History

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The first thing I would like to do is to thank you very much for allowing me to be brought out of retirement, dusted off and given an opportunity to speak to you. It is very flattering to those of us who have retired to be dug up because of a belief, that may prove to be mistaken, that we have something useful to say. In the past few years, CAN has proven to be a very effective organisation within the Canadian science community, and before I begin this talk in earnest, I would like to congratulate you as a group in what you have already achieved. Nonetheless there is much yet to be done.

It has been a long day for you. You have spent a lot of time with science and a certain amount of time here with more mundane matters. If you are now expecting a very thoughtful discussion of the history of neuroscience and the contribution of individual Canadians to the development of neuroscience, that is not going to be the substance of the talk. That would be a monumental achievement, for Canadian Neuroscientists have been major contributors is this field of science, unfortunately too often while working in other countries. What I am going to talk about is your history, the recent history that has led neuroscience in Canada and this association to its present point. That is best described as a vibrant community, but without adequate funding.

Neuroscience, for too many of you, is an underfunded activity conducted in institutions which do not adequately appreciate you, do not pay you appropriately and delay giving you any kind of security. The viewpoint will be primarily that of MRC supported individuals. There are many important activities in Neuroscience funded by other agencies, but I happen to know the story best from the viewpoint of the MRC best.

The story that will be told begins in the 1960's, a watershed period in the history of Canadian biomedical science. For almost 100 years until the 1960's support for science in Canada was primarily geared to the support of industry. Most money that came to Universities for research flowed through the National Research Council, an organisation whose mandate was to support industry, but which was wise enough to support basic research in its own labs and in Universities. This was the organisation which funded medical research up till 1960. Then the support of medical research was divorced from the National Research Council and the Medical Research Council created.

Important as the formation of the MRC was, it was really overshadowed by other events which took place in the 1960's. This was the move towards a national insured health system. The issue of some kind of national health insurance scheme had been around for a long time, but began to get real momentum in 1961 when Judge Emmett Hall was appointed by then Prime Minister Diefenbaker to review the matter of a National Insurance scheme and provide a report. That report which appeared in 1964 formed the basis of the structure of the new National Health Program. Such a new National Program required an enormous expansion of medical facilities and the creation of many new research opportunities for biomedical scientists.

Notwithstanding the formation of the MRC, the funding of medical research in Canada in the early 1960's is best described as somewhat strange for a sovereign nation. In 1962-1963 the total budget of the recently formed MRC was $4M, but the United States, through the NIH, was also a major contributor to Canadian research and contributed a further $2.3M, that is an amount equivalent to 60% of Canadian MRC funding. For many years Canada had relied on funding from the US, from charities such as the Rockefeller Foundation as well as from government sources to support its medical research. This situation was about to change. NIH was withdrawing much of its support. It was considered, quite rightly, that Canada as a developed and sovereign nation was well able to afford its own medical research. As a measure of the impact of that decision, in 1963 there were 125 NIH grants held in Canada, in 1964 there were only 32 and the dollar value of those grants dropped from $2.3M to about $600,000.

By 1964 there was thus a dramatic fall in the overall amount of money to support medical research in Canada, but at the same time as a result of the Hall report and the decision to introduce a National Health System great things were happening to greatly expand the potential for Canadian biomedical research. The Hall report had specifically recommended that a number of new medical schools be created, these included schools in Sherbrooke, in Hamilton at MacMaster, in Calgary, and those were all created as well as Memorial. Hall also deemed it necessary for existing medical schools to upgrade their facilities to meet the demands of this new universal health system. The Hall report also fully understood that medical research is an essential and basic part of any health research program and was to be enhanced in the new program.

At this time, in the early 1960's, Canada was in great shape. We had the second highest standard of living of any nation after the U.S. and the economy was growing at an annual rate of 6%. The natural resources which were in short supply worldwide were present in abundance in Canada. This plus a confidence that gripped the land made the new mandate possible. In a fit of euphoria and encouraged by Government, faculties of medicine fell into a frenzy of planning and a frenzy of aggressive recruiting. The fact was that for many years Canada had always produced excellent scientists, but for many of them living next to the much more prosperous United States and its very favourable research climate was too

tempting. Many found their careers there and also in Europe. Scientists such as Donald Hebb were able to have distinguished careers working at Queen's and McGill, but his equally gifted sister, Catherine Hebb pursued her career in Neuroscience in Edinburgh and Cambridge. The drain from Canada over the years was so great that much of the aggressive recruiting of the early 60's had to be conducted overseas and many scientists were plucked from other countries to fill the many new positions that were being created in Canada. It will probably sicken some of the post-docs here to find, in this period, that most of those who went overseas to post-doc training did so with a guaranteed job to return to in Canada. There were, however, a number of flies in the ointment. The Hall Commission, despite its virtuous attachment to research, only recommended that the MRC budget be increased by $2M a year for several years, a budgetary increase that was quite inadequate and would not even make up for the NIH loss for a couple of years. The pattern of miserliness in assessing Canada's financial needs for research that emerged in the 1960's has been maintained by successive Governments and by some is even regarded as a virtue, emphasising, as they believe, our ability to do more with less.

But to return to the 1960's. It was an exhilarating time. The cobwebs of ages were being dusted off from schools like Queen's and other existing schools as they planned their expansion; the planning of the new schools with new curricula and new opportunities for research attracted some of the most progressive thinking and capable minds in the country. To deal with the capital costs of the expanded health education system the health resources fund (HRF) made its appearance in 1965, with $1billion to its name. Not lightweight 1998 dollars, but heavy duty 1965 dollars. This money was for the building and equipping of new facilities and the upgrading older facilities. Great things were happening in providing the physical facilities for Biomedical Science in Canada.

Building went ahead at a furious pace, but almost as soon as the building phase started, so other concerns began to emerge. The growth and prosperity that had characterized the early 1960's began to wilt in the late 1960's and early 1970's. There were inflationary crises, recessions, anti-inflation programs and government financial austerity and suddenly all that seemed to be possible in 1964 and so near, slowed or came to a halt. Indeed, so dead were the hands (usually Provincial) that controlled HRF expenditures, that many facilities planned in the early 1960's did not even see the light of day until the 1980's and then only in a sharply truncated form.

As for research funds, what seemed to be generous to Government in 1964 clearly was not sufficient to meet the reasonable goals of the newly expanded research establishment. By the late 1960's the excitement and opportunity that drew many like myself to Canada was beginning to be replaced by concerns and anxiety that the goals that Canada had set for itself in biomedical research simply could not be met.

It is at this point that members in good standing in Canadian Scientific societies, found our societies slowly, but surely drawn into a new situation. Canadian scientific societies, which were somewhat sluggish, even in academic matters, found themselves having to think the unthinkable and get involved in politics. The view of the societies was totally naive and it was supposed that all we needed to do was to improve the visibility of research and this would gain all kinds of support. This would bring funding to a level that would be appropriate to the new level of manpower and facilities that had been created. But we really had few arguments to offer the politicians except for "more money please". One quantitative argument was to compare the percentage of Gross Domestic Products assigned to research and development in various countries. Canada usually spent a little more than 1% on R & D., with the research intensive countries spending 2.5% or more. But that argument could be weakened by the retort that the heavy spenders spent much of their R & D on defence-related research. When we did get ministerial support it was largely as an act of faith on the part of the Minister.

It happened that before I came to Canada I had some experience in working with parliamentarians on matters relating to the support of Medical Research and found myself very quickly co-opted to represent the Physiological Society in science policy matters. Like most scientists involved in this work in the late 1960's and early 1970's, I had no idea of the complexities and jealousies that really existed among those seeking support for science in Canada. I was unaware that the National Research Council, which had a tremendously good reputation among scientists, and even had Nobel Prize winning scientists on its staff, was held in low esteem by politicians and industry and by the scientific departments of many Ministries. NRC was originally formed to support industry, but supported a great deal of excellent basic research in its own labs and in Universities. This did not please many of the mandarins and it certainly did not please many of the ministers. Within Ministries such as Agriculture and Forestry there was a belief that they could do research for industry far better than NRC and that the money should flow to them rather than NRC. Various Ministries opposed other Ministries research operations. Jealousy was everywhere. In addition, in some government circles, there was strong antagonism to the idea that universities should be the prime beneficiary of any increase in research funds. It was in this period that I first heard one distinguished member of government say that Agiving money to university research is simply providing occupational therapy for underemployed faculty members. In the universities, where peer review was the norm for obtaining research funding, the idea of the largely non-refereed research being supported in Government labs was anathema. And the Universities opposed the creation of free standing Research Institutes, fearing that these would drain away their better faculty members. There were also the words of Bud Drury, a key member of the Cabinet who, despite being overall a strong supporter of science, said in the House of Commons one day ACanada did not need to do all that much science itself. The thing about science, he said "is that you could always buy it if you need it". An early example of Government failure to recognise that intellectual property may turn out to be more valuable to the country in the end than mining rocks and chopping down trees.

So, along with my fellows, I found myself trotting up to the Hill and taking part in demonstrations and lobbying efforts to try and persuade government that research was good.Unfortunately, as I pointed out earlier, we had few concrete arguments to make for the support of University research at that time, except that in financial terms, Canada did little research compared with other developed countries. To suggest that there were highly profitable industries to be created based on the fruits of scientific research was considered laughable. And remember that it was in 1969 that compulsory licencing of pharmaceuticals was introduced, effectively driving out pharmaceutical research from Canada for 20 years.

At the same time as the scientific societies began to get involved in politics, the Senate of Canada, an organization which often, despite everything is said and done, does occasionally take the opportunity to do something new and original, decided that science in Canada was conducted in the absence of any coherent policy and was done largely without direction. It accordingly set up a special committee on science and technology, chaired by Senator Maurice Lamontagne, to look into this state of affairs. The Senate committee started work in March 1968 and conducted hearings into June 1969. So we have a convergence at this time of two major interests in matters of national science policy. We have both parliamentarians and the scientific community now involved.

The Lamontagne Senate committee began to deliver its reports in 1970. They had by then received 12,000 pages of written briefs and oral evidence. They heard from 44 universities and colleges, 79 Federal departments and crown corporations. They toured the United States, Sweden, France, Switzerland, Holland, Belgium and the United Kingdom to see how research was done there. They held 102 public meetings, 20 meetings in camera. They met with 325 groups and individuals and 1,000 science administrators came to participate. They had made a massive effort to define the role of science in Canada, but one of the earliest findings that they made was that if you get a half a dozen scientists in a room, particularly if they come from different disciplines, you are likely to get a half a dozen different opinions on the needs of science. They found it almost impossible to get a consensus from the scientists on anything. They also discovered the two-handed scientist too. On the one hand this, on the other hand, that. The Lamontagne Commission decided to do something about this. They believed that there had to be a forum in which scientists could speak to each other and then come to Government with one voice. This, they hoped, would avoid the conflicts that they were getting - institutes versus universities, universities versus government, government departments versus each other and the National Research Council, not to mention physical scientists against behavioural scientists and so on. They wanted an organization which could really define what it was that scientists felt should be done in Canada and which could provide that information to Government.

Thus, at their request, in 1970 an organization called SCITEC, the Association of Canadian Scientific, Technological and Engineering societies, was put together. One hundred and ten societies were represented at the first meeting in which the structure began to be defined. I became the Canadian Physiological Society=s representative with a mandate to have nothing to do with this organization - to kill it. This was a common view, and the scientific Societies by and large wanted nothing to do with SCITEC. There was a belief, widely held among members of individual scientific societies, that no other discipline could understand their own particular problems and requirements. Therefore, any organization that tried to speak for the scientists, engineers and technologists as a group would inevitably misrepresent individual disciplines and play down the specific interests of that particular group. As I recall, SCITEC at this time had an annual budget of approximately $300,000. a year drawn from a number of Government departments. This enabled SCITEC to organise meetings and pay people to come to discuss specific issues of national importance. So I went along to a meeting of SCITEC with a mission to help bury SCITEC. But an extraordinary thing happened, as if in an evangelical church I was converted. I recognized that virtually all the scientists who were lobbying for more money and I include myself, had no real idea of how the Canadian Government and the political process worked in Canada. The people who were talking at the SCITEC meetings, the Parliamentarians both from the Senate and the House of Commons, and senior scientists such as Omond Solandt, with a lifetime of Government service, were full of useful information about the great maze called Ottawa. We scientists in search of money from Government clearly needed all the help we could get and SCITEC, it seemed had the credibility and contacts that could provide that help. There was no one else.

In Canada there was no machinery for scientists to speak to Government directly. The Science Council had been incorporated, but was advisory. There was no equivalent of a highly regarded National Academy of Science and the Royal Society was very poorly placed to undertake such a role. So it became apparent to me that a well funded organization such as SCITEC really had a role to play. But unfortunately, through its 10 or so years of life, SCITEC never succeeded in winning the support and co-operation of the majority of Canadian scientific societies. This was not for want of trying. SCITEC tried a great many things to try and advance the cause of science. It set up a major program for the Public Awareness of Science. There was a belief, widespread then and now, in the scientific and political community, that if we could only get our message out, the public would aggressively support science and break down the doors of their local Members of Parliament to fund all forms of scientific research. We believed, as a community, that we needed much more awareness in the public at large about scientific research. We felt that if the average person was informed about science, there would be a groundswell of understanding and support. Well, we proved that to be dead wrong. We hired David Suzuki. He went around the English-speaking parts of the country giving splendid speeches and trying to lay the groundwork for some sort of National Canadian pro-science organization. His speeches attracted overflow audiences in towns all over Canada, but the moment he left town, the only visible residue that SCITEC had were his travel expense accounts. The notion that public awareness of science is something that is easily done and has a profound effect on the

way science is viewed by the public is only partially true. In another initiative SCITEC paid science journalists to write articles on science in French which were then supplied free to the Francophone press. The papers and magazines said thank you and published the articles and that was that.

Nonetheless, SCITEC, working with a group of Parliamentarians, was able to create a Parliamentary and Scientific Committee. This committee held meetings in the House on cogent matters of science for the information of Parliamentarians. Parliamentarians were introduced to the role that biotechnology was going to play. They were introduced to the new developments in silviculture to scientific progress in agriculture and forestry and communications and a number of other things that Canadians in the early 1970's really needed to know a lot about such as growing science based industry. There was a fair attendance of MPs and Senators at these meetings, but I do not think that these sessions had any great effect on the general level of parliamentary debate. The Senators turned out loyally, but many of these MPs who were our strongest supporters either lost their seats at the next election, or did not contest the next election - in some cases having accepted positions in science-based industry.

What we did learn was that what Parliamentarians, on the whole, are concerned with is the next election. If they are in power, they want to hold onto it. If they are out of power, they want to get back into power. So, they always looked at the issues concerning science that were provided to them, not in the context of their inherent rightness or wrongness for Canada, but how many votes they would get by supporting any particular issue. Think Monica Lewinsky.

If you think things are any different in 1998 from what they were 25 years ago, let me refer you to an article in the Globe and Mail which appeared on July 6th this year. Talking about the way to spend the so-called budget surplus the article reads. AA few Ministers think the best the Federal Government can do is to increase funding in areas where the Federal Government has an established role, such as the Medical Research Council, Breast Cancer, or AIDs Research and Aboriginal Health, but others counter that tried and true programs like these provide little political pop, especially when the public is fixated on emergency rooms and waiting lists. Little political pop - that is what you are.

We may believe that the research that we do is important, but that is not a widespread view and this is one of many lessons that those associated with SCITEC learned. That what you and I consider as fundamental concerns can generate a buzz for a little while, but they are not the things that sustain political support. One other thing about SCITEC was the finding that enemies come at you from all sides. These included the science teachers who thought we wanted to take over their role by our public awareness activities. The deputy ministers wanted to keep all outsiders away from the decision making process on research conducted by their ministries and, of course, those small-minded Presidents of Scientific Societies who were in training for their next post as dictators in very small Central American Republics did not want to cede power to anyone.

By the middle 1970's, nonetheless, as a result of all those activities, education of scientists was taking place and many scientific societies, including the Canadian Federation of Biological Sciences, finally began to understand the reality of Ottawa politics and the need for active participation in those politics. CFBS, for example, the sluggish organisation which represents the basic medical sciences, finally realized that it could not do its National business out of Saskatoon and moved its office to Ottawa, amidst a great deal of grumbling.

I learned another important lesson in that period about research funding. It was that in Canada there are members of an old boy's club who have their private channels of access to research money, and they want to keep things just the way they are. Let me give you an example. When Lotto 6/49 was established in Ontario, the idea was that all funds generated by this lottery would be applied to medical research. I was an Officer of the Canadian Federation of Biological Societies at that time. Although CFBS did not normally lobby at the provincial level, it was now believed by many Ontarians in CFBS that if the Ontario Provincial Government was allowed to hand out the money it would be handed out on a political basis. We Ontarians in CFBS wanted that money handed out on the basis of scientific merit. So a meeting was set up with Eugene Leblanc who at that time was the senior official concerned with research within the Ministry of Health in Ontario. The purpose of this meeting was to persuade the Ontario government that an Ontario Medical Research Council be created along the lines of the MRC of Canada and this would receive and disburse the Lotto 6/49 largesse.

The meeting at the Ministry of Health had barely got started and we had just begun to make our case when a very distinguished Toronto biomedical scientist appeared and sat down at the table and began to involve himself in the discussion at the meeting. The next day in my office, I received what can best be described as a one hour abusive phone call from the same senior scientist who attended the meeting. What he said can be condensed in one short sentence. We had put our noses in where we were not wanted. I was told that if there was an Ontario MRC - then Federal MRC contributions were bound to be cut to Ontario. We did not need an Ontario MRC and so on. Tell that one to Albertans whose medical research base has been transformed by the Heritage Research Fund! What really was the situation was that the senior scientist had a direct line into the Ministry and there was no doubt from the shape of provincially supported research that he was able to direct funds into those areas that interested him. That those areas were important and needed funding was in no doubt, but there were many other areas of science, particularly Neuroscience, whose importance and needs had not been recognised in the same way at any political level. Even now, the importance of political influence by high profile individuals in Canada and the effect that this has on the direction of research funding, particularly at the provincial level, cannot be over-estimated.

Now at the same time, in the early 1970's, that science policy became an issue, the Society for Neuroscience had been formed and was beginning to flower. What had started as 600 of us meeting in Washington in 1971 became a major scientific organization by the mid-70's. What had not been anticipated by most of us in 1971 was the growth of the political importance of the Society for Neuroscience within the U.S. Thus the experiences of the difficult years in the >60s and >70s made it essential that the views of the emerging Canadian neuroscience community not only be represented both nationally and provincially within Canada but also within the Society for Neuroscience. This society is, after all, a North American society with the U.S., Canada and Mexico as partners, and we needed a voice. These then are the circumstances that led to the formation the Canadian Association. It was obvious to many of us that we needed an organization which could speak for the Neuroscience community within Canada, which could exert the same kind of special pleading to politicians that other scientific groupings were doing. It was also particularly important to secure more formal representation within the Society for Neuroscience so that it would further Canadian interests by its funding, offices and prestige and form a conduit to enhance our influence within the Society and deal with matters of concern to Canadian members.

It was for these reasons that at a meeting of the CFBS that the proposal to form the Canadian Association for Neuroscience was brought forward and the decision taken to go ahead and form the organization and give it some formal structure. CAN very quickly became an effective element within the Society for Neuroscience. The objective of influencing the Society for Neuroscience and using it to influence Canadian institutions was aggressively pursued. The older members will remember that the then President of the MRC came to the annual meeting of the Society for Neuroscience to address us and listen to our concerns. A President=s breakfast was established in which the Officers of the Society for Neuroscience would meet with the Officers for CAN preferably in the presence of the MRC President and NIH Institute directors to discuss those issues which were pertinent to Canada.

Despite all the years that have passed since CAN was formed, Government support for science in Canada has changed little. The political realities have not really changed since the 1960's and the Federal Government of Canada is still not really serious about supporting science directly. We have yet to incorporate science into Canadian National culture. I quote the Globe and Mail from July of this year. ABetween 1990 and 1997 in real terms health research funding in Canada showed no growth whatsoever. The graph of cumulative annual growth shows a little peak in 1994, but that is it. In the same period in France, where the scientists took to the streets to protest the poor support for research, expenditures in health research increased by about 20%, In Germany, Australia, and the United Kingdom by about 40% and in the United States by almost 50%. For whatever reason, Canadian scientists have failed to convince the politicians that science, which is an integral part of health research, demands more funding and that such funding is in the public interest.

Thus, there has never been a time when this Association and its efforts were more important in the support of its science than now. So what are some of the fundamental issues in which CAN can take a leadership role - must take a leadership role? Let us start with the MRC and its role and its budget. I do not want to downplay the success in restoring the MRC budget, but I do want to say that the notion that putting the MRC budget in the 1998 fiscal year back to where it was in 1994 is not in my judgement a farsighted and welcome decision. Nor do I believe that an MRC budget in the 2000-2001 fiscal year of $275.5 M will come close to meeting the costs of an appropriate enterprise. As the President of the MRC has said, the MRC budget is at the bottom of the G7 countries. In a recent article in the November issue of the Report on Business I note with delight that Henry Friesen is proposing an additional $500 M boost to the MRC budget. This, I believe, is absolutely in the right ballpark and the kind of money that is needed if the MRC and biomedical science is to play the proper role that it should in Canada. What can we in CAN do about that?

Dr. Friesen in recent publications and speeches has launched a plan for the creation of a system of institutes associated with the Health Sciences Centres. That is an excellent initiative and has widespread support since it adds to the budgets of existing health science centres and gets them off the hook for research centres. But it does little or nothing for the MRC. Before there are any Institutes located in the Health Sciences Centres it is my belief that what is needed is a system of Medical Research Council Institutes funded 100% by and operated by the MRC. The Medical Research Council of Canada has a fundamental problem. It is invisible to the public at large. As an agency which has no physical plant except offices, which funds research in a variety of institutions, usually jointly with other agencies, the MRC has no visibility in the national conscience outside of a very few people and has only a small group of political supporters. The MRC, if it is to succeed, needs consistent grassroots support from outside the medical community. The only way that agencies get grassroots support is by being highly visible and nothing would be more visible than a large brick and stone structure in Ottawa in direct view from Parliament Hill with the words Medical Research Council Research Institute on it. Something like the National Defence offices - but with a huge neon sign, perhaps with a large sign visible for miles around which says that "Research saves lives". The MRC cannot win widespread support unless it is in the heart of the National conscience and seen as one of Canada's jewels, and it will never do that unless it has a presence on its own.

Indeed, given the quality of neuroscience, one can envisage the first of these institutes being dedicated to Neuroscience in all its ramifications. In Neuroscience, we may be short of money, but we are not short of quality. It is no accident that of the 28 Presidents that the Society for Neuroscience has had to date, Grafstein, Hubel and Mendel are all Canadians, but working in the United States. In addition, Mishkin is a Canadian-trained American and our own Albert Aguayo has also

been President of the Society. We are about 5% of the membership of the Society for Neuroscience. We have provided it with about 15% of its Presidents, so why not have the first Medical Research Council Institute in Ottawa, a Research Centre dedicated to Neuroscience in all its broad diversity from those things that impinge directly on the care of those with problems of mental health through to the molecular biology and exotic computing and all the other sciences that fit under the umbrella science that we call Neuroscience.

Let us go even further. Let us take one of Justice Emmett Hall=s original recommendations and think of getting rid of the Medical Research Council as it presently exists. He suggested for a number of reasons, which I think are as cogent today as they were then, that we should have in its place a Health Sciences Research Council. The MRC talks at length about its role in Health Research. Let it grasp the nettle and become the Health Sciences Research Council and ensure that all the constituencies engaged in Health Research, all of which are equally important, become partners rather than opponents in health care research funding. Heavens, we might then even argue for a fixed proportion of National Health Care Costs be devoted to this new council by the Federal Government to give adequate and stable funding.

We, in this organisation, should also be involved along with other interested parties, in the appointment of the new President of the Health Research Council. At the moment, the process of appointment of the President of the MRC seems to be very secretive and I doubt if few of you in the audience have any idea of how it is conducted. We, the scientists, need to have representation in that organisation that will make the appointment of the President of the Health Research Council. In making their recommendation that the MRC be superseded by a Health Research Council, the Hall report said that the president of this new Council should be a lay person. If one thinks very hard about the role of such a council in the 1990's, the Hall suggestion has much merit. The head of such an organisation must not be beholden to any one constituency. We don't need a splendid medical scientist at the head, we don=t need a splendid administrator at the head. We need somebody who can function as a charismatic TV personality. There is no more effective way of a new Health Research Council impinging on the Canadian public than by having a recognised and respected President of the MRC who not only appears frequently on television, but whose appearances are welcomed and are interesting to a high percentage of the Canadian public. It is not an accolade to be established as a reward for long and distinguished service in Medical Science, although that ain=t bad. We need someone who can convince the TV viewer of the genuine needs of this community. Kind of the opposite of Ken Starr. Do you think Richard Branson would take the job?

One other suggestion for the Association to undertake for the future. That is the reform of the Royal Society. We not only need a consortium of scientists and scientific organisations for the purposes of lobbying. We also need a highly respected agency which can represent science and only science and be seen to be representing the best of science and to which Government and other bodies can go to when they need the highest quality scientific advice. The Royal Society has tried to do this on occasion, but it fails for a number of reasons. Firstly, it is not a body dedicated to science. It is the typical Canadian compromise, except that rather than try and encompass two solitudes, it has created three. It has three academies, all with divergent interests, thus creating the possibility of 6 types of conflict. We need to separate science from out of this. The Royal Society and the Fellows can still put FRSC after their name, but we need an independent National Academy of Science and if we cannot have it within the Royal Society, we should have it outside the Royal Society.

Not only, in my judgement, do we need that National Academy, we need to have a membership of that Academy which is sufficiently broad and numerous that it impinges on and reflects back in to the Canadian community of scientists. At the moment there are only a few Fellows of the Royal Society of Canada who come from our science; they represent no more than a pimple on the membership of the Society for Neuroscience and this Association. It should be a reasonable goal of all hard-working scientists of some distinction in Canada that they receive such a fellowship. That means having more than 30 new members a year which the Science Academy currently spreads among all disciplines including engineering. There would be other advantages that a National Academy of Science should be able to achieve, including the attraction of sufficient endowment. Given the size of science-based industry in Canada, domestic and foreign owned, it should be possible to raise a handsome endowment. By not having to go outside for funding, a National Academy it can offer truly independent advice on science, and further, with sufficient endowment could even offer members some tangible material benefits.

Well, as you can see, I do not see any shortage of roles for this Association to do. I am sure that with officers and members as aggressive and as effective in the last few years as they have been, what you achieved in the past will be more than equalled by what you can and will achieve in the future. I shall now retire to the comfort of retirement and begin to compile my score card of your performance.November 17, 1998