



# THE ROYAL BANK OF CANADA

## MONTHLY LETTER

Vol. 42, No. 8

HEAD OFFICE, MONTREAL, OCTOBER 1961

### *Some Human Consequences of Our Increasing Industrialization*

**I**T IS a great error to regard economics and industry as arrays of statistics and masses of machines. They are tools for the achievement by human beings of certain purposes.

Industrialization, based on science and technology, is an extension of man's power over nature, emancipating him from many of the limitations of animal life. It enables him to devote more and more of his time and energy to pursuit of interests which mark his humanity.

It is also a mistake to think of industrialization as having created man's dependence upon his means of getting a living. Men have always, since the beginning of time, been utterly dependent for their bread upon some means of earning it. Our industrial society merely sets a new shape in place of the old, and requires us to organize ourselves in different ways.

Industrialism is fundamentally productive technique, based upon the discovery and development of improved methods of producing goods. To use it effectively we need to learn about the nature of man and his material needs; the nature of man as a social being, and the nature of industry as it contributes to material and social well-being.

#### *A study conference*

To study these problems, three hundred men and women from Commonwealth countries have enrolled in H.R.H. the Duke of Edinburgh's Second Commonwealth Study Conference. They are people between 25 and 45 years of age who are likely to occupy positions of responsibility in industrial management or labour organizations.

The conference is not designed to deal with wages, hours of work, collective bargaining, and such things, but to focus upon the impact of industrialization upon people and upon the communities in which they live.

While there will be a distinctly Canadian flavour to the conference, the overseas members will be asked to

relate their findings in Canada to situations in their own countries. Among other things they will study farm mechanization and oil development, in both of which Canada leads other Commonwealth countries, and industrial ghost towns like Springhill, Nova Scotia, and Elliot Lake, Ontario, which have their counterparts in every changing society will be considered. Prince Philip suggested that transportation and the strangulation of traffic in large cities might be good topics.

The value of the conference will not come out in recommendations, resolutions, criticisms, and things like that. Its value lies in the influence it has on the minds of the people taking part, so that when they get to positions of authority the decisions they make will be based on a reasonable understanding of the consequences.

It is not a governmental affair. Its President is Prince Philip; its Chairman is the Rt. Hon. Vincent Massey, former Governor General of Canada, and the programme has been set up by a Council of 90 members representing industry and labour in Canada, with the help of groups throughout the Commonwealth.

Students will be guests of Canadian industry and labour for 25 days, travelling from coast to coast. After the opening address in Montreal by Prince Philip, and a one-day visit to Ottawa, the members will fan out in study groups of fifteen, visiting farms, factories and communities in an inquiring state of mind.

As to the nature of the discussions, Prince Philip set the keynote in speaking at Ottawa about the conference which centred on Oxford University in 1956. He said: "The important thing to remember is that the organizers must keep their feet firmly planted on the ground of practical problems and cases. The enterprise is doomed to failure if it is allowed to enter the rarified atmosphere of theory." His hope is that the conference will lead its members to new and interesting

thoughts about what things contribute to good factories, happy communities and satisfied individuals.

### *We cannot go back*

What are some of the problems likely to be discussed by the conference members with managers, foremen and workers in Canadian factories, with farm operators, fishermen and lumbermen, with labour unions, and with community leaders?

We cannot turn the clock back to a simpler way of life. Mass production has been instrumental in raising the standard of living of millions of people throughout the world to a level never before known. Without it we could not produce enough goods to satisfy even elementary wants. We are, at the middle of the twentieth century, like pilots on a transatlantic flight who have passed the point of no return, who do not have enough fuel to go back but must push on regardless of storms or other dangers.

The rapid change from a society based upon agriculture to one based upon industry has left us off balance. In olden times life seemed to be a matter of seeds miraculously sprouting from the soil, responding to husbandry, and multiplying spontaneously. But Watt laboured and invented, and Arkwright, Whitney and Stephenson followed him, and suddenly life found itself caught up from a million farms and flung into a million factories.

Customs had to be recast, relationships between man and man, man and woman, parent and child, master and worker — all had to be altered to suit the new environment. The sheen of the cities, with their cheap amusements and their hurry and bustle, overcast the attraction of the green countryside.

It is impossible to pick on a date and say: "This is when it started." Men have always been seeking easier, less burdensome, ways of doing the necessary chores. It was before 3000 B.C. that they invented the plough, the wheeled cart and the sailing ship.

An upsurge in the use of machinery started somewhere around 1660 ushering in a period we call the Industrial Revolution. A handful of inventions launched technology on developments which are still in progress. Every new device had a hundred children. Every one of these offspring was a problem child.

Today's baby is automation, and because we are so close to it we think of it as being more rambunctious than any of the others.

A distinguished mathematician, Norbert Wiener of Massachusetts Institute of Technology, gives us comfort when he says that automation will lead to "the human use of human beings." It will, he thinks, make use of man's specifically human qualities — his ability

to think, to analyze, to balance and synthesize, to decide and to act purposefully. It will relieve him of all the dreary work machines can do better.

### *Benefits of machines*

There is much in industrialization with which to find fault, but we should stop criticizing the individual plays long enough to look at the scoreboard.

In most parts of the world industrialism has meant an advance in material civilization, a rise in the standard of living, an improved status, and greater political power for humble people. It has bettered health, lengthened life, lessened laborious toil, and given us greater leisure. The working man of today enjoys comforts that were merely fairy tales to princes and barons of three hundred years ago.

Not many generations ago famine pressed upon even the most advanced countries. In important western countries today poverty has almost disappeared. In the realm of the spirit of man there has been an increase in dignity resulting from the displacement of human muscle by inanimate sources of energy. Slavery has all but vanished and democracy has blossomed.

Individual lives have expanded through the increase in goods available for consumption. In Canada and the United States practically everybody can have as much of material goods as is conducive to happiness, without excessive hours of labour and with a degree of mental culture which is needed to make leisure delightful.

The Chairman of Canada's Productivity Council, H. G. De Young, said this in an article he contributed to the I.A.C. *Merit News*: "Nor is the sole aim of productivity higher profits or higher wages or bigger dividends. Its aim is a greater reward for *all* members of the co-operating team: owners, employees, customers and government."

The fulness of life thus held out to people in all parts of the world could not exist without the complex paraphernalia which technology and industry provide, but there were values inherent in pre-industrial life which may have been unwarrantedly sacrificed. Gandhi argued for the retention of cottage industry to prevent the domination of life by the soulless rhythm of the machine, and industrialists today are trying by various means to bring some of the old fellowship back into their factories.

### *Machines change environments*

Every invention becomes a part of the material environment to which society must adapt itself. When steam power replaced manual work it required the workers to adjust to a new situation in which the machine and not the operator set the pace.

When we think of the rapidity of the change in the past two hundred years we cease to marvel that there have been rough places. Look at the similarity between Israel under the rule of King Solomon and this country at the time of the establishment of the first Parliament of Lower Canada in 1792: men in both ages wore homespun clothing, illuminated their houses with oil lamps, heated with wood, and travelled in horse-drawn vehicles. Between Solomon and our responsible government lay 3,000 years; between 1792 and us only 170 years.

Advances in automation do not simply replace older techniques and bring us new commodities: they create new ways of life. They eliminate labour that was only repetitive. They increase the requirement for skill, and change the character of the skills needed.

One widely-expressed fear is of unemployment. It is said that since machinery and automatic processes increase output per worker, the demand for goods and services will be met without fully employing the labour force. But over the long run since the start of the Industrial Revolution employment has been maintained by means of a general rise in consumption and a reduction of working hours.

This has not happened without changes in the distribution of the labour force from industries producing goods for consumption to those making capital equipment and to others providing services such as transport and distribution. In Great Britain in 1955 there were only 465 persons engaged in production for every 100 in distribution, whereas seven years earlier there were 482.

### *What to do about it*

Under these circumstances we need to know what are the responsibilities of leaders and workers.

The human consequences of industrialization are not confined to workers at benches and machines. The men responsible, the executives, the proprietors and the financial backers, are affected too. They are charged with the heavy responsibility of managing the capital which is needed to make the machines effective, and with managing the businesses in the interests of stockholders, employees and customers.

There are two evident reasons why executives suffer from tension. First, they see and must cope with the consequences of what they do, and second, they are so placed in the scheme of things that they have to be their own inspectors.

Management is not domination over people, but organizing them for effective action.

This organization contains one factor which goes to the root of the human consequences of this industrial

society: people who work in our factories and stores and offices must be made to feel that they count.

We are faced today with such changes in operative skills that skilful planning by management is required. We need training on the job, given by men who are not only competent workmen but sensitive human beings. We need revisions of school curricula, such as are being made here and there in Canada, to lay the foundation upon which rewarding training may be done.

### *Incentives*

The old incentives of bribes and threats — the carrot or the stick — have lost their effectiveness. In states which have unemployment relief funds and free medical service the threat to fire has lost its punch.

Money is not in itself the most important incentive. One company attached to every machine in its factory a motor that ticked up the wages of the worker just as a taximeter ticks up a fare. It was found that the workers soon lost interest in these meters. They found it better and more interesting to keep their minds on their jobs.

Most people get satisfaction out of meeting challenges successfully. No increase in wages will ever make up for loss of happiness and contentment at work. It is a principle of good management that people must not have their self-esteem injured by any action that may lower their status in relation to that of others. This is something far more important than the prestige of having a new car or getting away first when the traffic light changes to green. It is personal and basic.

Beyond all reasonable doubt, human beings need to possess a philosophy of life within which their work "makes sense." They need a sense of purpose, enthusiasm, and a durable feeling of self-identity. Let the machine do the hard and boring work which comes naturally to it, but preserve in human beings the instinct for workmanship, the assurance of being needed, the will to achieve.

### *About building morale*

Morale means sharing goals in common. It leads people to plan how to reach those goals, and stimulates the aggressive and efficient team action that makes goals become realities.

This demands a much better communication of ideas than is yet common. The large concern is typically impersonal, and the loss of personal contact between worker and boss is one of the greatest burdens of industrial development over the years.

Once management is right in its services to the public and in its dealings with workers, then it needs

to tell about that rightness. Only then will workers become more concerned about their performance than about their prerogatives. Only then can management rely upon the acceptance of the responsibilities increasingly laid upon workers by mechanization and automation.

It is not enough to read books, published by the score every year, telling about techniques of management. We need to observe the realities around us, relate them to human lives, and apply our skill to making new combinations.

What has been accomplished so far in this century is but a preface to what may be accomplished in the second half if we can learn to make the most of human traits. Just as man walks only by putting one foot in front of the other, so industry can go forward only by putting one idea in front of another. Today's new idea, to put in front of the machine idea, is the worth of men, men who feel themselves to be part of the advancing industrial age.

### *Education*

Technological development has since its very beginning required that workers develop new skills and understandings.

The newer skill is basically brain power, not muscular power and dexterity. Educated people are required in unprecedented numbers. Gadgeteering skill is not enough. Even in routine jobs, automation requires ability to think, a trained imagination, good judgment, some skill in logical methods, mathematical understanding, and ability well above the elementary level to read and write. Man can keep his ascendancy only if he has a knowledge of principles which enables him to think originally, something the automatic machine cannot do.

It is a sad spectacle to see a youth who has been trained as a memory machine but does not have the motivation or the understanding of principles to reason his way through a non-routine situation.

We have passed from the old-established society where apprenticeship was the answer to training problems. Ours is an adaptive society in which techniques change daily. Education must lay the groundwork of knowledge which can be adapted to new situations — to the taking over of machines and processes not yet thought of or developed, to the substituting of thought for habit and experience.

There are two qualities needed in today's technologist: he must be able, at the least, to read delicate instruments with intelligence, knowing what they mean and what is at stake, and he must perceive the causal relationships among the elements in the specific sphere

of activity with which he is concerned so as to anticipate the consequences of his actions. He must correlate his instrument readings with others and interpret a trend of events by seeing the whole picture they present.

### *Man and society*

Let us not grow mechanical in head and in heart as well as in hand. The machine does not isolate man from the great problems of nature and society, but plunges him more deeply into them. In many countries, social development limps bewildered and protesting in the train of technical and economic practice.

We are faced with the task of developing social skills to meet the changing conditions. We cannot prosper with one foot in the twentieth century and the other in the eighteenth.

Social groups have as their reason for being the satisfaction of material and economic needs, the maintenance of spontaneous co-operation throughout the organization, and the fulfilment of men's legitimate desires. Every member of the group must find in it scope for expression, peace, comfort and self-respect. In a society like that men and women think greatly of their functions and purposes. Out of it they gain a feeling of security and certainty and comradeship.

### *Ideas, vision, courage*

If we are to make progress in an industrialized world, we must have ideas, vision and courage. These are individual things, not things produced by committees and boards.

A psychologist warned in his book that we advance only by adjusting our behaviour to our universe as it is, by learning how it works and its natural laws. We may then set ourselves to change this world to suit our needs, or else, if we are not able to do that, then change ourselves to fit the new situation as it is.

There is no question but that industrialism is here to stay. The world cannot do without the food, fuel, and all the other goods and services that only industrialization can supply. That is our world as we have it.

The danger of the industrial machine to society is not from the machine itself, but from what we make of it. Samuel Butler warned us well in his book *Erewhon* when he pictured machines as conquering mankind by the use of men as the subordinate organs.

This sort of disaster can be avoided by the co-operative thought and action of men and women, of intelligent working groups and responsibility-minded management.

We need not look upon what appears to us to be twilight as the twilight of evening: we can make it the twilight of morning.