

The Address—Mr. Scott

I believe that automation marks a break with past trends, a qualitative departure from the more conventional advance of technology. It implies a basic change in our attitude toward the manner of performing work. It is something of a conceptual breakthrough, as revolutionary in its way as Henry Ford's concept to the assembly lines.

John L. Snyder, a manufacturer, forecasts that unless we deal adequately with automation in North America we will have a national catastrophe which will make the depression of the 30's seem like a humorous anecdote in our countries' history.

What is this new change that seems to evoke only varying degrees of foreboding among the experts? In our country it is very difficult to assess its implications largely because we are doing virtually nothing in the way of research and study in this highly important field. The very admirable Senate committee on manpower throughout its report details areas in which we are evading the responsibility of trying to find out the impact of automation on the country, but there are some figures which help. For example, between 1949 and 1959 motor vehicle production went up by 50 per cent and employment only 11 per cent. Electrical productivity went up by 82 per cent and employment only 42 per cent. Household appliance production rose by 54 per cent and employment only 19 per cent. In all manufacturing industries between 1957 and 1962 production rose 44 per cent and employment actually dropped. In a film made in Ontario under the ominous title of "Are People Necessary" it is estimated that 800,000 jobs have vanished in Canada in the last 15 years.

The United States is far more aware of this problem than we are and its statistical information is much more useful and helpful. Between 1953 and 1960 they produced 500,000 more cars with 172,000 fewer jobs. From 1955 to 1962, chemical production went up by 27 per cent and employment dropped 3 per cent. Steel productivity went up 20 per cent but 77,000 fewer people were employed. United States labour commission statistics estimate that between 1953 and 1963, two million blue collar jobs were lost.

These are astonishing and frightening figures. What is happening in our industrial world that is bringing about these changes? Let me give you a few examples. One factory in the United States now produces one billion light bulbs a year in a continuous flow process. Ninety per cent of all bulbs are made with a staff of 14. The \$28.5 million Sarnia petrochemical plant runs on shifts of 10 workers. The Esso refinery in the United Kingdom pumps 5½ million gallons a day with a six worker shift. The famous Detroit automation process, which produces

six cylinder engines from rough castings, is described as follows:

Altogether 42 automatic machines, linked together by transfer devices that automatically move the blocks to the complete process, perform 530 precision operations and hand borings. A rough casting goes through the line and emerges as a finished engine block in just 14.6 minutes, as against 9 hours in a conventional plant. From the start to finish along the 1,545 foot line no operator touches a part.

One man in one Dearborn assembly line described his job as this: "I don't do nothing but press these two buttons. Sometimes I use my thumbs, sometimes I use my wrists, and sometimes I lay my whole arm across. The only time I sweat on the job any more is when it is over 100 degrees outside." It is already technically possible, Mr. Speaker, to produce an entire United States automobile without a single worker being involved. The process is not commercially attractive at the moment, but it is technically possible.

The implications of these changes, Mr. Speaker, seem to me to be overwhelming. Indeed, they are likely to create a staggering problem for Canada. I quote Mr. Brown again of the international lithographers who has said:

Automation is likely to hit Canada harder than elsewhere. The impact has not really been felt yet, but when it comes it will be introduced full-blown. The impact will be greater, the period for adjustment shorter, the hardships sharper.

Arthur Porter in Toronto in his speech at the automation conference said that there are fewer than 300 people in Canada who understand anything at all about automation and less than 300 who are doing anything by way of study or research into it. Recently the University of Toronto held a seminar on automation and invited 300 of our leading companies to send representatives. After coaxing, only 22 would send representatives. Part of the reason for this lethargy, Mr. Speaker, is due to the fact there is no form of co-ordination, direction or leadership by our senior levels of government, and part of the reason is due to the lethargy developing in the industrial world itself. These industrialists have always held the theory that automation was not a serious problem because those who lost their jobs through automation would be absorbed into the service industries, and that as the service industries expanded these people could be retrained and shifted into those industries.

The facts, however, do not bear this out at all. A study of the service industries themselves indicates greater technological changes and more massive shifts in unemployed workers than even in the production industries of the country. I refer, of course, in this vein to the new science referred to by my leader