and of technological change?

Unless we can do that, especially with the circumstances that we have now, where every year we send 20,000 people to high school and five years after, 5,000 of them are going to get full passes.

Mr. President: The speaking time of the hon. Minister has expired.

Motion made, That the hon. Minister's speaking time be extended by 15 minutes. [*Sen. W. Mark*]

Question put and agreed to.

Sen. Prof. Spence: Mr. President, before the Minister gets up again—and I think I agree with much of what he has said—I wonder whether he could tell us what the Government of Trinidad and Tobago is doing about all this, because one of the objectives of the Motion was to get Government's policy. So, if in the last 15 minutes, he could tell us what the Government is doing to correct all the ills that he has pointed out for us. [*Desk thumping*]

Dr. The Hon. M. Job: Mr. President, I can understand the impatience of Sen. Prof. Spence, but I started off by saying that in order to deal with what the Government is doing and what has not been done, because much of what is being criticized and asked, is a consequence of people not dealing with the ideas about which I am talking. I am preparing the foundation so that when I reach the point of corroborating what Sen. Gillette has said, what Minister Gangar has said and what other people would have said, in and out of this august Chamber, there is a foundation, there is an environment of understanding, there is a space of understanding in which you can position it.

That is what I am doing, because I do not want to participate in this debate and leave it as if technological innovation and scientific endeavour are questions mainly for professors at the University of the West Indies. It is a matter for members of Cabinet; it is a matter for Senators; it is a matter for all the people in this country.

Nobody from UWI invented the steel pan. I did not know that any Member of Parliament at that time—what they called the Legislative Council—had anything to do with inventing the steel pan. It is very pertinent, Mr. President, and I crave the indulgence of Sen. Prof. Spence to understand that, perhaps, I should have spent the whole hour, or whatever time I have, on that foundation and then come back for another hour to deal with the other issues because they are so important to moving us from where we are to where we need to go. That is what I am trying to do and, apparently, he is not understanding me, Mr. President. But I cannot help that. I can only do the best I can.

Mr. President, there is the case of Sen. Cynthia Alfred. I need to make a few comments on her contribution, because I thought there were very, many points that we need to elucidate. I quote from her contribution:

> "It is a widely held belief, especially among laypersons, that science relates and is confined to some vague area outside of their understanding."

I dealt with that part of it.

> "Something having to do with eccentric men mostly, in white coats…"

She went on:

> "As for technology, well, that is something to do with space, maybe, making capsules or whatever to go to the moon or maybe even Mars. They are so very wrong…"

And I agree with all that because that is what I was explaining to you in the last 5 or 10 minutes.

> "….but then, they can be forgiven for thinking this because of the high level at which science and technology are unusually placed."

I do not know what "high level" means. I think what has happened here is that we have discussed these things in a kind of arcane way as if they are, indeed, recondite knowledge, inaccessible to laymen. I think I have dealt with that point.

Then, she quoted something about:

> "'…a primary purpose of science teaching should be to demonstrate the application of scientific knowledge to everybody life and to the social and environmental implications of scientific and technological development. Compared with traditional notions of science, modern science teaching should be driven more by societal needs than by theory. Therefore, scientific research is mainly channelled towards human and social ends, such as finding a cure for AIDS or developing new sources of energy, and the result is a complex set of interacting relationships among science, technology, society, education and human affairs.'"

Mr. President, I do not agree with that at all; entirely. I reject that understanding of what science is all about and what is the purpose of science. It is not true to say that the purpose of scientific endeavour should be looking for a cure for AIDS, a cure for cancer, or anything else. Those things come about as a consequence of the scientific finesse and competence of a society that, originally, was given and driven by curiousity, to understand nature and to understand things about them. I think one of the most quintessentially determining and descriptive features of a human being is that Godlike and, I might even say, demonic will, to investigate and find out. That is what drives scientific endeavour, not to look for a cure for AIDS, for TB, or for anything else. That is the point. We do these things and we are able to do these things; we are able to invent all these gadgets.

I remember Michael Faraday in 1821 or 1831, when he was doing his experiments with coiling wires and a magnet, and showing with a magnetometer or ammeter, that where you bring a magnet near to a coil, a current passes through the coil, some parliamentary friend of his asked, "What is this gadget for?" And Faraday said, "My honourable Sir, what is the use of a new born baby?" That is the point.

When Faraday was doing that, nobody had any idea of electric motors, electric trains, generators, amateurs and all these gadgets which make modern civilization

worth living. We cannot conceive of a civilization without the instrument that can convert the crossing of electromagnetic flux by a coil into electricity. All of them are based on the simple principle. All the power stations—we have lights here. Were it not for Faraday's work, we would be living in darkness or having candles here.

So that the idea that drives science and, I think, the programmes and the procedures—notwithstanding the statement I just made—that this Government is willing to get into, are to get people into that culture of inquisitiveness of scientific endeavour. Some institutions and places, as indeed, the institutions that we have here—we need funding at UWI, at the cocoa research and at Niherst—are particular cases. We have a Ministry of the Environment now and if there are particular problems that you want to investigate, you will do that. But, in every case, the basis, the knowledge, the tools, the concepts, the paradigms, that are germane and relevant to the successful conclusion of any particular scientific endeavour, as for example, dealing with AIDS, would come from the disinterested curiosity that has been built up, layer upon layer, generation after generation. That is how you deal with science and technology.

I make a particular departure to say that we ought not to tell children—let me quote it again:

> "'Compared with traditional notions of science, modern science teaching should be driven more by societal needs than by theory.'"

That is what I would call an absurdity.

> "'Therefore, scientific research is mainly channelled towards human and social ends, such as finding a cure for AIDS…"

This is what led us to fascism. This is what Nazism is all about. What Mengele and the Nazis were doing was perverting science to demonic ends, because that is what they thought. They thought that science was to be used to the greater glory of a master Aryan race. Science was to make Germany, Deutschland Uber Alles. That is not what science is all about, so all the non-Aryan people—the Einsteins, the Heisenbergs and the Bonns—had to run from Germany and those who did not get away, were fried alive in the gas chambers, because of this fascist idea of science and technology. We do not need that idea, Mr. President.

Mr. President, the hon. Senator said:

> "The United Kingdom Department of Trade and Industry/Science, on the question of science and technology in a periodical called *Science & Technology* which was done in 1997—this was drawn from the Internet—stated:

> 'One of DTI's objectives is to make the most of the UK's science, engineering and technology, in particular by achieving standards of international excellence in basic science and maximising the contribution of S&T outputs to the UK's economic development and the quality of our lives.'"

I did not make the point that people in the United Kingdom can do that because they have hundreds of years of scientific endeavour. I read somewhere that per capita, the United Kingdom has a higher proportion of Nobel Prize winners than any other country. That is a consequence of the caste-like nature of their educational system where, at the higher levels, they are the best in the world, but down below, that elitist system has not been sufficiently modernized to give to a large cross-section of the population underneath a good education. So, you have in the ghettos of the United Kingdom, generally, a rather mediocre education system, but Cambridge, the London University and Manchester are the best, top of the line. Therefore, they can afford the luxury of telling people they want to set up an institute to convert their scientific prowess into commercial things.

I think we have to be very wary of that kind of attitude because what we need here, more than anything, is to generate a culture that we do not have, to make sure that we have a broad-based cultural understanding of how we need to get people into science and technology. She went on:

> "Here it is, Mr. President, in the United Kingdom, it has been recognized that science and technology—that is science, technology, engineering and so forth—the objective is to achieve international excellence."

I did say that reminds me of Germans; it reminds me of the fascists; it reminds me of what Stalin and the neo-fascists were doing. So that, while we have to focus on using the resources that we have in particular areas, we cannot forget that we cannot become world-class.

There was some politician in Trinidad and Tobago who was saying he wanted to make Trinidad and Tobago world-class. It reminds me, when I was in primary school, there was a story about *The Ass In The Lion's Skin*, and then one day when the ass put on the lion's skin and said, "Lion!", nobody came. That world-class reminds me of that world-class animal. [*Laughter*]

We cannot forget these things. So that when Minister Gangar was here—I have to say some of the things that this Government is doing. I did say that when I got into the Cabinet, there was a committee set up to review the curriculum so that the primary school children would not only be unburdened from what they called

the trauma of the Common Entrance, but they would be properly prepared in terms of that culture, on which you can build.

One of the things I was able—because I was a member of the committee—to get that curriculum review committee to get into that document, was the idea that from early o'clock, at primary school, we need not to be teaching children laws. It is no use telling a little child in primary school, or even maybe in the lower forms of secondary school, what you mean by $V=U + AT$, or $S=UT + \frac{1}{2}AT^2$, or $V^2=U^2 + 2AS$. These are basic equations in Newtonian mechanics. I learnt these things many years ago and those equations are based on an understanding of planetary motions, motions of stones when you pelt them, or rockets, or gunshots, or missiles.

But, indeed, Mr. President, you need to create an environment early o'clock, so that the child will be inquisitive enough to want to get to the stage where they will learn these equations and learn what they mean, Mr. President.

3.25 p.m.

The Government that I am happy to be a part of understands these problems. The Government is trying its best to create that environment from early o'clock. I am in the Cabinet and the Government, I am sure, is supporting my ideas; that we need to create the environment where we can use modern technology to upgrade the quality of teachers.

Mr. President, what I am talking about here—we have a set of obsolete systems that are inimical to progress in this country. We still have a system where we are taking—*[Interruption]*

Mr. President: I just want to remind the hon. Minister that he has three minutes to wrap up.

Dr. The Hon. M. Job: Yes. We are taking people from all over the country and bringing them to one central location to say that they are going to the Teacher's Training College. We do not need those kinds of obsolete systems anymore, Mr. President, when we have computers where we can put lessons or exercises there and get all the teachers in the country to download them and organize some kind of process where one can accredit them and understand what is going on.

I concur with all the things that Sen. Finbar Gangar said in terms of the moneys that we are spending in research institutions, the science and technology

park and the institute for science and technology. Sen. The Hon. Lindsay Gillette mentioned a lot of these things. We have expanded the scholarship programme, Mr. President, and are looking for ways where we can allocate resources so that anybody who gets three A'levels in Science will get a scholarship automatically. The pool of people who would have been trained would increase in the country.

The base of my contribution, Mr. President, was to say that this Government has created a different attitude, a different climate and we are about creating a different culture which will nurture the kinds of beneficial expenditures in science and technology. I did not have enough time, though I neglected to use my time well, to explain how the allocation of resources to science and technology does, in fact, obey marketing laws and the imperatives of self-adapting institutions and systems that are more about promoting the interest of the people there, than in producing output that the taxpayers might want to prefer. All these issues have to be articulated at some other time. I would be grateful to come back here some time.

Mr. President, I want to remind you that my side supports the Motion that all the resolutions, whereas and whereas, we agree with them. As I said in my initial statement: I really, honestly, do believe that this Motion is pregnant with so much implications, so much opportunities, so much possibilities, that I wish this topic can be converted into a national debate.

I recommend that the Senator who moved the Motion; Sen. Prof. Kenny, should try to collaborate and see how we can engage—everybody, all the teachers, the media. The media has been a very perverse and subversive element in some ways in the society, in terms of the way they focus attention. If we can get them to focus attention on Sen. Prof. Kenny's Motion, I think we all would have done this country a great favour.

Thank you, Mr. President. *[Desk thumping]*

Sen. Nafeesa Mohammed: Mr. President, it was not my intention to speak here this afternoon but after listening to the hon. Minister in his contribution, and after listening to all this esoteric nonsense that he has just uttered, I thought it necessary to get up and make a very brief contribution on this very significant Motion presented by Sen. Prof. J. Kenny.

We sat here for the last two hours and more listening to the hon. Minister of Tobago Affairs and indeed the hon. Minister in the Office of the Prime Minister. At the end of the day, we still have to ask the question about what Government's policies are in relation—*[Desk thumping]* to the general direction of scientific

research and technological development in the country and what are the measures which it might take to ensure more efficient use of resources in the pursuit of these policies. We still do not know. Several Ministers have spoken; about four or five of them have spoken and we are still left wondering. At the end of the day what it tells us is that in truth and in fact, the Government seems to have no real policy. *[Desk thumping]*

I must say that I was a bit disappointed in Sen. The Hon. Lindsay Gillette's contribution, because with all the technical jargons he was using, he spoke at length about a telecommunications policy and a telecommunications authority that this Government is going to be setting up. Mr. President, I was taken aback that of all the Ministers on the Government side, Sen. The Hon. Gillette would be speaking about telecommunications. It just confirms the point that the hon. Minister of Tobago Affairs just made: that under this UNC administration the Government has really created a new culture and a new environment, *[Laughter]* because one would have thought that if one has a conflict of interest in a particular field, one would stay out of it as a matter of principle and integrity. That certainly disappointed me, Mr. President. *[Desk thumping]* It was not just on a telecommunications policy, we heard about the Tourism Industrial Development Company (TIDCO) again—*[Interruption]*

Sen. Daly: The posse.

Sen. N. Mohammed:—being involved in the setting up of the science and technology park and some other areas of activities.

Given the Government's past experiences over the last few months and the millions and millions of dollars that are going down the drain under the Government's watch, we have to wonder what is really happening. This Motion raises a very important issue, which the Members on the Government's side seem to be missing. That relates to the more efficient use of resources in the pursuit of the policies as they relate to science and technology. The Government has certainly missed out on this issue. We know that whatever limited resources we may have in our country, we would like to see it used in the most efficient and productive way possible.

Mr. President, I think somebody made mention of the fact that, around 1995 it was, in fact, through the National Institute of Higher Education. (Research, Science and Technology) (NIHERST) a science and technology policy was, in fact, being formulated. A particular gentleman, who is very involved in the—I think there might have been a Green Paper on it and some preliminary work done. Dr.

Narine—this is the second time I am mentioning him in this Parliament Chamber—was very involved in that particular policy. These were things that were happening when the then People's National Movement was in government. I think when this Government came into office, Dr. Narine died about a year or so after. We have to wonder what is the status of this science and technology policy. Please we would like to know what is happening! NIHERST is still around. Who is in charge of NIHERST?

One would have thought that in such an important debate like this, we would have heard from the hon. Minister who is today holding the Ministry of Agriculture, Land and Marine Resources; the hon. Trevor Sudama. I believe some months ago he was the Minster in charge of planning and development. Today, the current Minster of Planning and Development is Sen. The Hon. Brian Kuei-Tung and they have not yet spoken on this very significant Motion. It was under their watch, or at least their portfolio, that these issues would have been dealt with. At least I am assuming so. When one is talking about a science and technology policy, under whose ministry is it coming? We would like to get some accountability from this Government that has boasted so much about accountability.

Earlier today, we saw a classic example of that, where the hon. Minister of Tobago Affairs could not account to the Parliament and the people of Trinidad Tobago, in relation to the question that was asked about a matter involving Tobago and he is the hon. Minister of Tobago Affairs. The Government is here creating a whole new culture in our country. It is destroying all our most sacred institutions. Every day the Government is attacking this one and that one and just denigrating people. Even this afternoon—*[Interruption]*

Sen. Daly: Including Spence.

Sen. N. Mohammed: Independent Senators are being denigrated weekly. The Government wants to attack anybody who criticizes or makes a comment against it. The Government wants to attack the media. Dr. The Hon. Job, again, did it this afternoon.

You know it was shocking too, to even hear, in the hon. Minister's contribution this afternoon, an attack on people's religious beliefs as well. An attack on people's religious beliefs! Condemning people! If it is that some people have some spiritual beliefs, so what! They are entitled to hold spiritual beliefs. Denigrating people left, right and centre, Mr. President. It is a complete breakdown in our society that is taking place.

Hon. Member: Do not give way.

Dr. Job: On a point of order. I never attacked anybody's religion this afternoon, Mr. President.

Sen. N. Mohammed: Mr. President, it is not just an attack on people's religion, but an attack on people's culture as well. When one talks about people who believe in obeah and people who believe in this and who did this and who did that, Mr. President.

Sen. Mark: Is the PNM he was talking about.

3.35 p.m.

Sen. N. Mohammed: Mr. President, they are quick to talk about the People's National Movement. The Government needs to sit back and examine itself and see where it is taking our country, where we are headed. Here it is that on such a significant Motion calling for a science and technology policy which, under the PNM, was being formulated—and it has been lost under this Government because all they wish to do, as the honourable Leader of Government Business did a couple of days ago, is to go on television and boast about this and that. He is in charge of public administration—we are talking science and technology and we know for a fact that we are living in the information age, it is like a revolution that is sweeping through the world. Some analysts have said that just as we have had the industrial revolution, with the information age it is almost like that is taking over.

With all the propaganda they are giving, I remember that at one time prior to my coming to the Parliament Chamber, I worked in a particular state legal department. I felt very privileged, indeed, when so many of us together with the clerks in that ministry were sent on a training course in order to be exposed to the computer system. I think it was operated through the National Information Systems.

Here it is we are talking about technological innovation. We are in the information age and we talk about a technology policy and what have you. Let us just take, for example, in the field of public administration, a classic example. If it is that we want to accept the changes that are taking place and to really move ahead with the times, then we have to ensure that our people are properly trained and, not only that, they must also have the proper tools and equipment.

Last week we had a bill dealing with the Police Complaints Authority and I read extensively from the reports that had been submitted with respect to the operations of that authority. When you read these reports, whether it is the

Scotland Yard Report or all the other reports on the police service, there is a basic cry and call for equipment: they need computers and printers. What are you as a Government doing except just blaming everybody and not wanting to blame yourselves? What is the Government doing in all the various ministries? That is what we want to know.

Sometime ago we came here and debated the amendments to the motor vehicles and traffic laws, to introduce a penalty points system and to have traffic wardens and so forth and that whole new system under the transportation division—[*Interruption*]

Mr. President: Let the Senator make her contribution please.

Sen. N. Mohammed: Thank you, Mr. President; the truth always offends.

As we talk about the Ministry of Works and Transport, a classic example is the condition that continues to exist at the Licensing Division. The Government wants to introduce legislation and set up a new framework in order to deal with the problems on the roads and what have you, but for that system to work, we made the point then and I will make it again, you need to ensure that you have a proper computerized system in place. Do we have that? Hon. Minister of Public Administration, can you tell us whether we have that in place as yet? [*Interruption*]

Sen. Mark: Do not worry.

Sen. N. Mohammed: That is all they are about, bamboozling the people and the country and especially in this year when the place is going to get all heated up we can expect more and more of their propaganda, but the people will not allow themselves to be fooled again, if I may say so. [*Desk thumpin*g] It is really unfortunate that two of the key ministers who could have shed some light on this Motion have not spoken on it. I am referring to the hon. Trevor Sudama and the hon. Brian Kuei Tung.

I remember when Sen. Prof. Kenny presented this Motion. There were three or four main issues on which he tried to focus. If I may just look into his presentation, one of the points he made was the fact that there are certain research institutions that are existing in our country. There are so many various institutions like the Nation Institute of Higher Education (Research, Science and Technology) (NIHERST), the Institute of Marine Affairs (IMA), CARDI, Cariri and so forth. The point he made was about the duplication of efforts in relation to these various agencies.

Apart from the duplication of efforts, he spoke at length about the output and quality of research that is coming out and the relevance of research. This is the main purpose of the Motion—to get the Government to tell the nation and the Parliament how it intends to use the limited resources that are available in order to get more efficient use of resources in the pursuit of this science and technology policy. But, firstly, they have to tell us about their science and technology policy. We are still waiting to hear about this.

We are calling on the Government to please tell us, not little things here and there that are happening, like in telecommunications and those areas that are of particular interest to certain ministers, we want to know from a national point of view, what really is this Government's policy as it relates to science and technology. Do you have a science and technology policy?

I sat and listened to the hon. Minister of Tobago Affairs speak and he made the point that politicians manipulate people's minds. I have to accept the fact now that the hon. Minister is, indeed, a full-fledged politician. I know he is a person who comes from a very sound scientific background, but from his contribution today it is, indeed, very sad, because he was waffling all around the various issues and up to now he cannot say anything about the Government's policy; the Government of which he is happy to be a part.

I am surprised to know that he is still so happy to be a part of this Government after all the injustices that have been taking place in this country, especially as it relates to him and Tobago. I am really surprised that he is still so happy to be a part of this Government, but that is his *modus operandi*, he missed out on a golden opportunity. I know of Dr. Job in the field of agriculture; he has a tremendous amount of knowledge and information. I thought we would have heard something more constructive coming from him but, unfortunately, we did not. It was just the usual condemnation.

Mr. President, at the end of the day, we in the PNM accept the fact that we are in this new era. We are living through this information age. In fact, we embrace this as a challenge. We are not afraid of it and in terms of our policies they just have to look at what they inherited from us and they would see what a very strong foundation they have inherited. [*Desk thumpin*g] They have actually been derailing so many of our policies and programmes and, as a result, this country has been operating on autopilot for the last four years. They have corrupted this country and this society. For them to ask us now, what we have done—we are asking them, what have they done? Where is the science and technology policy that we left behind? Please tell us where it is and what is happening with it.

Mr. President, I just want to reiterate the fact that we are in a new age, a new era and we of the People's National Movement certainly embrace the challenges that confront us as a nation. When we are talking about science and technology we have to look at this issue from a national point of view. We want to know what is the national vision? Where would we like to be as a nation especially as it relates to science and technology?

I would like to take this opportunity to congratulate Sen. Prof. Kenny for his Motion, which really is one that has so many different aspects to speak on. We certainly are supporting the call that is made in this Motion and, once again, we call on the Government to state and elaborate its policies and priorities for the general direction of scientific research and technological development in the country and measures which it might take to ensure more efficient use of resources in the pursuit of these policies. We are anxiously awaiting an answer.

Thank you.

Sen. Philip Marshall: Thank you. Mr. President, I rise to make a short contribution on this very important topic. I did not intend to do so, especially after hearing the very learned comments from the various Members of the Senate who have spoken so far on this motion.

I think that this is a really important issue relating to the whole aspect of allocation of our resources. I would just like to start by offering a distinction in my interpretation of what do we mean by research and innovation. I would like to start by offering a distinction between an idea, an invention and an innovation.

The analogy, if I have gotten my data correctly, is that one could say that Wilbur and Orville Wright—the place was Kitty Hawk in 1908—the Wright brothers invented flight. The innovation was with the DC3, I believe in 1939, where there were five major components and processes which together made the invention of flight a commercial innovation. These were, if I could recall, the invention of the air-cooled engine, a retractable landing gear, wing flaps, a certain body design and a reversible thrust in the engine, which meant in terms of take-off and landing, the lightness of the aircraft and carrying passengers, that an idea or an invention was turned into an innovation. It was innovative because it impacted upon people’s lives, hopefully, in a very positive, commercial and economic way.

Mr. President, the point is that we have significant talent and resources in Trinidad and Tobago where we need very significant government policies to harness that talent and learning. [*Desk thumping*] The hon. Member for Tobago East

talked about the immutable laws of economics and, again, I would like to add here that some of these laws are changing in the knowledge economy. Whereas in the past we have laws of diminishing returns which basically say that the more you consume of something, the less valuable it is, the smaller the marginal contribution for each additional unit; in the knowledge economy, in fact, we have the laws of increasing returns.

The more that you develop our product, for example, a software product, the more implemented is that product. The more pervasive the implementation of that product is throughout the world, in fact, the more valuable that product becomes, because that product becomes the platform where customers using that product are so going to install it in their business processes, that the switching cost to move from that product to another, will be far more expensive than even if somebody came along with a supposedly advanced component. In the new economy and the new knowledge world, what companies are really fighting for is that initial window of opportunity to establish the platform to seek and maintain those customer relationships by being first.

There is another aspect of the change of the knowledge economy and the whole aspect of science and technology. In the old economy, there was the relationship of employer and employee, for the simple reason that the employer, the landlord, had the finance. He owned the land, the factory and the finance.

3.50 p.m.

This is now changing because a major factor of production today is, in fact, intellectual capital where we can now rent land, we can rent buildings and we can borrow capital. In fact, the real capital is now going to be the intangible capital of intellectual knowledge and learning; where, in fact, the values in our society are going to relate to those things that are, in fact, intangible: they cannot be touched, they cannot be felt. Organizations are going to be less and less concerned with bricks and mortar and real assets, as opposed to intellectual assets.

This is an important issue and I go back to Bangalore—please forgive me if I do not get the figures correctly—which I believe was an old military town in India, that started off doing software programming. They were lucky because there was an Indian software engineer who I believe worked for Texas Instruments in the United States of America. By offering to do the arduous lengthy task of systems testing, software programming, and having shipped down through the communications line what we call the functional specifications in software, they took on that aspect of the value chain of software development of

coding and testing. Last year, I believe that the software engineers and computer graduates of Bangalore exported something like US $2 billion in software development.

Mr. President, we need in Trinidad and Tobago to identify some higher value-added components, to enable the fulfilment of the opportunities to be provided to the people of Trinidad and Tobago. This is why Sen. Prof. Kenny's Motion is so important. I was looking through some of the organizations in his presentation—I was not here that day—but he was talking about the different research institutes in Trinidad and Tobago, and one of the key aspects and issues facing us is how do we close that gap between knowledge and action. Knowledge is power. People do not share power easily. I would like to see this Government put forward a knowledge management policy and promote a knowledge sharing culture that is embedded in the performance, reviews and appraisals of those people who lead important Government research institutions.

I am sure in talking to the issue of duplication of effort, not only do we have duplication of effort, how do we have a process and a procedure to ensure that those research learnings and that benefit are shared among the different institutions in a specific area, and the users of that information have ready and clear access to be able to be provided with that information for their economic benefit. Very often when new ideas are spawned, maybe, in agro industry *et cetera*, why people may not immediately embrace those ideas is that they do not have proof whether those ideas have been successfully applied. We should have the ability to have in the whole issue of scientific research and development an all-embracing policy where people who want to consider being entrepreneurs can have access to knowledge bases that are consistent; and which not only represent the fine minds of the researchers of Trinidad and Tobago, as we have been told this afternoon, but additional minds in terms of the opportunities afforded us by the Internet. We need to have, as a policy, this free access to information so that we can take that learning; these ideas; these inventions and turn them into innovations that can provide our young entrepreneurs or our more experienced business people with opportunities that enable us to compete.

Why is a Government policy needed? We have a situation where we have been going through the liberalization of our economies in terms of goods. We have a situation where, being smaller countries in the Caribbean region, possibly we are not being favoured as fairly as we should. We have to open our countries to imported goods, but we are not getting a fair shake at possibly the access to markets that we desire. And we find that we are faced with all of these difficulties

of non-tariff barriers in terms of the knowledge and information that we may, supposedly, put on the packaging materials of our products.

Let me not be distracted. The point I was really trying to make was, the same way that we must open our economy to goods under the WTO, possibly, we should also look at the benefits that would accrue if we open our economy to services; but it must not be a one-sided affair. If we open our economy to services one of the benefits could be that, given the very important intellectual capital legislation which we passed a couple of years ago, Trinidad and Tobago could be an environment where we encourage foreign investors to set up operations here that would lead to the knowledge and technology of, maybe, international banking, insurance and other services which have the advantage, not just simply of being a market for a foreign investor, but providing the learning and opportunities for our people to staff the positions that are required—the market-place being the global market-place.

This is such an important issue, because our companies—although most of our businesses today compete in local or regional markets—have to be globally competitive. As we open our local and regional markets, as the barriers go down, if they are not globally competitive in terms of cost and quality, their products simply, would not be bought, because there are no barriers to prevent extra-regional products and services from being imported to what, traditionally, are our existing markets. We sometimes failed to be reminded that if you look at our balance of visible trade, statistics—I cannot remember them now—you will see that the Caricom countries represent a very important market-place for us. And as they face their own issues—with respect to bananas *et cetera*—which may result in their purchasing power being diminished, it would mean that we must never, never falter from that continuous cycle of improvement.

The hon. Minister of Implementation talked about technology; he talked about communication but, again, I want to reinforce that the significant point is technology which is just simply an enabler; bandwidth is just simply an enabler for knowledge and communication. It is a conduit. What is important is the knowledge and the ability to have a culture, as the Minister of Tobago Affairs dealt with the culture in our education systems to transform from the pre primary school level through to primary school, through to secondary school, the knowledge, learning and platform to equip our nationals to learn.

4.00 p.m.

I would like to see, Mr. President, that in the whole issue of science and technology the Government establishes policies relating to the spending of our

educational budget. Research has shown over and over that the greatest return to a government is expenditure on pre and primary schooling. The next highest return is secondary schooling and the lowest return is, in fact, tertiary education. I have made the point that people must be given the opportunity to have tertiary education but, if you think about it, this encourages the whole circle of success to be successful because, in fact, you end up spending more money on those people who, fortunately, are most equipped, or they will be after university education, for themselves to develop an economic career.

We have to look at our limited resources. We have to go back to the concept that maybe when people graduate from our universities and they get an economic contract or a job they would look at some form of repayment to give others the opportunity. Education is the only way out for us, Mr. President. In this whole issue of science and technology development very often, much to Sen. Daly's chagrin I refer to Singapore as an example. Again, I am not saying it is a good example, but how did they get there?

In 1965 Trinidad and Tobago and Singapore had the same GDP per capita. They focussed on technology and learning. I believe, in fact, that the Prime Minister at one time increased the minimum wages so as to force out highly manual and labour intensive work to Malaya so that the companies that remained in Singapore in business would switch to higher, value-added intellectual content product and services.

Sen. Daly: So what will you do with the energy, boy?

Sen. P. Marshall: Mr. President, that is the sort of thinking that we have to put forward in our budgets. Our budgets cannot be just a simple case of balancing revenue and expenditure. I do not know if it is possible, but, I think it was about two years ago I said it, we should approach lending organizations and ask for some sort of soft infrastructure loan where, in a particular year when we may have a deficit, that deficit will be spent on education.

So often we see development in terms of bricks and mortar. This is not a criticism at all of the whole issue of our need for new airports or roads or bridges, but roads, airports and bridges and concrete and other infrastructure are not necessarily measures of development. We should have policies that could possibly look at private funding of those types of projects with a change in the mind-set such that we may have to charge user fees for the use of overpasses, bridges or roads. We should then take the money saved by the Government not having to incur that cash flow into the collective services, such as education, that

are not immediately measurable and where the positive results of that expenditure may not be felt for six, seven, eight, nine or ten years.

Mr. President, I do not know what the answer is but again I have said, both the Government of the day and the Opposition party must get together and be honest with the people of Trinidad and Tobago and say: [*Desk thumping*] "The most fundamental issues that we need to correct span more than one term in government". [*Desk thumping*] We cannot have decisions that are based on five-year election cycles when the fundamental expenditures that one government may take may be in the same year as an election year but you are not going to spend it on things you physically cannot see, like education, because the results and the manifestation of that good policy decision are not going to be reflected for another six, seven or eight years. When can we have that communication with our people so that we can help educate them that what government may do may hurt them in the short-term but provide them with the ability to have sustainable learning and development?

The future of our people is here, Mr. President. That is where we must spend the money. So when even we look at our industrial policy, this is an important issue because Trinidad and Tobago will never have the money on its own to develop scientific research and development. We need to do that in conjunction with foreign alliance partners. One of my hopes with Point Lisas was that when some companies came in—in fact, it is sad that Nucor recently left, but they were spending their money on innovation.

When, therefore, we talk about direct foreign investment and we sometimes talk about giving away our patrimony, *et cetera*, we must also understand the enormous financing and risk required if there is failure. So Nucor came here, they tried a new process, it did not work and they left. Our taxpayers could not afford that. However, we, by proper government strategies of science and technology, could look at developing the whole issue and concept that Michael Porter refers to as industry and competitive clusters, where certain types of industry come together in a certain area and share that knowledge and learning and our country becomes a centre for innovation, continually attracting new knowledge, new learning, the churning of knowledge and our people in a continuous learning cycle.

So in the same way, to compete in the world today, organizations must have permeable organization boundaries to accept and take new ideas from the outside into the organization. I look to you, Minister of National Security, and say again, our science policy must address the whole issue of immigration and work permits,

et cetera. Where people have something to offer us a new science and learning, we cannot be giving them a hard time to obtain a work permit, always on the understanding, of course, that they can demonstrate, within a certain period—and measurable—a transfer of technology.

Mr. President, I have spent a little longer than I thought I would and I end up with a matter about which I have always spoken and to which I have referred in previous contributions. It is called the wealth accountants' toolkit. You may remember that, Senators, where it said the huge gap in wealth per capita between less developed and more developed nations lay not in a smaller amount of natural resources or minerals or forests available to the people of that less developed nation. The subsequent difference in GDP, earning, wealth and power lay, in fact, in the subsequent exchange of goods and services, knowledge and value added chains among the markets all, in fact, propagated by the issue of intellectual capital.

I know, Mr. President, they are dealing with more people, they are dealing with larger markets, but the whole issue is that technology today, in terms of communications, eliminates geography and oceans. Connectivity is about any brain being available or providing services to the global market-place wherever that brain is located. We must, therefore, put forward a very holistic view of this development issue to make Trinidad and Tobago a place where people would say, "Let us go and settle down there; let us provide these services; let us use the fantastic opportunity and learning capability of the people and let us compete together". To deliver any other message, to do anything less not to address the inappropriate cultures among our learning organizations, is not to exercise leadership.

Mr. President, one of the most important roles of a leader is to recognize when the culture that exists in an organization is no longer appropriate to the survival of that organization. He may have created that culture. Even if he did, he must have the leadership courage to destroy that culture that is no longer appropriate. We have to ensure that among our research institutions, the University of the West Indies, we have a culture of knowledge sharing and building upon each other's learning for the benefit of the citizens of Trinidad and Tobago.

So, Mr. President, I really endorse the importance of Sen. Prof. Kenny's Private Member's Motion and hope that the Government would take heed of all the various contributions made in support of the importance of this Motion. Thank you, Mr. President. [*Desk thumping*]

ADJOURNMENT

The Minister of Public Administration (Sen. The Hon. Wade Mark): Mr. President, if there are no further contributions at this time, before moving to adjourn the sitting of this honourable Senate, I take this opportunity, on behalf of our side, to wish Senators and the entire citizenry a very happy, peaceful and enjoyable carnival 2000. I hope that during the carnival period fellow Senators would take the opportunity not only to enjoy themselves but to rest somewhat because I want also to serve notice that immediately after the carnival period we are going into a long period. We have had some slippages and we have to make up for those slippages as we proceed.

Mr. President, I beg to move that this Senate do now adjourn to a date to be fixed.

Mr. President: Hon. Members, there is a matter to be raised, on the motion for the adjournment, by Sen. Prof. Julian Kenny.

Queen's Park Savannah

(Paving)

Sen. Prof. Julian Kenny: Mr. President, the matter I raise is the recent extension of the paving of the Queen's Park Savannah. I am not actually going to talk so much about the paving of the savannah but about the legality of what has been done. We all, before the nation, swear an oath and the oath includes the words, "to uphold the Constitution and the law". This is what I will address this afternoon because, whatever may be said, what has gone on in the savannah violates the law. I will refer to the law in due course. The wider question is, do we, as citizens of this country, accept that there is such a thing as the rule of law? Why do civilized nations consider that the rule of law is important?

In the absence of the rule of law, Mr. President, we have mere anarchy and I suggest that what has been happening over the past few years, and which has led up to what has happened recently in the savannah, borders on anarchy. We have gone through a period where we have been told that we are being branded. We are branding ourselves internationally. Now, the mechanism of branding has been entertainment, it has been a television programme. I do not know what relationship this bears to the perception of other people elsewhere as to what we are. I would have thought that one of the most important projections we ought to make as citizens is the rule of law and the sanctity of the oaths which we as parliamentarians take, and this is the thrust of what I have to say.

4.15 p.m.

Mr. President, there are two apparent players in the issue of the paving of the savannah. There is the Executive which is the Cabinet, including the hon. Prime Minister, the hon. Attorney General and several Members of Cabinet who sit before us; who have all taken that oath to uphold the Constitution and the law. *[Desk thumping]*

I am often reminded by speeches by the hon. Prime Minister and the hon. Attorney General about the importance of enforcement of the law of the nation. We are told that if we do not respect and enforce the law then it goes into disrepute—the justice system or the legal system degenerates into disrepute—and people have no respect for it and, therefore, it is most important that we recognize that under our constitution, and under this oath of office which we take, that we are projecting ourselves as a civilized nation that we, first of all, project ourselves as a nation that observes the rule of law at the highest levels.

Mr. President, we are dealing in one part with the Cabinet collectively, individually and at ministerial level. Secondly, we are dealing with a corporate body called: The National Carnival Commission, which is not bound by the oath of office, which binds us to observe the Constitution of the land. There are terms of reference as to what the commission does and we are dealing with these parties.

Mr. President, there has been a lot of media coverage. I will not go into the specifics of the comments coming from the highest levels; or coming from ministerial levels; or coming from the Chairman of the Carnival Commission, or the Carnival Commission itself, nor the Vendors' Association or anybody else who has expressed a viewpoint. I would like, first of all, to deal with the subject of the law. I am not sure whether the administration, the Executive has done these things wilfully, or whether it is simply ignorance of the law, but I was told by my friends and colleagues in this Senate—from all sides and benches—that there is a basic principle in the rule of law that once the law is enacted, it does not really matter how long ago it has been enacted. It is nevertheless the law, until such time as the Parliament of this country repeals a particular law, it remains valid. *[Desk thumping]*

Mr. President, I was told that one of the words that one uses is, the law may be atrophied. It is actually a term from science. It does not matter what is the status of the law or what is the penalty. In fact, all countries that have worked according to a function and the rule of law have laws that range with sanctions for breaking

the law. In our case, if you were convicted of murder they would kill you. It has been done. This is the law of the land and it goes through. You could be sentenced to life; you could be sentenced to jail with physical beating; you could be sentenced to a few days; or you could be fined. So there is a full range of sanctions.

My point is that I have read the law that appears in the law books of Trinidad and Tobago. I sincerely hope that the Executive has also read this, because their oath of office requires them to uphold this, the law of the land. It is axiomatic that if this is the law of the land, and we have all taken this oath to uphold the law, it is axiomatic that Cabinet individually, Cabinet Members collectively, may not instruct anyone to take action which is illegal and this is part of my argument this afternoon. *[Desk thumping]*

Mr. President, therefore, I have concluded as a total amateur that there are certain laws which have been broken, in particular, the Queen's Park Ordinance, Chapter 42, No. 6, which gives to the state, the then Governor, the authority to make regulations. The Queen's Park Regulations Chapter 42, No. 6, which are the actual regulations which I have here is the law of the land and there are no less than 19 different offences. It matters little what is the sentencing. That is the law of the land. This law had been amended in 1977 after we became a Republic, where it prohibited the driving and parking of vehicles on the Queen's Park Savannah. I was told that it was enforced for a while. The fine for driving and parking at the Queen's Park Savannah was $250 which, was then, more than a traffic ticket.

Mr. President, when one reads through the law, one will see that the law says, there is only one entrance to the Queen's Park Savannah. It is the Dundonald gate entrance. Here is the law of the land and what has happened? Now, I know that it has been a gradual process, this anarchy that has gradually descended on us. It is something which has taken place over a few years, but nevertheless it is the law. It is an obligation that is binding both legally and morally, on all of the executives who have taken that oath of office to uphold the law.

Mr. President, the corporate body, the National Carnival Commission is bound by all the other laws. Now, while the Government is immune to the Town and Country Planning Act and the State Lands Act, the National Carnival Commission is not immune. The National Carnival Commission has to obey the law like every other corporate body, whether it is private, public or so forth. *[Desk thumping]* My point is that activities which have taken place and which I

have seen are in breach of the law. Again, there is an obligation on the part of the Executive to ensure that—the National Carnival Commission, which is apparently the body which is doing it and which is in violation of the law of Trinidad and Tobago—the sanctions are enforced. It is not only the waving of the paper. I would just like to refer to a couple things relating to the Regulations, the Town and Country Planning Act and to the State Lands Act. First of all—

Mr. President: Senator, you are advised that it is 15 minutes you have to make your presentation, so bear that in mind.

Sen. Prof. J. Kenny: How many more minutes do I have?

Mr. President: You started at 4.13p.m; you have until 4.28p.m.

Sen. Prof. J. Kenny: I think I can finish then; it is very easy. It is an offence to dig dirt on the Queen's Park Savannah; it is an offence to place notice or advertisement on anything in the Queen's Park Savannah. That is something which the Executive of the country has to uphold. Firstly, the National Carnival Commission must have permission or approval from the Town and Country Planning Division of the appropriate Ministry for that particular physical development. This is to ensure that it is done according to standards and it applies to every corporate body or citizen of this country.

Secondly, the State Lands Act prohibits the removal of material. With my eyes I saw, vast quantities of prime topsoil being removed from the Savannah.

Hon. Senators: Who took it? Who get it? Who have it?

Sen. Prof. J. Kenny: Precisely the point. You do not buy topsoil for $5.00 a load.

4.25 p.m.

These are the points I want to make about the law but, Mr. President, I hope that the Government—I have offered my presentation which is a long written one. I was hoping that having offered it in advance, they could respond to my arguments, rather than just giving me a palliative.

I close by making the observation that what is happening there is not a planned development, at least, not according to the official plan. I have in my possession here part of a report, which is a cover leaf on the executive summary which was done by E. Day, Collaborative Incorporated, and E. Pask, Consultants; they are local and foreign consultants. This is a proposed plan for Port of Spain, for Trinidad and Tobago carnival, culture and so forth. This is a Tidco project and

involves consultation with all people, including Trinity Cross holders and here is the plan. The plan does not involve any movement of bands. They have a band route there—if anyone wishes to see this, it is here. This is from Tidco.

Mr. President, I close by saying that in my years in Trinidad and Tobago, I have never seen as cynical a decision and action, as we claim that the year 2000 is the year of the environment, E2K, and we cynically break the law; we cynically hide from people the fact that we have a proposal from Tidco for the comprehensive development, involving something at the foreshore.

Thank you, Mr. President.

Mr. President: The Minister of Culture and Gender Affairs. You also have 15 minutes to respond.

The Minister of Culture and Gender Affairs (Sen. Dr. The Hon. Daphne Phillips): Mr. President, the National Carnival Commission was established as a legal entity by Act No. 9 of 1991. The Act, in section 4, entrusts the Commission with the responsibility of making carnival a viable national, cultural and commercial enterprise, and with providing the necessary managerial and organizational infrastructure for the efficient and effective presentation and marketing of the cultural products of carnival.

By Cabinet Minute No. 2233 of 1994, Cabinet assigned responsibility for the Grand Stand and associated buildings to the Ministry with responsibility for culture, under the direct control of the National Carnival Commission. The rest of the savannah was placed under the responsibility of the Ministry of Agriculture, Land and Marine Resources.

In preparation for Carnival 1998, Cabinet appointed a ministerial sub-committee, which recommended among other things, the decentralization of the administration of carnival activities to carnival interest groups. These are Pan Trinbago, the Trinbago Unified Calypsonians Organization and the National Carnival Bandleaders Association. The sub-committee recommended, as well, the surface preparation of the portion of the way leading off the stage to facilitate the free flow of activities. That portion leading to the stage, both from the Charlotte and Frederick Streets entrances had been previously paved, that is, prior to 1998 and prior to 1994. The paving of the former portion, that is, the portion leading away from the stage, was not implemented prior to 1998.

In preparation for the Independence Day Parade in August, 1999, the Board of the Commission took a decision to hard surface that portion of the Queen's Park

Savannah on which the North Stand is usually accommodated and which is also used for the Independence Day Parade. This was reportedly due to the unusual sogginess of the soil, supposedly caused by the late removal of the North Stand that year because of the activities relating to the hosting of the Miss Universe Pageant in 1999.

In December, 1999, by Minute No. 2738, Cabinet took a decision that the Ministry of Agriculture, Land and Marine Resources be responsible for the maintenance of the Queen's Park Savannah, except for the Grand Stand and associated buildings and the paved area north of the Grand Stand which was to be placed under the responsibility of the Ministry of Culture and Gender Affairs.

The National Carnival Commission prepared the area for Carnival 2000 by painting the buildings, resurfacing the walkways and driveways which were already paved, and by paving selected areas to accommodate the passage of mas bands and steelbands.

By Cabinet Minute No. 362 of February 2000, Cabinet assigned the National Carnival Commission responsibility for the Grand Stand and associated buildings, the paved area north thereof and the strip leading therefrom to the exit on Queen's Park South opposite Victoria Avenue.

Sen. Prof. Spence: Could we be given that again?

Sen. Dr. The Hon. D. Phillips: Mr. President, I thank you.

Sen. Daly: Are you finished? Where is the soil?

Mr. President: You are not permitted debate on the issue unless you want something explained; no new question; just on whatever was said, an explanation.

Sen. Daly: She did not say anything.

Sen. Montano: My question is that the Minister indicated that the National Carnival Commission acted in compliance with the Cabinet directive. But, the question is: Did the NCC act in compliance with the law, the Queen's Park Savannah Ordinance?

Sen. Mohammed: Flagrant violation.

Sen. Dr. The Hon. D. Phillips: Mr. President, that is a new question. It is not related to anything I explained.

Sen. Prof. Spence: Mr. President, I wonder if the hon. Minister could give us the date of the Cabinet Minute to which she referred, and whether it would be possible to let us have a copy of the minute?

Sen. Dr. The Hon. D. Phillips: Mr. President, I referred to three Cabinet Minutes. If I may be permitted. There was Cabinet Minute No. 2233 of 1994; there was Cabinet Minute No. 2738 of December 20, 1999, and Cabinet Minute No. 362 dated February 23, 2000.

Sen. Prof. Spence: Could the hon. Minister explain what the minute of December 1999 directed?

Sen. Dr. The Hon. D. Phillips: Mr. President, I will read it again.

In December, 1999, by Minute No. 2738, Cabinet took a decision that the Ministry of Agriculture, Land and Marine Resources be responsible for the maintenance of the Queen's Park Savannah, except for the Grand Stand and associated buildings and the paved area north of the Grand Stand. These were placed under the responsibility of the Ministry of Culture and Gender Affairs.

Mr. President: I think the Minister of Public Administration has something to say.

Sen. Mark: I just wanted to inform fellow Senators at the next sitting of the Senate, we are going to deal with Bills 1—5.

Question put and agreed to.

Senate adjourned accordingly.

Adjourned at 4.35 p.m.