EDITORIAL

IMPLICATIONS OF THE TECHNOLOGICAL REVOLUTION FOR THE CARIBBEAN

The countries of the Commonwealth Caribbean, like the rest of the world, are at the cross-roads in their social and economic development. Prospects here are not bright, for in the face of a seemingly endless struggle to provide jobs for populations which are growing too quickly while demand for traditional products steadily diminishes, they are now assailed by a technological revolution which, in the short term, will most certainly exacerbate age-old problems. What choices does the Region have?

In this connection, it is interesting to reflect on the theme of a recent address in which Nobel Laureate Sir Arthur Lewis, responding to the rhetorical question "What is going to become of these islands?" stated: "The first ingredient (of success) is to have a high level of capital formation, keeping well ahead of population growth. With this also should be constant upgrading of technology so that the islands can maintain their competitive positions in the world."

Few will dispute this prescription for economic survival since it is merely a re-assertion of what has for a long time been self evident.

Maintaining a competitive position through technological excellence has many implications for the Caribbean people especially for the engineering profession which must assume the mantle of leadership in meeting this challenge. The production of goods and services will increasingly be dominated by skilful use of the computer and its mechanical derivative — the robot — of which there are now about 25,000 in operation worldwide. The number of these machines is expected to grow at the astonishing rate of 35% per year so that towards the end of the century they may well exceed 2 million. Many will be located in the Caribbean. Robots and computers will free mankind from dull, repetitive and even dangerous work and enable it to turn to more creative occupations for which the human mind is more naturally suited. In the short term, however, severe if not unacceptable dislocations of labour are likely to occur as each country adjusts to a new mode of economic activity wrought by the imperative of competitiveness.

Indeed the transition in the Caribbean may well prove overwhelming if plans are not carefully laid now to cushion the trauma of inevitable change. In this regard education at all levels will play a key role. Hand in hand with the training of new generations to fit into an increasingly computerised world, must go rigorous programmes of retraining and re-education of dislocated workers instituted both by private industry and Government. Such programmes will be expensive and will make substantial demands on the time and ingenuity of the educational specialists, planners and decision makers in modifying and updating school curricula and catering to the special needs of re-education.

At the tertiary level of education — the University and technical schools — the technological revolution brings to focus the dangers of educating engineers and technicians without due concern for the sociological effects of their work. Up to the present time the absence of suitable courses designed to promote responsible social attitudes, has been a notable deficiency of degree and diploma curricula. Now that the university is assured of expanding facilities its major concern must be for modernisation of its curricula while maintaining the closest possible links with industry. The system of formation of engineers, however, depends equally on structured postgraduate training which will continue to be controlled by the professional institutions or engineering councils. Their failure to deal effectively with this aspect of training cries out for urgent redress.

The University must also concentrate on its role as a centre of excellence in research since it is only here that leadership in this sphere of activity can be provided through innovation and adaption, using the new tools of technology. Given the lack of tradition for the support of research in the Caribbean, the University must seek to convince its benefactors of the importance of research by concentrating on projects which have immediate and spectacular benefits to the society.

The technological revolution will have another interesting effect, one which derives from man's perception of the workings of the human mind, in the light of the growing computer culture and the development of machines with arti-

ficial intelligence. In the same way that it came to accommodate the heretical assertion of Copernicus that the Earth was not the centre of the Universe and Darwin's theory that man evolved from lower forms of life, mankind will be obliged to rethink its philosophical position as a unique creation, in terms of the special characteristics of the human mind which distinguish it from the computational and mechanistic model.

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