2. As far as life in New Zealand is concerned, one can say with confidence that only a very small number of persons are directly exposed, as a result of their work, to deadly poisons; but, on the other hand, many thousands are employed in work which is hot, dusty, laborious, dirty, or merely monotonous and uninteresting, and they, too, may be exposed to environmental dangers the effects of which, although less immediately disabling, are none the less real. These less specific health hazards, and the annoying and fatigue-producing inconveniences which a man or woman may encounter at work, are well worthy of attention, for they may have much to do with the maintenance of health. The former have been studied by medical men in Britain, privately and with State aid, for over one hundred years, and elsewhere for shorter periods; while the systematic study of the latter was first undertaken, also in Britain, during and just after the last War, when the Industrial Fatigue Research Board was created in 1918 as a result of the findings of the Health of Munition Workers Committee, which had been set up in 1915. This Board, starting off with investigations into fatigue and other causes of labour wastage in industry, found itself inevitably obliged to study the health as well as the ill health of the industrial worker, and in due course it changed its title to the more appropriate one of Industrial Health Research Board.

3. Industrialization, unless suitably controlled, is prone to induce a worsening of working as well as of living conditions, and statistics of occupational mortality help to give us a clear mental picture of the need for attention to industrial hygiene. Recent official British figures of occupational mortality among men have shown that sand-blasters, metalliferous-mine workers, stevedores, slate-miners, glass-blowers, kiln and oven men in the pottery trade, and a few others have all a death-rate of more than 50 per cent. over the average, while the lowest death-rate (less than 70 per cent. of the average) is that among agricultural-machine workers on farm-work. The risk in most of these trades is dust. Potters' deaths from bronchitis, for example, are about three times the normal, while glass-blowers have the highest death-rate from cancer viz., 225 per cent. of the normal. Leather-dressers, furriers, tin and copper miners, gas-producer men, and kiln and oven men also have high rates for cancer deaths. Some of the commoner causes of occupational cancer in Britain, such as shale-mining, are disappearing, but others, such as the manufacture of patent fuel and of synthetic dyes, are becoming commoner. Much has already been achieved in most highly industrialized countries as a result of improved hygiene in industry and attention to the health as well as the ill health of the factory worker. Most of the older well-known occupational diseases are now fairly well under control, and the decline in their incidence is illuminating. In Britain not only are "lead palsy" and mercury "shakes" seldom seen now, but such diseases as "miners' phthisis," "grinders' rot," "potters' asthma," and "the shivers" among brass-founders are rapidly disappearing. In 1900, for example, 1,058 cases of lead poisoning were notified; in 1941, only 59 cases were notified, and, in addition to this great reduction in number, the cases occurring now are much less severe than formerly. Similarly, the incidence of anthrax—"wool-sorters' disease"—fell from 51 cases in 1910 to 22 in 1941. Even more striking, because more vital to the war effort, is the fall in the incidence in Britain of toxic jaundice due to the handling of T.N.T. and its compounds. T.N.T. is absorbed into the body not through being swallowed, but mainly through the skin, and via the lungs, as dust and fume. Once this was discovered, preventive measures followed rapidly, with the result that while there were well over 400 cases between 1916–18, with a mortality of 33 per cent., during the present war (when we may assume that the number of persons at risk is at least not less) there have been, during the corresponding three years (1940–42), only 85 cases. How has all this been achieved? Partly by reason of the greater attention paid by managements to public hygiene in factories, and partly by the exercise of continuous skilled supervision of industry on behalf of the State by a trained factory inspectorate which includes on its staff its own medical officers. Obviously this is a subject well worthy of close study if New Zealand is to benefit to the full from the lessons learnt elsewhere.

4. What is the leading principle involved in the application of hygiene to industry? Simply this: that every man is entitled to the benefits at work of good ventilation, sufficient lighting, adequate warmth, a clean workplace, comfort, and freedom from exposure to harmful or unpleasant dust, gases, fumes, or radiations. The extent to which these things are lacking in a country's industry is a measure of the need for the services of a skilled industrial hygienist and a trained team of inspectors.

THE POSITION IN INDUSTRY IN NEW ZEALAND TO-DAY

5. New Zealand appears to have entered an era of industrial activity, and although heavy industries such as steelmaking have not so far been established, there is already a surprising diversity of light industry. Part of this is no doubt a mushroom growth resulting from the war, but it is probable, also, that a large part will remain and flourish as part of the permanent economy of the Dominion. It is worth noting, also, that modern methods of mechanization and of canning, &c., have so transformed the "primary" industries—milk, butter, and cheese production—that they, too, are now carried on in factories not very different basically from those housing "secondary" industries, and conditions of work in both may be very similar. What I have seen of these conditions during the past few months leads me to think that more careful planning and supervision will be required in future than has been allotted to this subject in the past if secondary industries are to attract labour and provide healthy, safe, and congenial employment. Conditions of work are too often unsatisfactory, and yet informed public opinion on this matter appears to have lagged behind that of some other countries in that there seems to be no general recognition of that fact. A short description of conditions encountered in New Zealand factories to-day, together with a comparison between current New Zealand and British factory legislation, will help to illustrate these points. Most of the New Zealand legislation quoted is that laid down in the Factories Act, 1921–22, as amended by the Factories Amendment Act, 1936. The corresponding British Factories Act is dated 1937. It should, of course, be borne in mind, in making such a comparison, that the British Act of 1937 emerged only after long years of discussion as to the needs of modern industry, and represents a valiant effort to bring up to a reasonable standard, in matters affecting the health, welfare, and safety of workpeople, those firms and industries which persistently lagged behind best current practice. A new Factories Act was by 1937 long overdue, the previous Factory and Workshops Act having served since 1901. To-day New Zealand is in much the same position as Great Britain was prior to 1937, in that the Dominion is trying to make do with a Factories Act which is largely out of date.