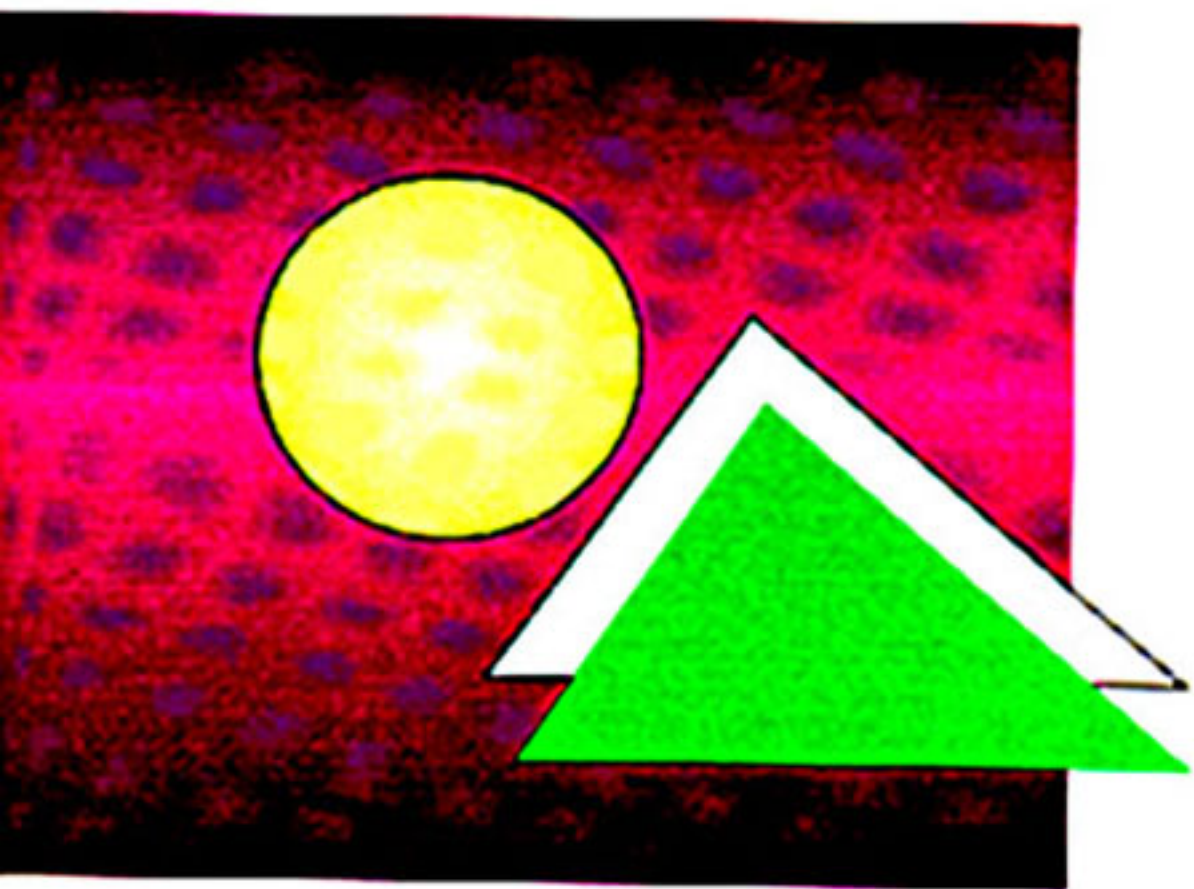


# **G. Arthur Brown**

**Patterns of Development and  
Attendant Choices and  
Consequences for  
Jamaica and the Caribbean**



**Grace Kennedy Foundation Lecture 1989**

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FOUNDATION

## **Preface**

Jamaica is a society in marvelous ferment. It is also a society where "free speech" runs riot. There is a great deal of ill-considered public utterance on major issues, which convulse the society. There is also an inordinate amount of partisan political colouration too much of what is presented to the public as comment. The main effect is to multiply confusion.

More dispassionate discussion and examination, hopefully of relevant issues, take place on the academic campuses, but the public has no access to it.

The Grace, Kennedy Foundation Lecture was conceived as an effort to do two things.

First, it will sponsor rigorous appraisal of major issues affecting the development of our Jamaican society, led by persons competent in the selected fields of thought.

Second, it will provide an opportunity for the widest accessibility of such thinking to the public, so as to stimulate informed debate.

Hence the lectures will first be broadcast and then made available in printed form. It is hoped that the text will form the basis for group discussion and seminars all over the island.

The Foundation is honoured that the Hon. G. Arthur Brown accepted our invitation to deliver the first of this series of annual lectures. The full text of his Inaugural Lecture on "Patterns of Development and Attendant Choices and Consequences for Jamaica and the Caribbean", which is presented in this volume, was first broadcast by radio in five abbreviated sections.

By sponsoring this annual lecture series, the Grace, Kennedy Foundation and Grace, Kennedy and Company Limited are, I believe, providing a service of major proportions to the intellectual life of our nation.

*Rev. C. Samuel Reid*

*Director - Grace, Kennedy Foundation*

## **Introduction**

As a former colleague of Hon. G. Arthur Brown in the Ministry of Finance and the Central Planning Unit thirty-five years ago, and currently in the capacity of a Director of the Grace, Kennedy Foundation, I am honoured and very pleased to have been asked to write this brief introduction.

This lecture on "Patterns of Development" is set within the context of the international environment and its influence and impact on social and economic development in Jamaica and other Commonwealth Caribbean states.

Mr. Brown paints a canvas of the striking contrast between the period of the late 1950s to early 1970s - the "golden age of the international economy", reflected in a phenomenal expansion in world trade and in improved living standards internationally, and the dramatic decline during the decade and a half since the mid-1970s. The latter, announced by the shock of the quadrupling of oil prices, has been followed by a decline in international trade and in the rate of growth of GDP in the industrial countries.

In analysing the impact on Jamaica and the Caribbean of these changes in international conditions, Mr. Brown turns the searchlight on the emergent technologies and the internationalisation of a new and more sophisticated services sector. In doing so, he directs attention to the need for Caribbean societies and economies to grasp opportunities urgently (indicating specific areas of potential development) if they are to enter the 21st century with any significant improvement in the lives of their people.

An important pre-requisite for meeting such an objective - and this represents an underlying theme of the lecture - is a development strategy which places emphasis on investment in human resources

as an absolutely key priority. Hence, an over-riding objective should be the development of "knowledge-based capacity", that is, "the ability of people to adapt, appropriate, accumulate and use knowledge and know-how associated particularly with the new technologies.

The text of this lecture was first delivered in five short radio broadcasts, presented in Mr. Brown's usual inimitable style: lucid and expressed in terms intelligible to the average lay person. This lecture deserves to be widely read by those who are seriously interested in the development of Jamaica and the Caribbean as a whole.

*Professor Gladstone E. Mills*  
*Director - Grace, Kennedy Foundation*



### **The Hon. G. Arthur Brown**

**As** Associate Administrator of the United Nations Development Programme (UNDP), Mr. Brown is responsible for all its operations throughout the world, reporting to its executive head, the Administrator. The UNDP provides technical assistance grants for projects in 157 developing countries and territories, has offices in 117 countries, and is the world's most extensive development service organisation.

He is currently Chairman of the Council of the University of the West Indies, Mona Campus and was recently appointed economic advisor to the Prime Minister of Jamaica.

Before assuming UNDP functions in May 1978, Mr. Brown held top-level positions in national development planning, finance and banking, commodity production and marketing, export credit insurance, the tourism industry and in international negotiations for Jamaica.

As chief financial officer of the Government of Jamaica (1962-1977), he was responsible for all bilateral and multilateral development assistance programmes.

He was Alternative Governor of the World Bank and the International Monetary Fund for 15 years and of the Inter-American Development Bank and the Caribbean Development Bank for ten years. He was actively involved in preparing the Charter of the Caribbean Development Bank.

Mr. Brown was one of the Deputies in the Group of 20 appointed by the International Monetary Fund to make proposals for the reform of the international monetary system.

Just before joining UNDP in 1977-1978, he was Secretary-General of the International Bauxite Association, a grouping of 11 bauxite producing countries.

Born in Jamaica in 1922, he holds an honours degree in Economics from the London School of Economics and has been part-time lecturer on subjects related to public finance and banking at the University of the West Indies (UWI) and at Columbia University in New York.

## Summary

I shall, in the first section of my lecture, review briefly major events in the world economy since the 1960s and place Jamaica within this world environment.

In the second, I shall be spotlighting the progress made by some of the developing countries which have coped with a hostile, external economic environment and compare Jamaica's performance with theirs to see what lessons there are for success or failure for a small developing economy.

Thirdly, I shall review the major expansion which has taken place in the international provision of services and see whether Jamaica can do more to ride on the back of this new wave.

Closely linked to this revolution of the services sector are the developments taking place in the new technologies, which will constitute the fourth section.

And fifthly, I shall look ahead and speculate on where we might be at the end of the century.

This presentation will be non-technical. I shall avoid, as much as possible, quoting too many statistics or using technical terms. The views are my own; no one else is responsible for them. Note, however, that in any economic analysis done for Jamaica, especially over a recent time period, there are certain magical dates which mark the great divide between the alternating reigns of the two political parties and interested groups are always keen on seeing whether favourable or unfavourable comparisons are made of events in these different periods. I hope to avoid being tarred with the brush of partisanship, as I will use the information, as it is



available and avoid moralising or preaching to anyone. I should mention that all the figures quoted are in US dollars.

## **The Last Three Decades**

### ***The Golden Age of the International Economy***

All economic historians now regard the period of the late 1950s, all the 1960s and the early years of the 1970s, as the golden age of the international economy. World trade expanded at phenomenal rates, standards of living increased throughout the world. Developing countries did particularly well. As a group they experienced growth; Gross Domestic Product in real terms of 6.5% per annum during this long period, compared to growth in the industrialised countries of 4.5% per annum. These rates of growth have not been achieved since then.

In making comparisons between the growth rates of developing countries and industrialised countries, we must remember two important points. First, population growth rates in developing countries at 3.0% to 3.5% are higher than those of industrialised countries (less than 1%) and so, on a per capita basis, the relative improvement is not that different. Secondly, in the case of developing countries we are starting from a low base and therefore in absolute terms the amount of dollar increase is not high. For example, a 5.0% per annum increase on a per capita income of \$500.00 gives \$25.00 increase in that year. A 3.0% per annum increase on \$10,000 per capita income gives a \$300.00 increase in the same period. The gap between rich and poor countries did not therefore narrow during this period, but the standards of living in the poor countries did improve. This is particularly so in the social areas.

Probably the best single measure of improvement in the quality of life is life expectancy at birth, affecting as it does the combined effects of nutrition and food, control of diseases and preventive health care, education, housing, and so on. Average life expectancy at birth, which in pre-World War 2 was as low as 35 to 40 years in

developing countries, increased to 50 years for low-income, developing countries in the post-war period.

### *Jamaica's Performance*

How did Jamaica compare with this average of the developing countries during this period to the beginning of the 1970s?

Jamaica, indeed, made remarkable progress. In any area one might select, Jamaica as a small country with 2.34 million people established a name for itself worldwide - a fact which still surprises many today. "Why", they ask in the United Nations, "is such a small country so influential and so well known, and why has it produced so many outstanding persons holding their own with the best in the world?" Above all, what we had was a burst of energy, enterprise and initiative in the private sector, in the government, in our schools and in all areas of society, reflecting a determination to move ahead and take on new challenges. The preoccupation with the politics of joining and leaving the West Indies Federation did detract somewhat for a few years, but not enough to stifle the growth, which was manifest in all economic areas and in standards of living. In the expanding industrial arena we saw the new Jamaican man and woman, people without the advantages of class and birth, moving into the vacuum caused by the obsession of the established families with the import/export trade and retailing.

New ventures started up, aided by the enlightened policy of incentives, credits and industrial estates. The bauxite industry, of course, became a tremendous contributor to growth in foreign exchange earnings and to a large wage bill providing employment at good wages to thousands of persons. These people gradually acquired the skills of the trade to the point where today this industry, about which we knew nothing prior to 1945, is for practical purposes managed and run by Jamaicans. Our tourism industry also experienced important growth.

These developments transformed the economy from a one-crop banana economy pre-1940, to one which, as we said at the time, rested on four legs - agriculture, industry, bauxite and tourism. But it is the people aspect of this development that I would like to stress. Looking back now, one concludes that whilst there were political rivalries, and governments changed, there was a feeling of pride and love of country which permeated everyone. There was a spirit of cooperation manifested in the working together to achieve independence and thereafter the manifestation of a release of boundless energies to reach the top in whatever field of endeavour was selected. I give just one example of the practical side of this spirit. When we look at the migration figures from Jamaica, up to the end of the 1960s, we find a large out-migration but this is essentially of unskilled persons, those who were better rewarded for unskilled work in the rich countries such as the United Kingdom, Canada and the United States. What was absent was the out-migration of the skilled, the semi-skilled and of the professional.

I mentioned earlier some of the achievements of the average developing country in the social fields. Unlike these countries, life expectancy at birth in Jamaica was not very different from that of the industrialised countries, being 69 to 70 years in the 1970s, and now 73 years. Incidentally, for women it is now 76 years and for men 71.

In the economic field, in terms of GNP per capita, we were in the top quarter of developing countries, as listed in the World Bank's Annual Development Report. We accomplished all this with little foreign borrowing and little help from abroad. Indeed, I do remember one year in which the International Monetary Fund (IMF) designated Jamaica as a country which would be required to accept Special Drawing Rights, which meant that we were regarded as having an exceptionally strong currency. There was

even talk at the time of de-linking our Jamaican currency from the British pound, which experienced such traumatic changes in the 1950s and 1960s.

### *The Oil Crisis*

The coming of the 1970s marked a sharp break with the previous decade in the world economy. The rate of growth in world trade declined and GDP growth in the industrial world fell to under 3.0% per annum. The world experienced the first oil shock in 1973, when the price of oil quadrupled. Non-oil producing, developing countries were particularly hard hit. There is an important reason why oil, as a commodity, had a different impact on the world economy from other commodities; it is that oil had become the most important source of energy. Energy was the basis of the industrial revolution; energy is a mover of machines, lifter of heavy loads, producer of light and the prime source for the movement of goods and people. Without readily available sources of energy, modern production and present day standards of living would not be possible. Additionally, oil is the basic component of a whole range of commodities from fertilizer to artificial fabrics. The industrialised world had long enjoyed the advantage of relatively cheap energy and one can judge the difference in standards of living between the rich and poor countries by their relative consumption of energy.

The average per capita consumption of energy in the industrialised world today is approximately 11,000 pounds of coal equivalent per annum. For the developing world it averages 200 pounds for low-income countries and about 1,000 pounds for middle income countries. Jamaica's consumption is above average, being approximately 2,000 pounds, largely because of the needs of the bauxite industry.

It is not difficult to see therefore that with the quadrupling of oil prices, developing countries had only three options facing them. One was to cut back on energy imports and use, which meant cutting back on their economic development; another was to cutback on imports of other items; and a third was to borrow to sustain their energy imports. Developing countries tended to use the last two options, partly cutting back on other imports and borrowing to pay for energy imports.

At the same time, industrialised countries found for the first time, that they were faced with an effective raw material cartel with the power to enforce large price increases. They reacted quite differently from the developing countries.

The rich countries decided to cutback on economic growth and set up a deflationary policy to reduce consumption, install energy conservation programmes, and seek out new sources of supply of energy. The deflationary policy had a serious adverse effect on demand for developing countries' products and thus began the long slide in commodity prices, which in turn reduced the incomes from developing countries' exports.

Developing countries were faced with a 'double whammy', so to speak: higher import prices for the important energy inputs and declining export prices.

Developing countries were able to borrow to meet their energy bill because the oil exporting countries started to amass large surpluses even after embarking on a spending spree in which the world's most advanced hospitals, airports, seaports, highway systems were constructed. The surpluses had to be kept somewhere and the obvious place was the multinational banking system. The banks, in turn, had to employ these funds and since the rich countries were being deflationary and cutting back, what better borrowers than the

oil-importing, developing countries, eager to maintain their economies?

Jamaica obviously was caught up in this vicious cycle: borrowing heavily to maintain imports, being hit by declining commodity prices, particularly bauxite and sugar and, as we got into the 1980s, being further hit by high real interest rates. This meant that from reduced export earnings we had to pay for high-priced energy and the servicing of an escalating debt.

### *The Debt Crisis*

What is now known as the debt crisis emerged when Mexico, a few years ago, declared that it could not meet its commitments. Up to that time, banks and multilateral lenders, had assumed that what are called "sovereign risks", that is, monies owed by governments or guaranteed by them were relatively safe. It is interesting how history is quickly forgotten. Throughout the world there have been debt crises, moratoria and repudiations in different countries during the history of their development. North America in the 18th and 19th centuries, and South America in the early 20th century, went through these periods of booms and depressions, debt repudiations and moratoria.

### *Structural Adjustment*

From the late 1970s into the 1980s we entered the era when the vast majority of developing countries reached the stage where their internal and external accounts were hopelessly out of balance. For the first time the words "structural adjustment", hitherto known only to the experts, became part of everyday language. In simple terms, it means taking a number of actions to reduce consumption and to lay the foundations for further growth in the future. It is never said so overtly, but clearly what is involved in adjustment is reducing standards of living, because goods and services produced

in these countries cannot sustain past standards while repaying debt.

### *Jamaica's Structural Adjustment*

Adjustment clearly is so much more difficult if export earnings also fall. Jamaica has experienced all of these adverse factors, increased energy prices, high cost of debt servicing, fall in commodity prices and, whether we like it or not, we would have had to adjust once we had used up our savings and had no further access to borrowing. A country vis-a-vis the rest of the world is no different from the individual who loses his job and can get another one at only half his previous earnings. If he has savings, he can maintain his previous standard of living for a while until the savings run out. If he can borrow, he can also do so until the banks or the lenders begin to regard him as a bad risk, because they doubt his ability to pay back. When this happens he has to adjust, that is, reduce his living standards to fit within his reduced income and, if he had borrowed and now has to pay interest and repay debt, these charges must come out of the reduced income, making the fall in standard of living even more steep. This has been Jamaica's position. Those who say that we need not have an adjustment programme need only reflect on the example of the individual's position I have just given.

Fortunately, the international community provides some assistance to ease the adjustment process. Jamaica benefited extraordinarily well from both the World Bank and the IMF. According to the latest IMF Report, the Bank and the Fund together have made available approximately one billion dollars of loans to Jamaica. This is approximately \$425.00 per head of population. In addition, bilateral and multilateral donors have been particularly generous to Jamaica. Jamaica has also benefited from debt rescheduling and refinancing programmes of both bilateral and commercial debt. According to the IMF, debt relief of \$950 million in respect of



official debt has been accorded to Jamaica over the last five years. However, foreign debt is still high at \$3.5 billion or 119.0% of GDP, and debt service obligations are still high at 45.0% of exports of goods and services. Remember that all the figures used are in US dollars.

In 1986, the long drain caused by high oil prices saw some relief brought about by the down-turn of oil prices and this, together with improvements in the bauxite market and prices, has started what we all hope is the beginning of an improvement in the external economic environment and the continuation of a lasting upturn.

## **Jamaica and Its Peers**

In the first section, I contrasted the performance of the Jamaican economy in the 1950s on the one hand, with the 1970s and early 1980s on the other, by which latter time we had used up all our reserves and had borrowed to the hilt. Even after some debt relief, we had chalked up foreign debts of \$3.5 billion, compared to an amount of approximately \$1.5 billion even as late as March 1980. Since our commercial bank credit was cut off, we were left to deal with international institutions, bilateral government to government loans and some trade credits. I mentioned that, because of the deterioration of the economy, Jamaica had to adjust; that is, take the hard course and cut back on its consumption. Jamaica has tried to do so. The first attempt at adjustment ran into difficulties, in large part because of the collapse of the bauxite industry, on the revival of which so much hope had been placed. To Jamaica's credit, it stuck to its guns and a combination of fiscal and economic policy reforms, backed up by generous World Bank and International Monetary Fund assistance, as well as bilateral assistance, have resulted in an important turn around. At the same time, the fall in oil prices helped considerably in the reduction of the energy bill.

## **Jamaica's Performance in the 1980s**

Jamaica's GDP has registered a growth of 5.5% for the year ending March 1988. This is the first significant growth in real terms, which has been achieved for the last 15 years. The price paid has been high in terms of social programmes, employment and the preemption of future foreign earnings to service the massive debt - this debt being equal to \$1,600 (J\$8,800) per man, woman and child. But the trends are in the right direction and the Jamaican performance is being noticed internationally as an achievement to watch. The sustaining of this growth and the increased attention now being given to and planned for the social sectors, such as

nutrition, education, health, water, housing must be the next big steps.

## **The Jamaican People**

I keep referring always to the people as the key to the success, or otherwise, in the implementation of economic policies. Many other countries have fallen apart at the seams, when a programme not half as rigorous as Jamaica's has been tried. The social fabric of these societies was not strong enough to withstand the shocks of unemployment, increased prices and reduced consumption, which accompany adjustment programmes. I feel that we too often assume that the people, the proverbial man in the street, are ignorant of these economic issues, and that they automatically press for their selfish gains at the expense of longer-term growth and more permanent benefits.

We must give high marks to the Jamaican people for holding the society together while, at the same time, preserving our democratic traditions, pursuing active party politics and compromising not one inch the liberties and freedoms which have been an integral part of our society.

## **Making Comparisons - 1965 and 1986**

As we analyse the performance of some other countries, we will see that the achievement of economic adjustment and growth has, on many occasions, been at the expense of democracy and freedom. Jamaica's performance is therefore all the more remarkable. However, we must not go too far on an euphoric trip. Let us come back to earth and see where we now stand, compared first with our own position say twenty years ago, and then how we compare with our neighbours and some other countries which have been affected by the same adverse, external environment. As the IMF points out in its latest report, there was a cumulative fall in

GDP of 21.0% between 1974 and 1980 or 31.0% on a per capita basis. In fact the latest World Bank publication shows that for the 21 years, 1965 to 1986, per capita GNP fell on an average each year by 1.4%. In other words, on a per capita basis we are worse off than we were in 1965. In terms of overall GDP, the country as a whole now has fewer resources for consumption, for investment, for social services than it had then. Remember, here we are dealing with averages, so that some people and groups are much better off and some people and groups worse off. Unfortunately, we do not have up-to-date income distribution figures to measure these differences. However, we are not dealing with perfect instruments of measurement and we must avoid trying to be very precise. Differences of plus or minus 5.0% may not be significant. Taking all these factors into account, the basic trends are the important points. We still have some way to go to catch up with our position of 15 to 20 years ago, and then to grow and improve after the catching up has been done.

This is not the time for looking back. There have been six years of growth out of the last ten and, if the imbalance and external shocks to the economy were reduced or removed, we should have a solid basis on which to build. The example of what others have done should be an encouragement to us of what is possible.

### **Other Caribbean Countries**

Let us look briefly at our sister islands, both large and small. I shall restrict comparisons to a few indices.

Jamaica's per capita GNP in 1986 was \$840.00. We should note here that GNP or Gross National Product, is the total value of goods and services produced in a country, i.e. the GDP or Gross Domestic Product; plus earnings or income from abroad, such as dividends, interest, workers' remittances; less similar income sent

abroad. In Jamaica the GNP is now less than the GDP because of the amount of debt service we have to pay abroad.

How does Jamaica's \$840.00 per capita GNP in 1986 compare with Barbados? First, remember that Barbados has 250,000 people, compared to our 2.34 million, is about the same size as the Parish of St. Andrew; and in 1966, 22 years ago, Barbados' per capita GNP was \$1,550 compared to Jamaica's \$1,070. However, Barbados is now in a relatively fortunate position, as it produces from its natural resources 45% of its petroleum needs and 60% of its natural gas needs. In 1986 Barbados had a per capita income of \$5,150 - 6 times that of Jamaica. The Bahamas, which is also smaller than Jamaica, with a smaller population, has a per capita income of \$7,150 or eight and a half times Jamaica's. In 1976 the ratio was three times. How do we explain the absolute gap? Here, it is worth noting that of the countries classified as industrial market economies by the World Bank, both Barbados and the Bahamas exceed the per capita GNP of Spain and Ireland and are not far behind New Zealand, Italy and Britain.

I must repeat that these comparisons have many statistical problems when we are comparing the position in the same country over time, and much more so when we are comparing one country with another. For example, in comparing Jamaica's per capita GNP in 1986 with per capita GNP in 1976, we do not take into account changes in consumption patterns and the role of government. In international comparisons, when we compare two countries we have to convert all amounts into one currency, say the US dollar, and exchange rates may not measure comparative purchasing power. Exchange rates also move for reasons not directly connected with relative changes in prices and production. The World Bank in its statistics tries to smooth this out by using averages. Even so, we cannot assume perfect comparisons. Allowing for the most generous assumptions about statistical errors, Jamaica's per capita GNP and, hence, average standard of

living are way out of line with Barbados and the Bahamas and are much more so now than in 1976. I know the average middle and upper income persons who have traveled to these countries and met their opposite numbers are not likely to feel or see this difference. Remember that we are dealing with all the population, the hundreds of thousands living west of King Street, in east and south Kingston, in the slums of our cities, and those eking out subsistence living on the farms.

Some might say that the Bahamas are just an extension of Florida, but can the same be said of Barbados? Could it be that people there are better educated, that illiteracy is nonexistent, that they work harder and save more than Jamaicans are? They are of the same stock as ourselves, share the same history of slavery, had the same ruling colonial power, so why the difference? Should we seriously try to find out? Would this not be a fitting subject for a university research programme, a comparative study of the performance of selected Caribbean economies? I hope the University of the West Indies can obtain a grant for this. The comparison with Barbados and the Bahamas is against us. What do we say then about Antigua? Its per capita GNP is three times ours. St. Kitts and even St. Vincent, regarded as the poorest of the Caribbean islands, are ahead of Jamaica. It was not always so.

Trinidad and Tobago although having a per capita income in 1986 of over \$5,000 has been in trouble. Here, we have a country which benefited from the oil boom, and at one time had foreign exchange reserves of over \$2 billion for a population of just over 1 million; but it frittered away its patrimony and in the last three years has been in a downward spiral. The government and people there avoided, for a long time, the stringent measures taken in Jamaica to adjust. Because the cutbacks will have to be massive, the question is, will the social fabric hold when they do so? Trinidad could benefit from a study of the Jamaican model. In turn, we do have some lessons to learn from them; that is, how not to waste huge

resources, assuming the day comes when Jamaica gets back to that fortunate position.

I mention Guyana, to make one point only. Guyana's landmass is 215,000 square kilometres compared to Jamaica's 11,000 and Barbados' 350. It has mineral resources, huge rivers and no shortage of water, but it is very low on the totem pole in the Caribbean. The lesson from both Trinidad and Guyana is that oil reserves, large land area and natural resources do not automatically ensure economic growth. The consensus of most observers is that we have had a classic case of mismanagement of these two economies over the years. Only in the last year or two are there signs of credible policies and genuine attempts to put in place policies and programmes which will harness the great natural and human resources these countries possess. A further lesson is that even a good educational system which has turned out some of the most qualified and competent people in the Caribbean is not enough if the leadership is not there to channel these human energies in a productive direction.

### **Trends in Other Developing Countries**

In reviewing the performance of developing countries over the last twenty odd years, people have constantly made reference to the adverse impact of events in the world economy over which developing countries have no control. Decline in the rate of growth of world trade, increased protectionism in the industrialised countries, collapse of commodity prices, high real interest rates have all been adverse factors. In Africa this was compounded by natural phenomena resulting in the most severe series of droughts experienced in this century. This combination of man-made and natural disasters has caused many developing countries, particularly in Africa, to become basket cases, that is, countries which will never be able to walk again on their own two feet

without the most massive injection of foreign aid on the softest terms.

## **The Examples of Hong Kong and Singapore**

I have compared Jamaica's historical performance adversely with its Caribbean neighbours, but perhaps there are lessons to be learned from two small islands in Asia which have defied the external environment and have made good. These are among the so-called newly industrialised economies (NIEs), previously known as the NICs. Hong Kong and Singapore have achieved GDP growth of between 5.0% to 10.0% per annum continuously over the last 20 years. This is a record not achieved by other countries, not even Japan over so long a period. Hong Kong and Singapore each have under 1,000 square kilometres of land and, if we were to use the conventional wisdom, they would be regarded as over-populated. Singapore nevertheless had a per capita GNP in 1986 of \$7,400 and Hong Kong of \$7,000. How can these countries, with limited natural resources, achieve this record against an adverse, international economic environment? In the case of Hong Kong, additional problems are experienced by having to cope with massive inward migration and an uncertain constitutional future. In their industrial sector the rate of growth has out-performed even Japan and they are now moving into the next league, that is, of countries where the service industries are predominant. I shall be saying more about the services sector later.

What are some of the characteristics of these economies? In Hong Kong savings amounted to 27.0% of GDP for 1986, and in Singapore 40.0%. General government consumption, on the other hand, was only 8.0% for Hong Kong and 12.0% for Singapore. A little known fact is that notwithstanding a small land area and high population pressure, the proportion of food in the import bill is only 9.0% for both islands, compared to Jamaica's 18.0%, with eleven times the land area, and a population less than half that of



Hong Kong and about the same as Singapore's. Singapore at the end of 1986 had gross international reserves of \$12.9 billion; Jamaica had \$98 million. They have little foreign debt and in relation to their exports, debt service ratios are minimal - about 1.4% for Singapore.

I shall give just a few more examples to show that it is not only in economic areas that these countries are outstanding. In the social sector, the people of Hong Kong, notwithstanding its massive over-crowding, have now achieved a life expectancy of 76 years, with women's life expectancy being 79 years, a higher figure than many of the rich, industrialised countries. In Singapore, it is slightly lower but still in the league of the rich, developed countries. The ratio of doctors to population is approximately 1 to 1,140 in both countries compared to 1 to 2,800 in Jamaica. In the field of education, the percentage of the school-age population in secondary schools was 70.0% and in University 13.0% in 1985, far in excess of the Jamaican figures. It is this last fact I should like to highlight.

These countries' growth did not come about through some divine intervention. They decided, as a matter of policy, to invest heavily in education at all levels, concentrating also on the hard options at the tertiary level -mathematics, physics, chemistry, management, accounting, economics. Human resources investment became the key to their development strategy and without it no amount of strategic planning would have produced the miracle these countries represent. It is well to reflect that thirty years ago, the only major economic activity in Singapore was the British base and the dry dock. When Britain withdrew from east of Aden and closed down these facilities, a comparison for Jamaica would be if bauxite, tourism and sugar disappeared overnight. It is a fact, and attested to by Prime Minister Lee Quan Yu himself, that when faced with this calamity Singapore called on the United Nations for help and an inspired team of advisers mapped out a programme based

essentially on the use of Singapore's human resources and strategic geographical position. They followed that plan which led them to maximise the use of the harbour as a transshipment port, then followed the entrepôt trade largely stimulated by the instability of their large neighbouring countries. Exporters preferred to do business with Singapore where they could rely on shipping, port services, finance and banking services for moving the huge trade of the surrounding countries, with their large populations. These were followed by oil refining, manufacturing, tourism and the rest. Most characteristic is Singapore Airlines (SIA). The national carrier of this small country not only holds its own, but also beats the competition wherever it flies. Its global network covers virtually all major countries and it has one of the most modern fleets of all international carriers. No one refers to SIA as a third world airline, as its equipment is more modern than that of the international American carriers. All these businesses and enterprises are based, not on natural resources, but on their people.

Are there lessons Jamaica can learn? Surely, but we must get the facts, approach the comparison with an open mind. We must, at the same time, be aware that there may be disadvantages in terms of the political side that in these countries some price has been paid in terms of freedom and democracy. Put the differences in proper perspective and, having done this, ask ourselves honestly, "What prevents us from achieving even one quarter of the enormous success of these countries?" Then sit down and plan, get the people to back it and work together.

**\*Author's Note:** *This paper was prepared two weeks before "Gilbert" struck and ravaged so much of our country. In the two months following the hurricane, our recovery has been nothing short of remarkable and confirms my view that we must regard "Gilbert" as a temporary set-back only. The minuses and pluses of "Gilbert" are likely to balance out overtime and should not affect the medium and longer-term analysis presented here.*

**\*Editor's Note:** *Hurricane Gilbert, the eighth of the 1988 season, struck Jamaica on the morning of September 12, causing island-wide destruction. It was rated as the worst in the last 100 years. The presentation of this lecture was delayed for several months because of the many dislocations caused by Gilbert.*

## **The New Services Sector**

I remember very well the great Professor Harold Laski telling a story of a judge in England, who traditionally imposed only the minimum fine on factory owners prosecuted for smoke pollution. The judge felt that the more smoke which issued from an increasing number of chimneys and the denser the smoke, the greater the evidence of strong economic growth. "Let our Lancashire be covered with chimneys," he said, "and Lancashire will continue to be the leader in the world textile industry." Of course, we now know that the chimneys of efficient factories need not belch black smoke to show that they are in full production.

### ***The Services Sector***

What the judge did not foresee was that not only would smoke pollution be cleared up in many cities, but that the chimneys would disappear altogether in many of the great industrial cities. No one had foreseen then the decline of the smoke-stack industries as they are called, and their armies of factory workers, nor the emergence of the services sector as the dominant producer and employer. It may be a surprise to many to learn that in 1986 industry in the United States, the leading industrial country, absorbed only 31.0% of the labour force and contributed 31.0% of gross domestic product (GDP), whilst the services sector contributed 67.0% of GDP and provided employment for 66.0% of the labour force. It is estimated that since 1970, thirty million new jobs were created in the United States and that twenty-nine million of these were in the services sector. Surely this is the most telling evidence of the preponderant position of this sector in this advanced economy.

What constitutes the services sector? There are two traditional types of services, which have always been recognized. On the one hand, personal services, such as those performed for a family by

helpers, children's nannies, hairdressers, valets, and so on. Essentially, services, which are provided to a particular individual or group, have been around since the beginning of time. Indeed, the further back we go in history, the greater the proportion of the labour force, which was used as retainers and servants, catering to the personal needs of their lords and masters. In fact, one measure of the backwardness of an economy was the proportion of the labour force engaged in this type of personal service. This use of human resources was of course not very productive. It was in fact a means of redistributing income.

The other type of service is that provided by transportation, education, health, retailing and so on. These have been accepted, in varying degrees, as contributions to production but in an ancillary sense.

Adam Smith, the father of modern economics, made a distinction between the production of goods, like wheat and barley, boots and shoes, pots and pans, buildings, etc. products that could be seen and touched, and those human activities which did not alter or add to these visible goods. Adam Smith was particularly contemptuous of retailing, but he lauded the importance of the butcher, the baker and the candlestick maker. We know, today, that he completely misunderstood the economic functions performed, for example, by the distributive sector which ensures that, goods move from the factory or farm in the needed quantities, are packaged, warehoused, and become readily available to the consumer in thousands of outlets.

It is an interesting sidelight that Karl Marx followed Adam Smith in this view, of distinguishing between productive enterprises involved in producing visible goods and services, which he regarded as productive, and those engaged in service, which he regarded as unproductive. Marx did accept that trade played a part in making goods available for consumption, but regarded this as an

unavoidable evil. This Marxist doctrine is now an embarrassment to those in the Union of Soviet Socialist Republics (USSR) and other socialist countries who are trying to institute reforms and take advantage of the new thrust in this dynamic area of a burgeoning services industry. In these countries, up to today, the equivalent of gross domestic product is the measurement of what is called 'net material product,' which excludes services.

### ***The Requirements for Growth and Development***

I allow this digression to show that we can be hamstrung in our policies and programmes by old theories, which have acquired some status of revealed truth. It is most important for developing countries to become aware of what is happening around them and to discard old concepts about the ingredients needed for growth and improvements in standards of living.

To achieve a higher standard of living, a country need not be in possession of large land areas, mineral resources and other raw materials, but rather of trained people. What is important today may be described as knowledge-based capacity, that is, the ability of people to adapt, appropriate, accumulate and use knowledge and know-how associated particularly with the new technologies. While utilizing the new technologies is an important part of the boom in the services sector, the expansion of services is not necessarily tied in with the exploitation of these new technologies, a subject which, I will deal with in the next section.

### ***Opportunities in the Services Sector***

What are some of the new services in which growth is taking place? Banking and financial services have become truly globalized. Adding to their main role of deposit taking and making loans, banks now provide a host of financial related services on a worldwide basis. American Express in its annual report has

reported its operations as being divided into international banking services, (including trade, finance, money transfers, foreign exchange dealings, and merchant banking) and financial services, (including brokerage, investment certificates, annuities), travel related services, (such as travelers' cheques, and the American Express card) and travel agency, data-based services, that is providing information on various subjects accessible by computer. Through its subsidiary, Shearson Lehman, American Express provides investment banking, asset management, capital market services and, through the Firemen's Fund, insurance services of all types.

I mention this, as an example of the banking and financial services supermarkets' one-stop shopping, which has been in the forefront of growth and which, as will be seen, is really the selling of expertise internationally. There is a raft of business services, which have now become globalized and sold for foreign exchange - the so-called invisible exports. Take accounting, for example, hitherto regarded as a domestic industry and not capable of being traded. A small number of accounting firms have become international. Their organization differs, but usually there is a loose collection of largely autonomous local partnerships with the international firm, whose name is sometimes used locally, setting standards. It offers training, refers clients, provides corporate software and is a point of reference for solving problems or providing information. Sometimes its personnel are temporarily out-posted. Fees are charged or profits shared as compensation for the services rendered.

Who could have considered the fast-food business as one, which could be internationalised and be a source of income from services rendered? The international Hamburger Company is not normally selling hamburgers abroad. It sells its trade name, provides the operating manuals, quality control, centralised discount purchasing, worldwide name recognition, business techniques,

accounting and costing formats, engineering and architectural drawings and construction advice. In other words, McDonald's sells its know-how for foreign exchange.

In the building and construction fields, we find large sales of services. Korean construction teams are found all over the world. Turkish and Philippine contractors have a well-known presence in the Middle East.

In Jamaica we should be familiar with the international hotel chains. Many of these chains invest not one penny in bricks and mortar. They don't own the hotel buildings. They sell their services as managers providing advice, from the design and construction stages, to furnishings, food and beverage operations, management, accounting and above all, a centralised reservation system.

I could list a whole range of other services, which are now being sold internationally: advertising, airlines reservation systems, legal services, and consulting and advisory services of all types. Recently, areas considered wholly domestic have provided opportunities for the sale of know-how. Take the courier services; who had heard of DHL ten years ago? DHL Worldwide Express has a small headquarters staff in London, from which it organises a worldwide express parcels service, based on overcoming bureaucratic customs requirements at airports, and taking advantage of the availability of under-utilised airport facilities at night. Brussels recognised the potential of this business and has become the European hub for DHL, with 17 DHL planes landing there nightly from all corners of Europe with parcels and mail. Sorting is done there and the planes are ready to return to the European capitals the next morning, ensuring one-day delivery. Brussels earns foreign exchange and so does DHL.



We have similar global opportunities in security services, temporary labour, training and education, databanks, quality control and inspection and many more.

One of the best examples to consider is a book publishing company in Singapore. Some years ago while in that city, I was invited to dinner by the Chairman of McGraw Hill Far Eastern Limited. I learnt only then that one of the enterprises undertaken by this company was the preparation and publication of textbooks for use in Caribbean schools. By preparation, I mean, the company hired graduates from the University of Singapore, sent them to the Caribbean to do research and gather material and then return to Singapore, where the material was written up, edited, printed, and books distributed. Truly an example of making use of brain power and earning foreign exchange.

What do you think of Bulgaria, where they have seen a gap in the field for translation of technical documents particularly into the more obscure languages? They have specially trained 600 linguists who specialise in translating documents of all types. Because their specialists cover various fields, a multinational company wishing instructions for a chemical plant to be translated knows that the trained specialist translator will provide an accurate translation. Thus Bulgaria earns foreign exchange from the use of brainpower.

What conclusions can we in Jamaica draw from these developments? First, if we wish to break into these fields, we need the human resources infrastructure. We need to invest more at all levels of education and, at the tertiary level, try to get graduates into the harder sciences, such as mathematics, physics, engineering; the biological sciences; management; economics. It is this brainpower which we will be selling. Jamaica's students, given the opportunity, have been known to excel against all comers and there is no reason why we should not seek out some of these niches and become specialists. Some years ago, Jamaican architects were

commissioned to do jobs in other parts of the Caribbean. There are opportunities for consulting services. In India, architectural firms have contracts with firms in the U.S. to provide working drawings, which are transmitted via satellite, as if the drawings were being done next door. Is there any reason why we could not provide accounting and auditing services worldwide on our own or under contract with the international firms? And what of medical services? The cost of medical services has gone through the roof in developed countries. In the United States medical care is absorbing 14.0% to 15.0% of household consumption expenditure. This is an enormous sum of money, approximately \$320 billion in 1986. With high-class medical facilities we could provide what may be called "export medicine"; that is, people coming here for medical attention, as a business.

When I started at St. Anthony's Academy, a Catholic school in Port Antonio, about one-third of the students came from Cuba. If we had good schools at all levels, we could export education. The U.K. does it with great success.

### ***Back-up for the Services Sector***

Next, to increased education and training for our people: we must develop the infrastructure needed, viz. a supportive government, facilities, appropriate legislation, reduction of bureaucracy and red tape, first class communications, and willingness to be innovative.

As I have indicated, many of the services now being marketed internationally are not based on high technology. They are based essentially on detailed studies of the processes required and on setting up the proper organization. As a recent book on services remarked, "Making a hamburger is not high tech, but selling twenty billion dollars worth around the world is done only because of organizational techniques".

We have in McDonald's the complete integration of marketing, purchasing, design, training, quality control, franchising. These are the unique areas from the combination of which their predominance derives.

### ***An Alternative to Stagnation***

I have been able to touch only the surface of this expanding sector. Developing countries, like Jamaica, which have depended on the production of minerals and raw materials and the use of low cost labour in industry, may be faced with stagnation in demand for their exports, the reasons for which I will give in the next section. We are faced with high levels of unemployment and, if demand for existing exports stagnates, we may not be able to reduce these high levels. The countries which, move most quickly into this new area of services are the ones likely to succeed. We shall have to look at our human resources not as a burden but as an asset; but training will have to be provided. We can get to the forefront if we follow what some other governments are doing, that is, to set up special departments whose job is to review all the areas and opportunities which can be grasped to get the country into the services boom. Not much capital is needed. There can be joint ventures with transnational corporations in which our contribution is skilled manpower. But we must make it a national preoccupation. What about a Ministry charged with the job of seeking out and developing these opportunities?

### ***The Example of Japan***

These days, one should observe the Japanese. The story goes that, after the Japanese were defeated in World War II, General McArthur told them that, since they had to give up arms manufacturing, they could possibly relieve their unemployment situation by going into the motor car trade. True story or not, the record is that they not only learned fast but that they have shifted

the whole balance of economic power in the world today. Having conquered virtually every major manufacturing sector, whether this be steel or automobiles or machine tools, they too have realised that they must go into the services sector - and they have done so with a vengeance. Today, notwithstanding what is said in a certain local advertisement, the five largest international commercial banks are all Japanese. When Japan's growth slowed from 8.0% per annum in the 1960s and 1970s to what other countries would dream of having, namely, a steady growth of 4.0% to 5.0% per annum in the 1980s, the Japanese banks felt that this was too small a growth rate with which they could live. They therefore moved out into the international field to sell their services. The name of the world's largest bank is probably known to few in Jamaica. It is the Dai Ichi Kango, Bank, followed closely by Fuji. Nomura, a Japanese company, is the world's largest securities house.

But these are not, just banking houses. They operate in a way that has characterised Japanese businesses. They form a vast network of interlocking relationships with other Japanese companies. Toyota and Toshiba operations in the United States are funded by Japanese banks. Mitsubishi not only owns the fourth largest bank in the world, but it services the vast Mitsubishi conglomerate. The old Japanese trading houses showed very early in their history, that by linking backwards and forwards they could control vast operations. Trading houses sought out markets, then placed orders with manufacturers at home to supply them and, if the manufacturing companies did not exist, created them and expanded them. So it is with other major transnational networks in the world. With takeovers and mergers, backward and forward linkages by the transnational, developing countries will become even more marginalised and sidelined as actors in the world economy, unless they try to get under the fence and either join these networks as suppliers or joint venture partners, or find small niches where they may have some comparative advantages. There is no reason why an efficient wholesale and retailing house in Jamaica cannot move

backwards and forwards in the economic chain, not only providing a market for local products but providing credit, technical assistance, quality control and training. Similarly, in both imports and exports, it is possible to move further up or down the chain to the source of materials or goods purchased, or to the wholesale or retail end. Have you ever wondered what happens to the difference between the price per pound of bananas received by the grower and the price paid by the consumer in the U. K.? The first is a fraction of the other. The reverse also applies to things we buy. None of this difference in price goes towards processing or manufacturing; it is payment for services.

Jamaica has made a start in moving into some of these areas. At least one of our merchant houses is taking advantage of backward and forward linkages. Our tourist industry is, of course, a good example of one of the older service industries. But again, could we retain more of what the tourist spends? Remember, in computing net gains from tourism, we have to take into account debt servicing, costs of our hotels, airports and roads, quite apart from the obvious ones like imported food. With our strategic geographical position and natural advantages, we have only scratched the surface with one million tourists. Our Freeport and our Teleport are good examples of some of the new areas and directions in which we should be moving.

## **The New Technologies**

### ***The Pace of Change***

In the course of world history there have been long periods of stagnation in the economic, political and social orders. In these periods there is a stability and sameness over many centuries; sameness in the way people live, in what they eat, in what they produce, in how they are ruled. Beginning with the 18th and 19th centuries, the pace at which all aspects of society change has been accelerating and has been doing so at an even faster rate in the latter half of the 20th century. The social order of the middle ages of knights and nobles lasted for several centuries; the grandeur of Spain, France and Britain as great empires for less than 200 years. The social, political and scientific revolution of the 19th century quickened changes, with movements in each sector reacting on the other.

The invention of the steam engine not only revolutionised the factory and our ability to produce and move manufactured goods in quantities undreamt of before, but it also changed the social order with the previously landless serfs moving to the cities in their millions for new factory employment. New inventions followed: electricity, the telephone, the wireless and the airplane. All quickened the pace of change.

### ***The Third Industrial Revolution***

There are good grounds for the view that we are now in the midst of a new technological revolution surpassing even the cluster of inventions of the last 100 years. Some now refer to these developments as the third industrial revolution. These developments are in the areas of microelectronics, information and communications technology, biotechnology, new and renewable sources of energy, new and advanced synthetic materials, space

technology, new patterns of management, and industrial and business organisations based largely on the new developments in informatics and communications.

These technological innovations have both a downside and an upside for developing countries. The future growth and standards of living in these countries can be influenced for good or ill, depending on whether we remain on the sidelines or make an intensive study of options and possibilities. We must see how to take advantage of these changes instead of being marginalised.

### ***The Marvelous Microchip***

Let us start with that wonderful invention, the microchip, which has provided the basis for sorting, processing and receiving information of a volume and a complexity that would have been considered impossible only twenty years ago. The miniaturisation of machines incorporating microchips and the versatility of use of which they are capable make possible a range of applications, producing goods and services of the highest quality and precision. Computer-aided designs enable the most complex stresses in a bridge, or the motorcar design offering the least wind resistance, or the best facial outline in cosmetic surgery, to be determined. No more hit and miss or trial and error. Hundreds of tests of different designs, which would previously have taken months, can be programmed and evaluated in a period of days.

Computerised remote-controlled tools and industrial robots, starting first with simple repetitive jobs, take on increasingly complex tasks. Cutting fabric for clothing, making intricate patterns with sheet metal, painting and welding are some of the earlier tasks that these machines have been designed to perform. Because they are so precise in their application, they reduce waste in raw materials and use much less energy. Above all, they are

labour saving, and it is this factor to which developing countries should be particularly attuned.

### *The Future for Cheap Labour*

In the 1960s and 1970s, as wage levels increased in the industrial countries, particularly in Europe and North America, one measure adopted of ensuring competitiveness was to contract out to offshore operations, that is to the developing countries, those parts of the operations requiring little skill, and a lot of low cost labour. This was a counter to the increasing competition, not only from Japan, but also from some of the developing countries themselves, particularly the 'four giants'- Taiwan, Korea, Hong Kong and Singapore. The garment industry was one of the first to be spun off to low-wage countries and, of course, in Jamaica we are very familiar with this sort of operation.

However, there is no technical limit to the development of robots and automation to undertake, at low cost, the type of work now performed by low paid labour in offshore facilities. The conventional economic wisdom of the 1960s and 1970s, that the rich industrialised countries should constantly graduate up the technological ladder, leaving the less complex industrial process to the developing world, now no longer holds.

The view was that we, in the developing world, would take over textiles, boots and shoes, television, video sets, the simpler processes of producing iron and steel. All this will no longer be valid. If all the repetitive low paid employment and dirty jobs can be done by robots, why not have them done at home, that is, in the industrialised countries? Huge textile factories, with a handful of human supervisors, could now turn out all the clothing required. The moral then is that we must position ourselves to see what cards we can play in this competitive game and not take the present



division of labour between industrialised and developing countries as given.

### ***The Communications Industry***

The revolution in global communications and in what is called 'information movement and management' dependent on the microchip offers advantages to developing countries if we can grasp them. What is significant with this global communications technology, based on satellite or fibre optics, is that location can be dispersed without loss of management control. If physical location is no longer important, why can't developing countries take advantage of this fact? Simple data processing is being done in Barbados for U.S. firms thousands of miles away. I mentioned previously that Indian architects were working for U.S. firms with overnight transmission of data via satellite, the effect being the same as if they were next door to their colleagues. Lawyers in Jamaica could write opinions for foreign law firms, having access to the firms' libraries, to international computerised legal databases, and be in constant consultation with colleagues abroad using their computer screens. Jamaica could be the home of a large number of 800 and 900 telephone numbers, with operators here taking down orders, making reservations, providing information to callers. Telemarketing, based on huge warehouses with shoppers remaining at home, has become a growth industry.

Communications technology properly used can therefore be a counter to the opposite pressures created by robotics and automated production, particularly in those areas where some element of skill or knowledge is required, as opposed to repetitive manual work. There is an upside here, but we need two conditions to benefit. First, levels of education and training must be improved, because it is brainpower that we will be selling in this knowledge-intensive business. Second, the physical infrastructure of communications must be there.

## ***Biotechnology and its Impact***

The next new technology break-through I will mention is biotechnology. Man has always striven to obtain greater and greater control over nature and, of course, to some extent he has succeeded. The food we eat today is quite different from what would have been produced in nature without any human intervention. Animal life has also been affected; breeds of cattle, sheep, goats have been developed through crossbreeding and selection. What is new is the artificial exchange of genetic material between organisms. Genetic manipulation, gene splicing, tissue transplants, can bring about totally new characteristics of size, shape, nutrients, disease resistance and other factors in both plants and animals. Clearly, there are important applications here, in industrial materials, in agriculture, animal husbandry and even with human beings, hopefully, the last being restricted to medical applications.

In the area of plant breeding, will this new technology result in climatic conditions and geographical location no longer being relevant to production? If so, will the new coffee and cocoa be grown in Minnesota instead of Brazil, Jamaica and the Ivory Coast, or grown even in the factory? Equally, of course, will we in Jamaica grow the Macintosh apple, which so many Jamaicans seem to want? Obviously, there are possible gains and losses here when genetic material can be adapted to fit any climate and soil. Should developing countries not use the new technologies to achieve, as their first priority, self-sufficiency in food? We may not be able to compete with our exports, but we would at least avoid having to spend foreign exchange to buy food, assuming the new technology enabled us to produce wheat and other temperate crops here. In Jamaica 18.0% of our import bill of nearly \$1 billion in 1986 was on food. We imported 364,000 tons of cereals alone in 1986. In the midst of this high technology revolution we will still

have to eat and, whether or not we find a niche for ourselves in this new area, we should at least take advantage of it for ensuring our food supply. At the same time we may have increasing difficulties in applying high tech systems to agricultural exports, because the industrialised importing countries themselves will always be one step ahead.

Clearly, this is an area where third world countries must pool their resources in support of international research organisations. No one country will be able to afford the basic research and development in this complex area. Research in northern institutions obviously is concerned with interests of the North. The International Centre of Genetic Engineering and Biotechnology and the international agricultural research centres are institutions which developing countries and multilateral aid organisations should support to see how best we can extract the maximum from these new technologies for our benefit.

One footnote to all this is the possibility that the active ingredient in our well-prized ganja could be synthesised in the laboratory and reproduced in plantations in California. Ganja is grown in many places outside Jamaica, but we seem to have the monopoly of the best and the most prized. If we were to lose this through artificial synthesis, I leave others to debate the consequences!

### ***Dematerialisation of Production***

Closely related to the developments in biotechnology is the phenomenon called the 'dematerialisation of production', that is, the use of fewer and fewer raw materials in production. This is particularly relevant to developing countries because of the continued depression in raw material prices observable over the last ten years. There is a view that we are not in one of those cycles in which downturns are followed by upturns, but rather that we

have a permanent long term downward change in demand and therefore of continued price depressions.

In the United States it is estimated that the quantity of copper used per unit of GNP has fallen by 20.0% since 1973. The use of nickel and tin has fallen even more, of the order of 30.0% to 40.0%. In Japan, it is estimated that the quantity of raw materials used per unit of GNP has dropped by 60.0%. The average weight of steel in a motorcar is down by 20.0%. The use of satellites and fibre optics for communications replaced hundreds of thousands of miles of copper wire.

The writing is on the wall for some of those raw materials on which developing countries have been so dependent. What is more, the new materials, such as the super alloys and advanced ceramics, outclass materials they are replacing. They are lighter, more resistant to shock or corrosion, need less lubrication, have greater electrical conductivity and have other desirable properties. They use less energy; for instance, it is said that 100 lbs. of optical fibre can transmit the same number of telephone messages as a tonne or 2,000 lbs., of copper, a factor of twenty times better.

### ***The Human Element***

Finally, let us consider the new management techniques and organisational arrangements in which the dependence is not on unskilled individuals doing repetitive work at an assembly line, but on a highly trained workforce, which feels a close commitment to, and interest in the job required to be done. The Japanese success in production has been as much due to technology as to involving better human relationships, in which there is little distinction between boss and worker. Obviously, the application of the highest technology will fail if the human element, which must always be there no matter how extensive the automation, does not or cannot perform. Greater discipline will be required if the Japanese system,

for example of inventory control based on the 'just-in-time' principle, is put in place. This requires the closest collaboration between manufacturers, suppliers and the transport organisations. A small management improvement but with a saving of millions of dollars in building warehouses and in the cost of holding inventories.

It is well to end on this note because, if there is any single theme, which comes through this paper, it is the absolute key role of human resources.

## **A Look At The Next 135 Months**

One hundred and thirty five months \*: why this odd number? It is because it takes us to the year 2000. This year will be like any other, but human societies have always been sensitive to anniversaries, whether they be of births, deaths or of any other event. It is said that the coming of the year 1000 was anticipated with fear and dread. As may be expected, the most popular concern was that the end of the world would have arrived. There have been some religions, which have set various dates for this great event and have readily found excuses to explain why it did not happen. I am sure that it is just a matter of time before some pseudo-scientist makes similar warnings about the year 2000. Whatever the magicians and the tea leaf readers may say, there is a flurry of activity to use the occasion of this two thousandth anniversary to take stock, to look at what has gone wrong, to ask ourselves what we can accomplish by the year 2000 and to see how those goals which we have set ourselves can be achieved.

### ***The Year 2000***

We have already had proposals from international organizations for primary health care for all by the year 2000, shelter for all by the year 2000, clean drinking water for all, a better environment, and many other goals, using the year 2000 as a magic target date. And these are all to be commended. Jamaica might then ask itself, will it join those who are now setting goals for themselves for the year 2000, and can we use this target to energise ourselves and motivate ourselves to do what has eluded us up to now? Would it not be a worthwhile pursuit, not just for our political leaders but for all sections of our society - our churches, our agricultural societies, our teachers, and our scientists - to set themselves tough goals, which they should strive to achieve? And think of what we might accomplish if an entire society were to vow to come together

and work as a solid team. Not for some 'airy fairy' general 'pie in the sky' objective, but on sound, solid plans and targets which, although hard to achieve, are still achievable. I invite our leaders to consider this and to translate affirmative decision into affirmative action.

I shall set out some of the major areas we should be considering, but before doing so would like to look at some of the forecasts being made and hopes expressed for the rest of this century at the global level.

### *Forecasts and Targets*

In the sphere of economics, when we deal with the future, we must distinguish between two types of forecasting. First, economists having examined past and present trends might make assumptions as to how these trends are likely to move, for example, in the areas of world trade, savings and investments, public finance, commodity prices, and so on, and draw conclusions based on very elaborate computer models as to where the economy is likely to be in the next five, ten or fifteen years. Naturally, the longer the time period, the less the accuracy of the forecast and, I must say, the record of economic forecasting has not been very good. All the forecasts made in the late 1960s, for example, about global economic performance in the 1970s, were off target when the oil price increases took place.

The second type of forecast involves target setting. Your targets are set, for example, for rates of GDP growth, balance of payments performance, exchange rates, number of school places, hospital beds - in other words, the whole gamut of desired goals. To have meaning, the goals have to be set by people who have a feel for, and knowledge of, the facts of each sector and what is achievable given certain reasonable assumptions. In other words, they cannot

be goals plucked out of the air. They must be as down-to-earth and as realistic as possible.

The next task is to reconcile the targets in the various sectors to remove conflicts and inconsistencies. There cannot be one goal for expanding hospital beds with no provision made for training doctors and nurses. When the goals and targets are reconciled and are consistent, the next step is to see what needs to be done to get from the present base to the new target. This means assumptions about investments in the productive sectors, savings, tax policies, employment and all the other components. We must be careful not to confuse these two types of forecasts. The first type that of making assumptions about the future is more properly called the forecast and the second is closer to an indicative plan. The United Nations (UN), for example, sets targets for each development decade. One target could be a growth in developing countries' GDP of, say, 6.0% per annum. What has been lacking was the further work needed to determine what was required to reach this target at the level of individual countries and how we could go about taking the necessary steps. When I refer to Jamaica setting targets for the year 2000; I am now using the term in this latter sense of following up the targets with a detailed work-plan.

### ***Global Forecasts***

On the global scene, the World Bank has made two forecasts for the next decade. One is the case based, more or less, on a continuation of present global policies, and the results are not good. They show industrialised countries' growth of real per capita GDP as being only 1.8% per annum, and that of the developing countries as 2.2% per annum, with sub-Sahara African countries showing no growth at all. But even if certain remedial steps are taken, such as reducing high internal and external imbalances between the industrial and the developing countries, reducing protectionism and other reforms, the forecast still only shows a



2.6% to 3.6% per annum per capita GDP for developing countries. It is important to bear these global forecasts in mind because the economies of small developing countries, like Jamaica, cannot operate outside the international environment and the forecast that the environment is unlikely to be friendly for the rest of the century is not good news. However, the record also shows that some countries have countered the adverse external environment and have gone ahead of the rest of the pack.

Jamaica's task must be to plan on the basis that there will not be a fast-growing international economy to pull us along, but in that case we shall have to work doubly hard to counter these adverse factors.

### ***Moving Jamaica Ahead***

Our first concern must be with our human resources. This means increasing investment in those sectors, which improve the health, education, skills and wellbeing of all members of our society. Developing countries' efforts in these fields have been far from satisfactory because of limited resources, and these problems are further compounded by the high population growth rate with which they have to cope. If school places are already short, how can this be remedied if, while trying to remedy the backlog, it is found that over a five-year period 25.0% more additional places are required?

In this area of population planning Jamaica is fortunate; our forecasted rate of population growth to the year 2000 is only 1.4% per annum. This compares favourably with 3.0% to 3.5% per annum in many developing countries. The burden on social programmes will be considerably reduced if we can sustain this rate of population growth, and population policy has therefore to continue to have an important part in our overall policy planning.

The education sector will be the big problem area. Quantitative numbers do not tell the whole story. School places may exist, but the equipment, appliances, books, laboratories, qualified teachers needed for effective teaching are not there. The government, in its social wellbeing programme, has said it plans to increase the share of the education budget going to pre-primary and primary education from 32.0% to 38.0% in the 1990s. This is laudable, because, if the primary grounding is bad, the secondary and tertiary schools have only poor material to build on. So let our target for the year 2000 be not just a primary school place for every child but a primary place providing a good educational foundation. At the tertiary level, the percentage of the population in educational establishments would need to be lifted to at least 30%. But in addition to formal education, on-the-job training must be supported by employers, both public and private. It must become part of the culture of the workplace for a minimum percentage of the firm's budget to be spent on employee education.

### ***Human Resource Development - The Key to Success***

In January 1988, eighty-four Nobel Prize winners from all branches of science met in Paris at the invitation of President Mitterrand to discuss the problems facing the world in the 21st century. I shall mention only one of the sixteen conclusions these eminent thinkers presented to the world following their conference.

This is what the Nobel Laureates said about the topic we have just discussed:

*"Education must become the absolute priority in all budgets and must help enhance all aspects of human activity." Related to this recommendation is another, which says, "Science is a form of power, and access to science must be equitably shared amongst individuals and peoples. Science and technology must be made*

*available to developing countries in particular, to help them gain control over their own future and define the knowledge being necessary to their development."*

When the world's greatest brains looking at the achievements or lack of them in the past and, peering into the future, conclude that priority must be given, not to factory buildings or to large dams or ports, but first to enlarge human knowledge, we must sit up and listen and act.

I have already reviewed the development of the new technologies and the increasing importance of the services industry all requiring skilled workers, not an army of poorly paid, unskilled people who can use only their hands. The robots will be taking over the repetitive work; there will be no place for the messengers if we have fax machines in every office. Making this our priority will enable us to deal with our unemployment problem. Unemployment ratios in Jamaica have rarely been below 20.0%. An analysis of the facts shows that the highest incidence of unemployment is among unskilled, the young and the inexperienced and greater among women than men. So the rates are highest among the young, unskilled and inexperienced women, particularly under age 25.

In economic development programmes, the tendency is to view the labour force, particularly the unemployed portion of the labour force, on the basis that jobs must be found for these people. Psychologically, this has influenced the adoption of approaches, which treat the unemployed as a problem. What is necessary is to turn the programme on its head and regard these persons as a resource to be used, but clearly they can be used only if they are usable. And we come back to our priorities.

***Where Does Jamaica Stand?***

I know that many people, reading this paper about the goals for the year 2000, would have expected me, as an economist, to have concentrated on matters such as the rate of growth of GDP per capita. Those who have reviewed the Jamaican economy in depth feel that, with some reasonable assumptions, a growth rate in the 1990s of 3.5% to 4.0% per annum is the best we may expect. If we take population growth into account, we would have a per capita GNP growth of between 2.0% and 2.5% per annum per capita.

If, in fact, this is the best we will be able to do, we must know that we would at the 2.0% per capita rate be not much better off at the end of the century than we were in the early 1970s. Bearing in mind all the pitfalls of making exact comparisons over long time periods, this conclusion tells us that we may have to do the impossible; that is, to go to a growth rate of at least 3.0% to 4.0% per annum per capita to make a real improvement in the standard of living of all our people by the end of this century compared to where we were in the 1960s and 1970s. We would need to be helped by a friendly international environment; and I have already stated that this may be unlikely.

We will need some international solutions to prevent the hemorrhaging of resources, which we require to pay debts; now taking up to 45.0% of export revenues, with total debt being 130.0% of GDP in 1988. Rescheduling and postponement of principal and capitalising of interest have helped the present. But in the absence of actual waivers and debt forgiveness and reduction of interest rates, we merely push the problem into the future, with debt increasing even though we do not receive one penny net in new loan inflows.

On the basis of the present scenario, the rescheduling and grace periods come home to roost in the 1990s, and it is inevitable that, if we are not to have a compounded problem, there will need to be further reschedulings and further postponements. We cannot

provide the necessary imported raw materials and capital goods needed for increased production as well as essential consumer imports if we have to find 40.0% of export revenues to service debt.

We can expect some modest relief from debt-equity swaps, but the relief will come only from accelerated growth of production and foreign exchange earnings. The debt issue will be a heavy drag on the economy down to the year 2000. We cannot repudiate debt, because it would cut us off from the world economy. Every country, which has attempted this course, has suffered much worse than before. Our best brains and energies must be concentrated on coming to grips with the problem and it merely reinforces the point that we will need, more than ever, the productive resources of all our people with their increasing skills, to find innovative solutions. We should introduce and learn to manage new technologies, which must be developed to supplement our traditional production.

### ***The Natural Environment and its Management***

We cannot look at the future without expressing concern for the wanton destruction of the natural environment in many parts of the world, a situation that will lead to an explosive crisis, with available agricultural land declining while population continues to increase. Just a few examples will illustrate the magnitude of the problem. Twelve million acres of land, or nearly five times the size of Jamaica, are lost to desertification each year. The world's forests are declining at the rate of thirty million acres each year and there is rapid contamination of the world's fresh and seawater.

Jamaica, fortunately, is still green - at least when it rains. We have destroyed much of our hillside lands and our forests, but we have not reached the irreversible stage of some African countries. There is still time to make concern for the environment one of our major policy thrusts for the rest of this century.

The present generation should at least pass on to the next our natural resources - our lands, our trees, our rivers, our clean air, our lovely beaches - in the same state in which we inherited them from our fathers.

### *Ethics and Morality*

I will end this paper with a subject, which is rarely mentioned and, in some places, considered "not done" outside of a church on Sunday. It has to do with ethics and morality, not just in our personal life, but in our interpersonal relations and in the broader question of business relationships, government-people relationships and concern for others.

It is significant that in yet another forum of distinguished personalities assembled by the newspaper, "Christian Science Monitor", to discuss a priority agenda for the year 2000, four major issues were identified by the distinguished group as over-riding. They were protection of the environment, closing the north-south affluence gap, reducing the arms build-up and what the group called "bringing ethics to bear".

Former World Bank President, Robert S. McNamara, said that by morality he meant an understanding that our behaviour, both as a nation and as individuals, affects other people, and that we have a responsibility to behave in a manner consistent with the basic rights of others. Many statesmen and leaders of business feel that it will be regarded as lacking in toughness if they were to seek publicly to achieve a moral dimension in public and business policy. But morality means respecting the dignity and the rights to a minimum living standard for all of our people and a rejection of absolute poverty and misery. It means a determination to remedy these even if it costs us some of our own material wealth. It means that in business your word is your bond. A written contract is not

just a scrap of paper but a commitment to be honoured; a cheque for \$1,000 means money in the bank to honour it. It means trust and confidence between the government and the governed.

It is interesting that the Harvard Business School has only just discovered that it is important to add a course in ethics to its otherwise outstanding business education course. We need to seek material improvements, to have well-paid jobs, profitable businesses, housing and health for all, good roads. But we would not really be a great society, unless the other side of man, the ethical side, the spiritual side if you wish, the side which accepts compassion for others as strength, and honours concern for others as being essentially good, is ingrained as an integral part of the nation in the coming decade.

I am confident that my fellow Jamaicans have the capacity and will to achieve the goals set out here and that the year 2,000 will find this little country of ours a truly great one.

\*Editor's Note: This lecture was written in August 1988.