

environment and to promote public safety and welfare. In the case of tobacco smoking, the scientific evidence of the high rates of lung cancer, cardiovascular disease and other serious tobacco-related diseases in smokers, as well as the ill effects of passive smoking, places an obligation upon governments to act to protect the public. The health of the population has to take precedence over the freedom of the tobacco industry to promote sales of what are known to be harmful products. If I may, I will add to these arguments the wise statement of a famous legislator, Cicero, who stated, in the year 40 B.C. in the Senate of Rome, that the laws of man should put the safety of all above the safety of one.

The World Health Organization's 1982 report entitled, *Legislative Action to Combat the World Smoking Epidemic*, identified tobacco smoking as one of the serious health hazards of modern times and, what is more tragic, as an avoidable and unnecessary one. The harmful effects of smoking are no longer questioned except, perhaps, by the tobacco industry and stubborn, ill-informed, inveterate smokers. Numerous epidemiologic studies have shown that smoking increases the incidence of carcinoma of the bronchial tubes in the lungs; carcinoma of the pharynx and larynx, pancreas and urinary bladder; cardiovascular diseases, one of which is the dreaded emphysema, bronchitis, asthma allergy. This smoking epidemic has now invaded developing countries, killing 2.5 million people every year. Canada has the shameful record of being the sixth highest per capita consumer of tobacco in the world, after Greece, Japan, the U.S.A., Poland, and Yugoslavia, in that order. Statistics Canada recently revealed that the 40 per cent of Canadians who still smoked in 1982 puffed their way through more than 70 billion cigarettes per year. That cost the smokers \$4.4 billion, and that expenditure cost Canada 32,623 lives due to tobacco-related diseases. That is only in addition to the nuisance caused to other people, the incalculable suffering caused to those who died and the cause of 20 per cent of the fires in this country. Furthermore, the financial loss to Canada of this tragedy and folly in 1982 was \$7.1 billion. This enormous direct cost to our economy was broken down into \$4.6 billion in lost income due to premature deaths, \$1.5 billion due to hospitalization costs, \$860 million due to disability payments, \$30 million due to physician care and \$120 million due to fire loss. I should add that these figures did not include extra pharmaceutical costs at home, firefighting services, and the purchase and maintenance of ventilation systems. Our statisticians say that there are also many indirect costs incurred by tobacco smokers.

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All this damage is caused by using a tobacco product. This product, as I am sure all honourable senators know, is derived from that wicked plant called *nicotiana tabacum*, and its other species, *nicotiana rustica* and *persica*, purported to have been brought to Europe by Columbus after one of his trips to newly discovered America.

An Hon. Senator: Don't blame us!

Senator Haidasz: Tobacco smoke contains at least 3,800 known toxic chemicals of which 50 are implicated as carcino-

[Senator Haidasz]

gens, all affecting adversely certain bodily organs. The main constituents of tobacco smoke are nicotine, carbon monoxide and numerous tar compounds—all major health hazards—and their patho-physiological effects are many.

Time and practice does not permit me, in this circumstance, to go into specific and lengthy details about the patho-physiological effects of tobacco. This information is readily available in easily understandable material, appearing in medical journals and information pamphlets from such organizations as the Addiction Research Foundation in Toronto, cancer societies and anti-smoking advocacy groups. Statistics Canada and the Department of National Health and Welfare are other rich sources of special reports on tobacco smoking and its ill effects.

The essential noxious element dealt with in Bill S-8 is the harmful effect of passive smoking. Involuntary, forced or passive smoking is defined as the exposure of non-smokers to tobacco-combustion produced in the indoor environment. Tobacco smoke in the environment is derived from two sources: the "mainstream" smoke exhaled by a smoker, and "sidestream" smoke arising from the burning end of a cigarette, cigar or pipe tobacco.

Most alarming is the scientific evidence that sidestream smoke contains a higher concentration of dangerous and potentially dangerous gas-phase constituents and particulates; and that the gas phase accounts for approximately 85 per cent of the smoke found in a room occupied by cigarette smokers. About 90 per cent by weight of tobacco smoke is in the gaseous phase and 10 per cent in the particulate phase.

Tobacco smoke, both sidestream and mainstream, contains toxic gases and particulates that reach or are deposited in the tracheo-bronchial region during inhalation, and also in the distant tiny air sacs of the lung called alveoli.

The visible smoke from the tip of a burning cigarette, containing highly concentrated toxic chemicals such as formaldehyde, hydrogen cyanide, and the potent carcinogen N-nitrosodimethylamine become only slightly diluted as smoke drifts horizontally for distances up to three metres.

Furthermore, what is also alarming is that the toxic substances are not removed by standard air filtration systems. It has been estimated that a non-smoker exposed to air heavily contaminated by sidestream and mainstream smoke inhales as much of those toxic substances in one hour as a smoker does by smoking 15 non-filter or 35 filter tip cigarettes.

Passive smoking, or sidestream smoke, is responsible not only for irritations of the eye and nose, but also causes significant impairment of lung function, raised heart rate and also high blood pressure in patients with angina pectoris, as well as dangerous levels of carbon monoxide, which could impair one's driving.

Many pre-existing medical conditions are also aggravated by sidestream smoke. It also causes many acute illnesses of the respiratory system. Sidestream smoke also has long-term effects on the lung function and is also implicated in lung