

TECHNOLOGY AND SOCIETY'S WELL-BEING

**NOTES FOR AN ADDRESS
TO THE
EGYPT-CANADA BUSINESS COUNCIL
ANNUAL MEETING
NILE HILTON HOTEL
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**BY
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***Notes on the Business Council and on the speaker are attached.**

Dr. Dakrouri, Maître Toupin, your Excellencies, distinguished guests, members of the Council.

It is a singular pleasure for me to be here with you today. I have never had the opportunity until now to visit this exotic and historic centre of culture and commerce in the Arab world. Although I have been in Cairo only a few hours, I have been captivated both by its beauty and its vibrancy. Indeed, it seems that all life is here in its bustling streets and public markets.

I am also deeply honoured to have been invited to speak to you in the company of such a distinguished group of Egyptian and Canadian business and political leaders. I appreciated the comments of Dr. Ibrahim Abdel Rahman, and look forward to those of Dr. Youssef Mazhar, and their Excellencies Dr. Wagih Shindy and Dr. Youseff Wali. And I salute the presence here of Canada's Ambassador, and of Roy MacLaren, Canada's Minister of State for Finance - an old friend and a worthy and wise representative of my own country. Finally, I acknowledge the kindness and enthusiastic assistance of yet another old friend, Stephen Callary, through whom my invitation to this gathering was channeled, and whose tireless efforts in advancing Egypt-Canada relations have impressed me greatly.

The topic that Stephen has asked me to talk about is so all-embracing that I hesitate even to attempt it in the short time available. It makes me mindful of the old proverb that "the imprudent man reflects on what he has said; the wise man, on what he is going to say."

When we speak of technology and society in the same breath, we are talking about the greatest dynamic in the world today. We are, in fact, going through what has been accurately described as the second industrial

revolution, more powerful by far than the first, and with an impact that reaches every country, and every individual citizen.

The rapid advance of technology is most visible in its popular applications in the consumer society: first the transistor radio, and now the pocket calculator and digital watch. But these are only minor examples of a dramatic change in man's environment that has enormous potential for both good and evil; a force so powerful, in fact, that the world's most sophisticated and advanced societies are helpless to stop it or even determine its course.

Seldom in our history have we been so aware of the technological changes that are taking place around us. It is an exhilarating time, and it holds great promise for us all in terms of opening up new industries, bringing down costs, improving the quality of our lives, and broadening our horizons.

Along with the excitement and activity, however, have come concerns that the impact of the changes will not all be favourable. At the forefront is the fear of unemployment, of loss of jobs in traditional industries, of skills no longer needed, of damage done to particular groups in society.

The Government of Canada has been concerned for some time about this dual face of technology. As a result, some ten days ago the Canadian Government hosted a conference entitled "Canada Tomorrow -Le Canada Demain". It brought together representatives of various groups in Canadian society to discuss the impact of technology in all its aspects. In the opening address, Prime Minister Pierre Trudeau said "Canada must be both competitive and compassionate" in applying new technologies for economic development. This double concern surely must be the guiding principle for all societies that are seeking to harness technology to human needs.

Speaking of competitiveness, Mr. Chairman, I am reminded of a story recently told by Business Council and Royal Bank Chairman, Rowland Frazee. It is about two hikers who stumbled on a grizzly bear on a mountain trail. The bear seemed distinctly unhappy about the encounter. As the two hikers turned to run, one of them sat down, opened his pack and started quickly to switch his hiking boots for running shoes. His companion screamed at him to forget it -- it just wasn't possible to outrun the grizzly. As the other started lacing his sneakers, he pointed out, "I don't have to outrun the grizzly; I just have to outrun you."

What better example is there of technological revolution than the stunning impact of microelectronics in its various forms -miniaturization, automation, computerization, and now robotization. This progress is well set out in a report to the Club of Rome, published in 1982 under the name "Microelectronics and Society - For Better or Worse". In a chapter he contributed to that volume, Alexander King, of the International Federation of Institutes for Advanced Study in Paris, makes the point that no single invention or discovery since the steam engine has had such a profound impact as that of the integrated circuit, that tiny scrap of clear silicon that functions as the "brain" of the developing electronics industry.

As an illustration of the speed with which microelectronics is advancing, the report notes that the first digital computers, introduced at the end of the Second World War, were bulky affairs containing thousands of relays, switches and vacuum tubes, and literally millions of resistors. By comparison, today's silicon chip, a fraction of the size of the human fingernail, is 300,000 times smaller, 10,000 times faster, much more efficient in its use of power, and at the same time, far more reliable.

And this is only the beginning. By the end of the 1980s, each one of these tiny chips will contain as many as a million separate components. Amazingly enough, in a period of worrisome world inflation, the cost of these wonder workers has plummeted from around 10 dollars apiece in 1960 to a fraction of a cent today.

The economies being brought about by these changes were dramatized recently by an observation of Larry Clarke, Chairman and Chief Executive Officer of Spar Aerospace Ltd., the developers of the CANADARM used on the American space shuttle. He pointed out, "If automobiles had developed as has the microelectronic field we would be getting 12,000 miles per gallon on our standard automobiles and the cars would cost \$5.00." You will agree, I am sure, that this is nothing less than remarkable!

The report to the Club of Rome goes on, and I quote: "The question that arises is whether the countries of the Third World, which have not yet been able to assimilate the possibilities provided by the first industrial revolution, will be able to benefit by the upsurge of a second, and much more complex phase of technology . . . microelectronics."

Among the new technology's positive benefits are the elimination of dirty, boring, repetitive and dangerous jobs, and shortened working hours or years. This could lead, the report suggests, to the virtual abolition of poverty and the tyranny of work; in fact, it could be the key to utopia. But on the other hand, depending on its application, it could lead also to disruptive conflict in society, and growing levels of unemployment. The report concludes: "Microelectronics emerges as a new force in a world, if not in crisis, at least unsure of itself, its values, its goals and its destiny . . . The basic question for humanity is whether this new force, while possibly increasing the material prosperity of some, will be allowed to aggravate this

situation still further, or whether we can generate the wisdom to use it positively to shape new forms of society, with greater equity, which can offer a life of dignity and modest prosperity to all people and opportunities of human fulfillment."

Throughout its history, Canada has constantly adopted and created technological innovations, using them to grow and prosper. Technological change has enabled us to reduce our agricultural labour force by 640,000 since 1941 while increasing our real output by 50 percent each decade. In 20 years, from 1956 to 1976, it enabled us to reduce the number of rail workers by 40 percent and raise traffic volumes by a like amount. Because we have adopted and developed technological innovations in primary and secondary industry, less than 25 percent of our labour force now works in these sectors - areas which employed nearly all of our labour force 100 years ago.

In spite of these changes, Canada has not suffered the massive technologically-induced unemployment which many have feared. In fact, nearly six million new jobs were created between 1951 and 1981 as Canada accommodated in turn waves of immigration from other nations, major movements into the labour force by women, and the arrival at working age of our post-war baby boom. Indeed, with the exception of the severe recession of 1981-83, rapid employment growth has correlated with rapid technological change.

One widespread concern is the extent to which new technology brings with it adverse consequences. Physical health is sometimes cited, but the potential damage seems to be more in the area of psychological or social: fear and insecurity from changing jobs, or alienation from work which proves less satisfying. There is general agreement that the problems can be minimized if

workers are involved in the process of change through such means as union management committees or task forces dedicated to studying and talking about technological adaptation. The traditional adversarial approach in collective bargaining has not seemed to work very well in coping with this need for co-operation. It only makes sense that for new technologies to be successful, workers must be involved enabling those who must operate the technology to bring their knowledge and experience to bear on issues of design and implementation.

It is up to us as government and business leaders to ensure that this new technology is harnessed and put to proper use in achieving positive results for the benefit of all mankind.

It is not for me, as a Canadian and a first-time visitor to your country, to try to tell you how to manage your economy, or your development plans. You are perfectly capable of looking after yourselves in this regard. Canadians can, however, both as friends and business partners, offer their co-operation and help in achieving the ends you seek. That we do willingly, and without onerous quid pro quos.

Canada's regard for Egypt as a trading partner is both enthusiastic and growing. This past week, members of the Standing Committee of the Senate of Canada studying Canada's relations with the Middle East and North Africa were here and met with many of your leaders. Our Deputy Prime Minister and our Secretary of State for External Affairs, Allan MacEachen, were here some weeks ago. And two days from now, the Canadian International Development Agency is sponsoring in this city an exhibition on the transfer of technology from our country to yours. It will have as exhibitors some twenty-four Canadian companies in the agribusiness and high technology fields.

We are fully conscious of your development needs, and through CIDA, we are ready and anxious to share in that development. We know, too, a little about your problems with a rising population, a job shortage (a problem we share with you), and a need to import more than sixty percent of your total food requirements each year.

This is where we hope to be of help. Canada's contributions to this country in the form of direct assistance over the years, while small compared to those of the United States, nevertheless have been sizeable in dollar terms. They have been running at about \$25 million each year for the past five years, and soon we hope, may be increased to between \$30 and \$40 million.

CIDA's assistance has been focused in two areas: power and transportation. A \$50 million loan covered the provision of sixty-five General Motors locomotives to your railway system. With a further \$30 million loan, CIDA engaged in parallel financing with our Export Development Corporation for the delivery of 143 more locomotives. Another loan of \$25 million went to supplying electrical equipment for the rural electrification program. CIDA also maintains a small technical assistance program to the Ministry of Power, and a few weeks ago, participated in a \$75 million project for underground cables to connect your new Shubra el Kheima Power Plant to the main power grid.

We were happy to have President Mubarak as our guest in Canada earlier this year. We regard Egypt as one of the most promising markets in the Middle East for Canadian exporters of both goods and services. Our exports to this country have grown more than threefold since 1980 reaching \$350 million in 1982. We look to continuing sustained growth in future.

Canada is, as you know, a manufacturing country riding the crest of the revolution in high technology. Our telecommunications, in particular, are second to none in the world. You will be aware of the giant contract that Bell

Canada won some years ago against the toughest international competition to develop and operate a new telecommunications network in the Kingdom of Saudi Arabia. Earlier this year, a further management contract was signed with the Kingdom, representing an approximate value of up to \$1.6 billion over the next five years. Similar, though smaller contracts are being developed in several other countries in the Arab world.

Another dramatic innovation in the communications field has been Telidon, the all-Canadian videotex system that converts the home or office television set into a remarkable information retrieval system. Eventually, Telidon will develop into a two-way communications centre through which viewers may conduct business, take educational courses, or send and receive mail at the speed of light. Canada has already sold Telidon packages in the United States, Europe and Latin America. We hope to do the same in this part of the world as well - and - "Enshallah" - this technology will be demonstrated live for the first time in Egypt through a direct access to Canada at MISR CANTEC 83 here in the ballroom of this hotel on Monday.

Egypt's current five-year economic plan emphasizes an "open door" policy, first established in 1974, and reaffirmed by President Mubarak and his economic ministers. It has had the positive effect of attracting foreign capital, joint ventures, licencing, and the transfer of technology with the object of diversifying Egypt's own industrial base. As business people, we appreciate the generous terms your government offers, including tax holidays for investors, guarantees against nationalization and expropriation, and the right to expatriate profits. We know how hard his Excellency, Dr. Wagih Shindy, one of Canada's very good friends, has worked at this and how he would like us to do more.

As trading partners, Canada and Egypt already accord each other most-favored-nation treatment. Egypt benefits, too, from Canada's system of tariff preferences for developing countries. Your sales to us, however, have fallen since 1979, while Canadian exports to Egypt have continued to rise. We

send you our wheat, our lumber and our steel; but more important in recent years has been our sale to you of transport aircraft and, as I mentioned before, diesel locomotives.

In 1982, we also sold you more than a million dollars worth of telecommunications equipment, which we regard as a good omen for the future. Your need for computer software and hardware is increasing, and the market for other office equipment, including typewriters, computers and furniture, is promising as well. So we look forward to a healthy and growing partnership in the years ahead.

How much of that trade will be in the area of new technology is for you to decide. But it is obvious that you cannot allow yourselves to fall behind in this vital area, and we pledge our help in sharing this development.

Let me conclude, Mr. Chairman, by saying a few words about a subject very close to the hearts of all of us - world peace. Egypt, unhappily, is no stranger to war. Neither is Canada, although we have enjoyed several decades of tranquility and economic progress since our troops last engaged in battle. We share your happiness that an era of peace has now replaced the long years of hostility on your eastern border. We hope, as you do, that this will enable Egypt to turn its energies to the economic development that was not possible so long as your military needs had to take first priority.

In many ways our two countries have common goals and interests. Although your history goes back thousands of years while ours is relatively recent, we share a cultural and historical background from the period that led to our achievement of sovereignty and independence. And we occupy strategic positions on the globe - you at the intersection of Africa, Asia and Europe, we at the pole between the world's two superpowers.

We also share an experience from the time that our soldiers came here as peacekeepers under United Nations auspices. Their places have been taken now by our development experts and by our commercial traders. It is the beginning, I would suggest, of a long and fruitful period of co-operation between us.

Together, in a spirit of peace and true partnership, there is much that we can accomplish together. We look forward to continued and growing friendly relations, and many more such meetings as this in future.

"Shoukran".

Thank you.