

CANADIAN AWARDED NOBEL PRIZE

The 1971 Nobel Prize for Chemistry was awarded to a Canadian, Dr. Gerhard Herzberg, 66, of the National Research Council in Ottawa, for his studies of chemical reactions that help produce smog. He will receive \$88,000 with the award.

The man who won the first Nobel Prize in the natural sciences for Canada is a quiet individual with a devotion to the idea that capable scientists must be free to follow their own interests. Dr. Herzberg described this freedom in an interview published last April in *Science Forum* as: "First of all (the scientist), needs freedom to do what he wants to do, assuming that he is a really capable person. Then, of all the people around he surely is the best one to judge whether or not he can do a certain thing... A second kind of freedom is a more prosaic one: the scientist needs the facilities to do what he wants to do, without all sorts of restrictions, bureaucratic rules, and this sort of thing... A scientist does not know what he will be doing specifically two months from today, the forecasting has to be most flexible. There must be goals, yes, but flexible routes to them."

Dr. Herzberg, who was born in Germany on Christmas Day in 1904 and fled to the University of Saskatchewan during the Nazi regime in 1935, is fond of singing and music. He is a vegetarian and neither drinks nor smokes.

Dr. Herzberg was in the Soviet Union to deliver a series of lectures at the headquarters of the Soviet Academy of Sciences when his award was announced by the Swedish Royal Academy of Sciences. Discussing the award with reporters, he said: "The award is for me as a physicist. I was brought up as a physicist. But my recent work, for example in free radicals and molecules, has, in a way been more appreciated by chemists."

The Nobel Prize winner is a firm defender of the principle that scientists themselves should largely determine what work they should do and has made frequent appeals against what he sees as the inroads of bureaucracy on science. A few years ago, he told a convocation at York University, where he received an honorary Doctorate of Science degree (one of 18 honorary degrees he has received from institutions in Europe and North America): The greatest enemy of progress in science and technology in Canada is bureaucratic control. The interference of politicians, accountants and committees in the free development of creative processes in the scientific laboratories of the country is becoming more severe every year. If allowed to continue unchecked, this tendency is liable to stop all real progress.

His concern has not only been over the inroads of bureaucratic controls on science but also the trend to try and orient science toward particular ends—what he calls 'mission-oriented research'. "The exclusive or predominant support of mission-oriented work can only lead to mediocrity," he said. "In my opinion, we should not be greatly concerned whether the material benefits match or surpass the funds that we have put into the support of pure science. A high standard of living is not, as such, a goal worth striving for unless a high standard of living includes a high standard of art, literature and science."

The National Research Council has been Dr. Herzberg's home since 1949. Its current president Dr. William Schneider, was a student of his at the University of Saskatchewan. So was Dr. A. E. Douglas, Director of NRC's Division of Pure Physics, which Dr. Herzberg headed for a number of years.

Besides his honorary degrees, Dr. Herzberg has received many scientific honours, including the Faraday Medal of the Chemical Society of London (1970), and the Willard Gibbs Medal of the American Chemical Society (1969). The Canadian Association of Physicists honoured him with its Gold Medal in 1957 and the Royal Society of Canada with the Henry Marshall Tory Medal in 1953. Indian researchers have also been appreciative of Dr. Herzberg's research since Dr. C. V. Raman did early pioneering molecular spectroscopy. In 1957, the Indian Association

The five Nobel Prize winners at the Town Hall, Stockholm, after the Royal presentation of their awards. L-R: Simon Kunze, Economics; Earl Sutherland, Medicine; Pablo Neruda, Literature; Gerhard Herzberg, Chemistry; and Dennis Gabor, Physics. (Photo Courtesy World Feature Service, New Delhi).