Mr. Rynard: Mr. Chairman, I wish to congratulate the minister for his statement that funds for scientific research are to be increased. I shall deal with that subject later. I also want to compliment the hon. member for Kootenay West upon what he had to say about pollution. The scientific aspects of pollution have not been sufficiently studied in his province or in Canada, as indicated by the fact that 50 per cent of raw sewage is being pumped into the lakes and rivers of his province. This is a serious matter.

For a few moments I shall deal with air pollution. One gets confused whether this comes under the Minister of Energy, Mines and Resources, the Minister of Industry, or the minister of what's what. I assume that this subject comes under the aegis of the Minister of Industry, because he is responsible for scientific research. I propose this afternoon, therefore, to bring this matter under the heading of scientific research.

Referring to air pollution, it is said on good authority that in Canadian cities this pollution costs us over $500 million a year, which is a large figure. Surely, a small percentage of this amount could be devoted to research to try to solve the difficulty. The damage done is to fabrics, vehicles, machinery and so forth. One can figure out what the per capita cost to the Canadian taxpayer of such pollution is. It is around $40 to $60 per capita. Let me go farther, and talk of how air pollution affects people.

According to scientists researching in Los Angeles, 50 contaminants have been identified in the air of this city. How many unidentified contaminants there are I do not know. Many of these contaminants do harm to individuals, at least to a minor extent. In this country we are getting big cities, we are becoming industrialized. What scientific research in our universities is devoted to overcoming our difficulties? How great a concentration of air pollutants must one inhale before they become dangerous? Also, how much harm are those pollutants doing to us, even though they do not make us sick. To these questions scientific attention must be devoted.

Let me refer to one of the first areas on record affected by smog. In the Meuse Valley in Europe 6,000 people were made ill by smog and polluted air. Smog, of course, is one of the great problems of London, England. In one year there were 4,000 deaths attributable to the London smog. In Pensylvania in 1948 5,900 people became sick and 20 died. That is close to us on this continent. Pollution presents a serious problem. To recapitulate, it may cause diseases, or make people susceptible to diseases which have not been identified to date. So far nothing has been done under this heading in Canada in the scientific field. Also to be remembered, is the epidemic in New Orleans. I am sure the minister remembers this, because in that epidemic there were several fatal asthmatic attacks. It was thought at first that smog had caused the attacks, but later it was discovered that the dust from grain elevators had caused the acute asthma and killed the people. The serious part of this is that once this sort of thing happens, it may be too late to do anything about it. That is why I urge the minister to conduct investigations in this field, because research is his responsibility.

So far as I can determine, most smogs causing fatalities have resulted from the burning of soft coal which gives off oxides and sulphur. Combined with water, or with moisture in the air, the sulphur forms sulphuric acid.

Will the minister take into consideration the chest diseases that are aggravated by air pollution? Will he also consider our greatly increased asthma, bronchitis and emphysema? Air pollution aggravates such diseases. Statistics show an alarming increase in emphysema alone during the last few years. This is of great concern to the medical profession, and research ought to be done in this field.

I wish to deal now with the harm smoking does. How much harm is smoking doing to the population? When one drives in a metropolitan city one has the exhausts from automobiles, the waste from factories, as well as the smoke from cigarettes to inhale. Of course, the non-smoker has less trouble from pollution than the smoker has, and I refer particularly to the cigarette smoker. At the seventh annual air pollution medical research gathering, epidemiologists reported that personal air pollution was a far more serious hazard to health than the most serious form of communal air pollution. Cigarette smokers inhale their own pollutant as well as pollutants in the surrounding air.

To give an example, the two pack a day smoker inhales roughly 150 milligrams of benzyprene in one year. That is a serious problem itself. Equally serious is the fact that the smoker, by puffing smoke into the air, pollutes the air which other people breathe.