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ABSTRACT

Questions about the supply of highly qualified graduates in Canada are examined. Attention is directed to the following concerns: the need for more adequate statistical information about Canadian postsecondary education and about current and future requirements for highly qualified graduates; the problems of maintaining equilibrium in the period of growth in Canadian higher education from 1945 to 1975; the current state of Canadian higher education, especially problems and uncertainties about enrollments and finances and the relationship of these to the development of Canadian studies; Canadian requirements for highly qualified graduates; the age structure of the professoriate and the lack of jobs for young scholars in Canada; the question of faculty citizenship (i.e., hiring Canadians for Canadian universities); the human resource questions arising from the national goals set for research and development; the status of women in Canadian academic life and the implications for teaching and research about Canada; and the role of foreign students in the promotion of knowledge about Canada. Recommendations are focused to specific organizations, institutions, and government agencies. Appended are a bibliography and guidelines on Canadianization and the university. (SW)

Some Questions of Balance:

Human Resources, Higher Education and Canadian Studies

Thomas H.B. Symons
and
James E. Page

To Know Ourselves:
The Report of the Commission on Canadian Studies

Association of Universities and Colleges of Canada
1984

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PREFACE

To Know Ourselves, Volumes One and Two, The Report of the Commission on Canadian Studies, was released by the Association of Universities and Colleges of Canada in March 1976. That publication marks an important step in the evolution of higher education in Canada. The work of the Commission provided a thorough and detailed assessment of the level and quality of Canadian studies in higher education and a measure of Canadian content in a host of disciplines and professional programmes in Canadian universities and colleges. It exposed our shortcomings and proposed a new sense of value about things Canadian in higher education.

Much has happened since that publication. Programmes in Canadian Studies have been established in many Canadian universities and colleges, a number of programmes concerned with regional studies have been initiated, and in many other programmes across the country course content includes more attention to matters Canadian. Research on our history, literature, cultural and social developments has begun to flower and has gained respectability. Students have increasing opportunities *to know ourselves*, not by dispensing with knowledge of the wider world and its peoples, but in order to better understand the world and our place and time within it.

In the same time Canadian studies have been fostered in a number of universities abroad, reflecting at least in part the interest of others in Canada, in the role of our country, and reflecting as well the maturing status of higher education in Canada generally. The insights and assessments of others about Canada and Canadian studies can only be helpful to our own understanding.

Volume Three of the Report of the Commission, *Some Questions of Balance: Human Resources, Higher Education, and Canadian Studies* is now published by the Association. In this, the final volume of the Report, Thomas H.B. Symons, now joined by James E. Page, examines a number of issues of concern in Canadian higher education. Some of these have become, since 1975, of greater significance for the future than they were a decade or more ago. Many of the issues relate to faculty and its composition, to students, and to the need for highly qualified persons in our rapidly changing society. Significantly these issues are dealt with in the context of financial constraint that is now a fact of life in Canadian higher education to an extent not contemplated when the first two volumes of the Report were published.

The issues discussed, the assessments and proposals made, are, of course, those selected by the authors. The Association publishes this volume in the expectation that the work of Thomas Symons and James Page will further the

discussion of the issues they have raised, within institutions of higher education and among all those who have responsibility for their general welfare.

While many individuals and organizations contributed to the work of the Commission on Canadian Studies and to the authors of its reports, the outstanding work of the authors of this volume must be acknowledged. Mr. Page, a former senior staff member of the Commission and co-author of Volume Three, has made an outstanding contribution. The leadership and the work of Professor Symons on the entire project over more than a decade has been extraordinary. He has become "Mr. Canadian Studies." *To Know Ourselves* has been a major study, the full impact of which on developing Canadian culture only our successors in time will be able to assess properly.

Higher education in Canada and those concerned with studies about Canada and its people are indebted to Thomas Symons for all his work, and to him and James Page for this volume.

W. Andrew MacKay
President,
Association of Universities and Colleges of Canada

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The authors are indebted to many individuals and organizations for their assistance with the research and preparation of this book. We acknowledge with appreciation the financial assistance provided by the Atkinson Foundation, the Walter and Duncan Gordon Charitable Foundation, the Leon and Thea Koerner Foundation, the McLean Foundation, and the W. M. Messecar Foundation. We are also grateful to Professor Robin Harris and to Mrs. L. A. Humphries for their personal generosity which made the early stages of our research possible. We wish to acknowledge with thanks, as well, the encouragement and support provided to us by Trent University and Seneca College and by so many of our colleagues at these institutions. We are grateful to the Canadian Studies Program of the Department of the Secretary of State which, through a grant to the Association of Universities and Colleges of Canada, made the translation and publication of this report possible.

Numerous organizations and public agencies assisted the Commission in various ways, chiefly by the provision of information. These include the National Research Council, the Science Council, the Natural Sciences and Engineering Research Council, the Medical Research Council, the Social Sciences and Humanities Research Council, the Canada Council, Employment and Immigration Canada, the Department of External Affairs, the Department of the Secretary of State, the Ministry of State for Science and Technology, the United Nations Economic, Scientific and Cultural Organization, the Association of Commonwealth Universities, the Committee of Vice-Chancellors and Principals of the United Kingdom, the Australian Vice-Chancellors' Committee, the American Council on Education, the Institute of International Education, the Canadian Bureau for International Education, the International Council for Canadian Studies, the Association for Canadian Studies, the Canadian Association of University Teachers, the Canadian Federation for the Humanities, the Social Science Federation of Canada, the Canadian Federation of Biological Societies, the Canadian Association of Graduate Schools, the Association of Canadian Community Colleges, and the Royal Society of Canada, as well as many other scholarly and educational associations, academic institutions, and federal and provincial departments of government.

We are very much indebted to members of the staff of Statistics Canada without whose patient assistance this volume could not have been prepared. In particular, we must thank Dr. Max von Zur-Muehlen and Douglas Lynd, the Chief of the Postsecondary Education Section, as well as Zoltan Zsigmond,

Garnet Picot, Jo-Anne Belliveau, Ed Wicks, James Donnelly, Mongi Mouelhi, and many others.

A score of colleagues were kind enough to read, edit, and comment upon the draft text, including a number of the members of the original staff and Advisory Panel of the Commission, and some of the liaison persons at universities and colleges across the country whose names are listed in the front of Volume I. While greatly in their debt, the authors are, of course, solely responsible for the final text of this report.

We wish to thank Hazel Roberts for her knowledgeable assistance with the bibliography and footnotes, Aurèle Ouimet for his excellent translation, Blanche Fitzgerald for her impeccable typing and careful attention to many details, and the staff of the Association of Universities and Colleges of Canada, especially Miss Joan Rondeau, for their assistance with administrative matters and with publication arrangements.

Finally, the authors express their appreciation to Christine Symons and Darlene Page both for their patience and for their help with many aspects of this undertaking.

I

INTRODUCTION: SOME QUESTIONS OF BALANCE

This is the third volume of *To Know Ourselves: the Report of the Commission on Canadian Studies*. Established by the Association of Universities and Colleges of Canada in 1972, the Commission's task was outlined in an extensive and challenging mandate. Since that time, the Commission has carried out its research, released the three volumes of its study, assisted with the preparation of numerous papers and reports relating to its work, and been involved in far-reaching consultations about many proposals and reforms arising from its studies.

In Volumes I and II the Commission documented the neglect of teaching and research about Canada in many areas of postsecondary education. In light of its findings, it called for a reasonable balance in the curriculum and research activities of Canada universities and colleges that would allow adequate attention to be given to the particular needs and to the historical and contemporary circumstances of this country. In this third volume, continuing and extending the theme of meeting Canadian needs, the Commission examines questions about the current and future supply of human resources required to support Canadian teaching and research. As in the first two volumes, the Commission calls for a reasonable balance in higher education, in this case in order to meet the country's present and future needs for highly qualified graduates.

From its research, the Commission concludes in this volume that few areas of teaching and research about Canada have been more neglected than the state of Canadian higher education itself and, in particular, the examination of questions about the country's requirements for highly qualified graduates. Following its review of the present and projected supply of Canadian graduates, the Commission argues that the most serious problem facing teaching and research about Canada and, indeed, the whole of Canadian higher education, is the need for balance, realism, and equity in the development and deployment of highly qualified graduates. Looking ahead, the Commission believes that, in addition to the correction of imbalances, many more opportunities must be opened up for Canadian graduates in teaching and research if our educational system is to come anywhere near to meeting future Canadian needs for highly qualified personnel.

A. ABOUT THE MANDATE OF THE COMMISSION AND SOME TERMS OF REFERENCE

The mandate of the Commission included, in addition to its broad general responsibility to examine and report upon the state of teaching and research in studies relating to Canada, study and assessment of: the number and content of courses offered at the undergraduate and graduate levels in the various fields of study relating to Canada; the location, nature, and function of programmes and institutes concerned with Canadian studies; the location, extent, and access to library holdings, archives, and other material resources relevant to Canadian

studies; the sources and adequacy of financial support for the teaching of Canadian studies; the opportunities and support for research in Canadian studies; the scope of present and future requirements for qualified personnel for teaching and research in studies relating to Canada; the possibilities and needs for new programmes and future directions in studies relating to Canada; and "any other related matters."[1]

As reflected in these terms of reference, the Commission on Canadian Studies was appointed in response to a very real concern on the part of many members of the academic community, and of the public at large, that there should be a careful examination to determine whether the country's universities and colleges were paying adequate attention to Canadian conditions and circumstances, and to the needs and problems of this country, in their programmes of teaching and research. In short, how adequate is the attention given to teaching and research about Canada? and how adequate are the human and material resources available to support such work?

In addressing these questions, the Commission has taken as its definition of Canadian studies "teaching or research in any field that, as one of its major purposes, promotes knowledge about Canada by dealing with some aspect of the country's culture, social conditions, physical setting, or place in the world."[2] The Commission is also concerned, however, with the adequacy of attention given to the Canadian content and to the Canadian context of teaching and research conducted in this country, whether or not the promotion of knowledge about Canada is one of its specific and major objectives. While the first two volumes of the Commission's report focussed upon questions of content and orientation in teaching and research, this third volume examines questions about the composition and adequacy of the supply of human resources upon whom such teaching and research must depend.

The Commission devoted considerable attention to the rationale for Canadian studies in its first volume. It concluded that the most valid and compelling argument for Canadian studies is the importance of self-knowledge, the need to know and to understand who we are; where we are in time and space; where we have been; where we are going, and in what directions we may want to go; what we possess; what our responsibilities are to ourselves and to others.[3] We believe this rationale has stood up well to the testing of critics and cynics. Canadians need to know and to understand their social and physical environment, their institutions and cultures, and their historical and contemporary experience in order to make sensible decisions about their affairs, and also in order to be able to make their full contribution to the international community of knowledge. A curriculum that does not contribute to an appropriate extent to this end, amongst other things, lacks balance and common sense. Every society has a fundamental need to know itself through academically rigorous study, research, and reflection. Thus, studies of the Canadian situation should occupy an appropriate place in the curriculum and research interests of every university and college in Canada.

In advancing this rationale for Canadian studies, the Commission made no xenophobic arguments for discounting or neglecting teaching and research about other matters. Nor does it do so here. Indeed, it warned against, and continues to warn against, the danger of confusing nationalism and scholarship. The argument for Canadian studies based on the need for self-knowledge has the clear corollary that to know oneself one must know others. What is required is a reasonable balance of the two. It is no service to the international community of scholars to be disdainful of scholarship about one's own community.

The Commission has also warned against the dangers of seeing Canadian studies as a political or propagandist instrument to promote some particular perception of Canada. In teaching and research relating to Canada, as in every other area of scholarship, the function of the university is to train the critical intellect and to foster knowledge for its own sake, not to inculcate belief.

With these considerations in mind, the Commission examined some fifty academic areas in the first volume of its report, and suggested that in each of these areas, in both teaching and research, there was need and opportunity for greater attention to be paid to the particular problems and circumstances of this country. It found this to be true of the areas it examined in the sciences and professions as well as in the humanities and social sciences.

Volume II explored the problems and opportunities for teaching and research about Canada at universities in other countries; surveyed the state of Canadian studies in the community colleges; discussed the role of Canadian archives as the foundation for Canadian studies; inquired into the quality, extent, and accessibility of audio-visual resources and other media support for Canadian studies; and examined the present and potential role of the private donor in helping to foster teaching and research about Canada.

B. THE RESPONSE TO THE COMMISSION

The response to the public invitation from the Commission for briefs and submissions was extraordinary, demonstrating in an unmistakable manner the widespread concern about the matters on which it had been asked to report. Over one thousand briefs and nearly thirty thousand letters were received. In addition, meetings with the Commission were requested by representatives of over two hundred academic societies, educational organizations, and other associations. More than twenty-five hundred people attended the public hearings held at universities and colleges across Canada. Few Canadian commissions, and perhaps none concerned with higher education, had elicited such a massive response from the university community and from the general public.

This remarkable response was repeated when the Commission's report was published. The flow of letters has continued unabated and many more submissions following up particular points or opening up new ones have been received. All the papers received by the Commission and relating to its work

have been transferred to the archives of Trent University where they are being preserved and catalogued for the possible future use of interested scholars and members of the public. All told, these papers now occupy some fifty filing cabinets. Together, they constitute an extraordinarily interesting and valuable source of information and opinion about the issues of concern to Canadians and about the way in which Canadians have perceived themselves and their country in the decade from 1972 to 1983.

Extensive coverage of the report in the media, often not overly accurate, triggered widespread and sometimes heated discussion. Many, but not all, universities established committees to review its findings and recommendations, as did a large number of learned societies, educational organizations, professional associations, and government departments and agencies. The appearance of numerous 'reports on the report' prepared by universities and other bodies, and of articles and reviews in many scholarly journals, helped to make possible a more informed consideration of its recommendations, as did the publication of a paperback synopsis commissioned by the Book and Periodical Development Council of Canada and the Ontario Arts Council.[4]

On the whole, the response, after some initial turmoil, has been immensely positive and constructive. Of the 295 specific recommendations and additional one thousand general suggestions made in the text, a great many have been implemented and there has been at least some action on well over one-half of these proposals. Perhaps the most important consequence has been a change in the academic climate from a mood of sometimes militant indifference towards Canadian studies to one in which the academic legitimacy of teaching and research about Canada has been more widely recognized, if not always welcomed.[5]

Despite the growing number of dedicated teachers and scholars working in these fields, however, much remains to be done before a reasonable balance will have been achieved between the attention devoted to Canadian studies and to other matters. It is still true that our universities are frequently slower than universities in many other countries to respond to their obligations to educate students, to undertake systematic research, and to foster knowledge with the needs of their own society specifically in mind. To the extent that Canadian universities and colleges study their own society, they often tend to do so as if they were a group of anthropologists observing an Amazonian tribe in the last process of disappearing.

The massive and lively response to *To Know Ourselves* involved extensive demands upon the time of the Commissioner and of many of those who had worked with him in the preparation of the report. Requests came from more than three-quarters of the universities and colleges of Canada for further information, and for advice and assistance, in dealing with the recommendations advanced in the report. In many instances multiple requests were received from the same institution, coming from various faculties, or departments, or committees, as well as from the central administration and from many

individual scholars. Such requests came, also, from several hundred universities in other countries. In addition, the Commission was asked by many government departments and agencies, by various scholarly and educational associations, and by many other organizations to assist with their reviews of programmes or with the planning and evaluation of new ones. On a number of occasions the Commission was asked to help to sort out some apparently intractable problems or to mediate situations that threatened to erupt into destructive battles.

This on-going service function was accepted by the Commission as an integral part of its work, and it was one that was clearly expected of it by the academic community and by many public bodies. As one dean observed, "for the particular circumstances of this university, the service function of the Commission has been even more helpful than its formal report." Under these circumstances, a decision was made to defer the preparation of this third volume in order to respond to the extraordinary demands placed on the Commission following the publication of Volumes I and II. It should perhaps be noted that no budget or staff assistance were available to help meet the demands for this continuing service function, so that it was provided on a voluntary basis. Research relating to the mandate of the Commission was continued, however, and the preparation of Volume III was resumed in 1981 when the demands made on the Commission arising from the earlier volumes became somewhat less intense.

C. THE PRESENT VOLUME: SOME QUESTIONS OF BALANCE

This volume is the result of a collaboration between the Chairman of the Commission, Thomas H.B. Symons, the Vanier Professor at Trent University, and James E. Page, the founding president of the International Council for Canadian Studies, who had served as a consultant to the Commission during the preparation of the two earlier volumes and aided with the subsequent service function. In addition, many members of the original staff and advisory panel contributed their time to help with the work, in particular by commenting on drafts of the text.

The issues of concern to Canadian higher education have evolved rapidly since 1976, when the first two volumes of *To Know Ourselves* appeared. This is not to say that the issues of the mid-1970s have gone away. But universities have changed and so has the world around them. In particular, changing circumstances in the economy and in the social and political climate have brought forward new priorities. Changes in the attitude of government and the public about education are reflected in the substantial decline in the proportion of public funds devoted to education from over 22 per cent in 1970 to 16 per cent in 1980.[6] Within the total expenditure of public funds on education there has also been a decline in the proportion spent on university education from over 23 per cent in 1970-71 to about 19 per cent in 1981-82.[7]

Priorities and perceptions have also changed in regard to curriculum content and the orientation of research. Some of these changes reflect the opening of new fields of knowledge and the development of new intellectual interests. Others have come in response to changing circumstances and attitudes, including those brought about by the work of the Commission on Canadian Studies.

At the same time, concerns about the supply, composition, and deployment of highly qualified graduates have become more pronounced. Questions about human resources have become the key issues in Canadian postsecondary education, although this fact is not yet always clearly perceived.

These and other changes in the priorities and circumstances of higher education affect profoundly, of course, the current state and future prospects of teaching and research about Canada. To meet such changes in circumstances and priorities, the focus of this volume has been shifted from the wider table of contents originally envisaged in order to concentrate on issues relating to the supply of human resources produced by and for Canadian higher education. The authors of this volume hope, however, to prepare in due course some further publications dealing with a number of additional specific topics relating to Canadian studies, drawing upon the experience and materials of the Commission.

Entitled *Some Questions of Balance: Human Resources, Higher Education, and Canadian Studies*, the current volume examines a number of questions about the supply of highly qualified graduates in Canada, noting that it is going to be difficult to improve much further or faster on the state of teaching and research about Canada, or indeed in many other areas of scholarship, unless satisfactory answers can be found to these questions. Succeeding chapters examine the need for more adequate statistical information about Canadian postsecondary education and about current and future requirements for highly qualified graduates; set the historical context by reviewing the problems of maintaining equilibrium in the great period of growth in Canadian higher education from 1945 to 1975; explore the faculty citizenship question, including an examination of its implications and of the concerns it has raised; discuss some concerns about the current state of Canadian higher education, in particular problems and uncertainties about enrolments and finances and the relationship of these to the development of Canadian studies; review Canadian requirements for highly qualified graduates, noting in particular problems arising from shortages and imbalances in the supply of doctoral graduates and the need for a national strategy to avoid the loss of an academic generation; assess the situation caused by the age structure of the professoriate and the lack of jobs for young scholars in Canada; review the human resource questions arising from the national goals set for research and development; report on the status of women in Canadian academic life and the implications this has for teaching and research about Canada; and discuss the role of foreign students in the promotion of knowledge about Canada, both

within Canada and abroad, suggesting the need for a national approach to the formulation of a foreign student policy.

In preparing the volume, the authors have been assisted, as noted in the acknowledgements, by the information and views provided by a great many institutions, individuals, and organizations. They are particularly grateful to members of the staff of Statistics Canada with whom they have worked closely throughout the research and writing of this report.

Nevertheless, many difficulties were encountered in the course of this work. As with its first two volumes, the Commission's research proved often to be a trail-breaking exercise and, once more, it found that the trail has many hazards. Chief among these were the absence of firm, agreed data and the frequent lack of concensus even about the definitions required for statistical purposes. While the authors were inundated with a well-intentioned flood of 'facts' and statistics, these often did not agree or were sometimes in direct conflict with one another. Anyone who has tried to write on postsecondary educational questions will know the sensations that must be felt by someone trying to build a house on quicksand, as statistical data shift, often radically and repeatedly, during the course of the exercise. The frequent inaccuracy, incompleteness, or total absence of essential data about many basic aspects of Canadian higher education is, indeed, one of the major findings of the Commission and one that leads to a group of recommendations at the conclusion of the next chapter which is devoted to an examination of these problems about data.

Given this situation, it is not surprising that the Commission encountered myths abounding about the subjects it examined. Nor is it surprising that so much of the discussion of these topics has been characterized more by rhetoric than by factual content. Some of this mythology has a capacity for mischief or even to do harm. Too much of it has become public lore. So much of a pessimistic nature has been written and said, for instance, in recent times about job opportunities in Canada for university and college graduates that it is no wonder that many prospective postsecondary students, and their families and teachers, have become confused, discouraged and uncertain about the value of higher education. The headline of one national newspaper article, "66% will discover university degree useless, report says", is a good example of the kind of statement that has contributed to this unfortunate and unnecessary confusion.[8] The report referred to in the headline, a publication of the Ontario Manpower Commission, pointed in fact to an overall *shortage* of 15,000 to 32,500 university and college graduates in Ontario for the period 1981-1986.[9] It said nothing about university degrees being useless. It did, however, note that at least 88,100 university graduates in this period would be unable to find "jobs which are filled primarily by university graduates", and that these graduates would therefore have to look for, and to compete for, jobs in a wider field. Many people would regard this as no bad thing, either for the graduates concerned or for society as a whole. It may well be time for a broader conception of the value of a university

education than the one criterion of immediate employment in the occupations that have been traditionally thought of as requiring a university degree.

The report referred to by the newspaper also pointed to a number of areas in which there are already shortages of highly qualified manpower and predicted a growing demand for graduates in these fields. But this substantial aspect of its findings did not, of course, receive the media attention given to the misinterpretation of its findings expressed in the headline, "66% will discover university degree useless". Uninformed talk and distorted reporting along such lines have created a negative climate in which many promising students are being deterred from continuing their education, to our loss and to their own. Governments, too, find little encouragement to maintain or increase their support for postsecondary education in such a climate. Why send good money after bad? Who wants to buy a ticket for the second voyage of the Titanic?

Contrary to such myths and distortions, and the negative climate about higher education that they create, this Commission would emphasize that a great range of needs and opportunities exist now for willing and capable graduates in many fields and that many more opportunities will be opening up for well-qualified graduates in the future. If, for example, the Canadian community is to be able to employ science and technology in the pursuit of national goals, the country must have the skilled graduates required for the task. Yet, it is evident that Canada does not have, and is not preparing in sufficient numbers, the highly qualified people necessary to achieve essential national goals for research and development.

Such arguments are perhaps most easily made in speaking of the sciences and professions. But they apply in every field. Many people are so preoccupied by the current economic problems that they are not seeing the large future needs of a young country for well-qualified graduates. Both more knowledge and more knowledgeable people are needed to bring about the social, cultural, and economic progress of which this country is capable. We will need to call upon the totality of our human resources to fulfill the promise of this country and to resolve the many problems that it faces. To meet these problems, and to achieve these prospects, it is essential to ensure that our society is provided with adequate numbers of well-qualified graduates, and that, to an appropriate degree, their education, and the research that stands behind it, have been related to the needs and particular circumstances of Canadian society.

A discussion about the nature and extent of the country's needs for highly qualified graduates is, at a deeper level, a discussion about the nature and future of Canada itself. Canadians are still a long way from realizing the fundamental importance of knowledge and of the development of highly qualified manpower to the well-being and progress of every aspect of the life of their society. The fostering of a wider public understanding of the vital role played by higher education should, thus, be the number one priority of the universities and colleges of Canada.

Education is needed about the value of education. In particular, the case must be made for the sheer value to society as a whole, as well as for the individuals concerned, of a better educated citizenry. The existence of an educated citizenry is essential to the successful functioning of a democracy. Canada needs citizens with the capacities to continue to learn, and to think critically and conceptually, in order to resolve the increasingly complex issues that confront our society. There is an acute need for thoughtful graduates who can understand how this country has developed, perceive its problems and opportunities with clarity, and bring well-informed and constructive minds to the building of its future. In this sense, a country cannot have too many educated citizens, nor can it have enough knowledge of itself and of its place in the world. Far from any slowing or cut-backs in the preparation of graduates, the country should be pursuing a policy of steady and well-planned expansion in post-graduate work and, indeed, in the entire range of postsecondary education. Within this broader argument, the point must also be made that there is much to be done in teaching and research about Canada itself in order that the country can manage its affairs to better advantage and contribute more fully to the international community of knowledge.

Given Canada's rich human resources and potential, it is nonsensical that this country is still relying heavily on other countries to meet its needs for qualified graduates in many fields. At this point in its development, the country should surely not only be meeting its own requirements, it should also be contributing more substantially towards the growing needs of the less developed countries and of the international community for highly qualified graduates. Yet, as things now stand, we are continuing to depend to a large extent on the skills of graduates from other countries, including many from the less developed countries, at the same time as our society is apparently unable to make full and proper use of the talents of many capable and well-qualified graduates from its own educational institutions because of lack of planning and organization. Indeed, projections indicate that, because of lack of foresight, this country could very well face in the 1990s the prospect of having again to import faculty on a massive scale to staff its universities as it did in the 1960s and early 1970s.

The need for balance in the preparation and deployment of human resources at the postsecondary level of Canadian education is a central theme of this book. The Commission thus shares the concerns expressed to and by the Parliamentary Task Force on Employment Opportunities for the '80's which reported that "All across Canada, witnesses expressed concern over labour imbalances", high unemployment on the one hand and labour shortages on the other.[10] But the Commission's concern for balance goes beyond the basic imbalances in the labour market that the Task Force observed, serious as these are, to imbalances of many other sorts in the human resources circumstances of Canadian higher education. These imbalances include, for example, questions about enrolment; the supply of doctoral graduates and their fields of study; the differing roles and needs of the humanities, the social sciences, the natural

sciences, the life sciences, and the professions; the composition and age structure of faculty; university funding; insufficient attention to research and development; the status of women in Canadian academic life; the absence of any rational policy towards foreign students; and the relationship of all these to balance in the attention given to teaching and research about Canada. In its call for balance in these and other areas, the Commission is looking for 'balance' in the sense of reason and justice, and a general harmony between the parts, as well as in the sense of equipoise and equilibrium. It has also in mind the need in many situations to strike a balance in higher education that reflects the geographical and cultural variety of Canada, and that can enable our universities and colleges to draw strength from the academic richness inherent in the significant diversity of this country.

There is urgency to the need to find some better balances in the supply, composition, and deployment of Canadian highly qualified personnel. The career prospects of many tens of thousands of people, including a large part of one entire academic generation, are at stake. So, too, are the general health and the intellectual vitality of our postsecondary systems. The issues involved would be of front-rank importance at any time. But in a time of economic difficulties like the present it becomes even more important to serve and to manage our human resources to the best possible effect.

A study of the information set out in the following pages should make clear that the problems involved in our present situation will not go away, nor will they cure themselves. Well-planned and deliberate action is required, in which the academic community works in a creative partnership with those responsible for public policy and the public purse. The alternatives are not attractive: a continuation of imbalances and inadequacies in regard to the human resources circumstances of Canadian higher education, with the immense and growing loss that this entails for individuals and for society as a whole; or a more extensive and unilateral intervention by government to direct the use of the limited financial resources available in order to achieve the highly qualified manpower results that it may think to be in the public interest.

D. THE WAY AHEAD

Canadian universities and colleges thus face a considerable challenge arising from present and projected imbalances and inadequacies in the human resource circumstances of higher education. These circumstances have, in turn, profound implications for curriculum and research including, and perhaps in particular, teaching and research about Canada. The problems involved are inter-related and they concern most of the fundamentals of the postsecondary system: enrolment; funding; student and faculty mobility; research; post-graduate education; the curriculum; faculty and staff morale; and public confidence.

Many of these problems are the result of an absence of policy, lack of co-operation and co-ordination, ineffectual planning methods, or the pursuit of a haphazard, piecemeal approach to the issues concerned. The fact that university-government communications have not developed to keep pace with new needs, in fact have worsened in some instances, is also a major contributing factor.

A strong response is needed to meet the challenge posed by these circumstances. But there is a good deal of inertia and even of defeatist mentality to be cleared away before such a response can be generated. What is required is a basic re-thinking of the goals and purposes of Canadian higher education. New policies and directions must be found to meet society's needs and to extend the opportunities for both students and teachers to enlarge their skills and knowledge. In particular, there is a need to take a longer view of the situation Short-term solutions to current problems have already contributed too often to the more severe problems that universities and colleges must face in the longer term, including each of the problems discussed in this volume.

In searching out an appropriate path for sustained development based on planning and co-operation, it will be helpful for our universities and colleges to look back now over the period of the mid 1950s to the mid 1970s and to reflect thoughtfully upon what happened to them during that period of seemingly endless growth. One of the lessons of that experience is surely that we need, as an academic community, to lift up our gaze at regular intervals from the immediate problems that confront each of our individual institutions in order to take stock of our general situation, to see where we are going and what is happening to us as a total university system, and then to consider in what ways it makes good sense and in what ways it does not. It is important always to have an overview and to keep it up-to-date. We failed to maintain a sufficient overview during those two decades, and it is only now that we are beginning to take stock of what happened to us during those booming years and to reflect upon where they took us.

The present crisis, for it is that, should not be entirely unwelcome, however. It challenges our universities and colleges to think freshly and creatively about their problems and responsibilities, and it could result in a revitalization of the postsecondary system. It provides a chance to recoup from some of the more extreme consequences of the rampant academic elephantiasis of the preceding decades.

The state of Canadian studies is an important part of this challenge. Indeed, how the universities and colleges treat teaching and research about the society which supports them and of which they are a part is one measure of their own general balance and health. It is also a measure of how well these institutions are relating to the needs of that society.

At the heart of the challenge facing our postsecondary institutions is the task of educating the human capital that is required to meet the needs and opportunities of a pluralistic country, and the international community of which it is a part, in a time when societies everywhere are increasingly shaped by

technology and information. It is a time for a wider conception of the appropriate clientele for universities and colleges than the one that has in general prevailed. To a much greater extent than is now the case, higher education can and should be opened up to women, to all age groups, to the disadvantaged, to the less well-to-do, to the Native Peoples, to the cultural minorities, and to the many groups and elements in society that have so long been under-represented. One consequence of this under-representation, in addition to its inherent injustice, has been the lack of balance in teaching and research about our own diverse community.

As with Volumes I and II of the Commission's report, the recommendations in this third volume are addressed in general 'to whom it may concern.' However, many of the recommendations are sharply focussed and are directed to specific organizations, institutions, and departments or agencies of government. Such recommendations frequently call for concerted action by more than one party in order to achieve their objective. All told there are 85 specific, numbered recommendations that will be found at the end of the chapters upon which they are based. There are also many further suggestions and recommendations, implicit and explicit, in the text. The Commission hopes that each university might wish to ask a committee of its Senate or other senior academic body to examine, and to recommend action on, matters in this volume of the report that are relevant to its own situation. Other interested bodies might wish to conduct similar reviews.

Many of the recommendations advanced in this volume call for expenditures of money, in some cases for large expenditures. A number of recommendations, however, would result in economies or reductions in expenditures. In several cases such reductions could be substantial. In 1981-82, the most recent year for which such information is available, over seven billion dollars was spent on postsecondary education in Canada, nearly five billion of this on the university sector.[1] It is one of the arguments of this report that better value could be obtained from these massive expenditures through more attention to longer term planning and to the better shaping of policies and priorities in higher education. Such expenditures could also be appreciably more cost effective if there were greater co-operation among educational institutions, between such institutions and government, and within and among governments.

The report points also, however, to the need for new directions in the financing of Canadian universities, in regard both to policies and mechanisms. The present arrangements are not working well, and they will work less well year by year in the next phase of our academic history. A strong case can and must be made for more support to be given to higher education, by government and also by the private sector. The present underfunding of research and higher education, that has persisted for more than a decade, is not an economy. It has immense social costs and large adverse economic consequences for Canada. Because of the systematic underfunding of so many of our postsecondary

institutions, we are squandering our human resources and losing significant opportunities as a nation.

Our universities and colleges now face difficulties greater than any of those they have encountered in the past. The essential task, in surmounting these difficulties, is to work out reasonable policies that can be applied in a reasonable way. The authors of this volume are confident that this can be done, provided the problems are properly recognized and addressed in a co-operative spirit. These problems bring with them a rare opportunity for our universities and colleges, and for government and the private sector, to exercise their innovative spirit and creative capacities, upon a large scale, to effect some fundamental changes and to set some genuinely new directions for higher education in this country.

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5. Page. *Reflections on the Symons report*.
6. Statistics Canada. *A statistical portrait*, Table 37, p. 59.
7. Ibid. Table 38, p. 60.
8. *Globe and Mail*, 26 Jan. 1982. Headline: "66% will discover university degree useless".
9. Siddiqui (et al), 91.
10. Canada. Parliament. House of Commons. Special Committee on Employment Opportunities for the '80s. *Work for tomorrow*, 28-35.
11. Statistics Canada. *A statistical portrait*, Table 38, p. 60.

II

THE NEED FOR ADEQUATE STATISTICAL INFORMATION ABOUT CANADIAN POSTSECONDARY EDUCATION AND ABOUT CURRENT AND FUTURE REQUIREMENTS FOR HIGHLY QUALIFIED PERSONNEL

The importance of assembling and making available adequate statistical information about Canadian postsecondary education and about highly qualified personnel questions is illustrated and emphasized throughout this volume. The Commission wants to stress at the outset the urgency of this need for data, and for analysis, concerning human resources and postsecondary education. In so doing, we do not wish to imply any criticism of the work that Statistics Canada has been doing in this field. On the contrary, we should like to express appreciation for the admirable and useful service that Statistics Canada has been giving despite its present very limited resources for such work. The thinness of the shoestring on which Statistics Canada has to conduct its work in the fields of higher education and highly qualified personnel has been described as laughable by senior public statisticians in other countries with whom the Commission has consulted. Yet these are fields of critical importance for Canada.

An accurate and up-to-date statistical base is essential for intelligent decision making and for long-term planning in higher education. It is difficult to develop a balanced attention to teaching and research about Canada within the broader postsecondary programme in the absence of adequate statistical information and analyses about Canadian higher education and highly qualified personnel conditions. Indeed, the lack of such information and analyses is in itself an example of an area of Canadian studies in which much more work is required.

Because of the limited financial resources available to Statistics Canada for such work, it is understandable that its surveys of highly qualified personnel questions and of postsecondary education are often incomplete, or insufficiently detailed, or that they frequently lag far behind current situations. Indeed, in many areas of highly qualified personnel information, including some of great significance, Statistics Canada has been forced by financial exigencies to abandon altogether the collection and analysis of data. Thus, statistics about part-time enrolment and about the trades-training programmes of the community colleges of Canada have not been collected since the mid-1970s. Nor does Statistics Canada collect information from the community colleges on the citizenship or country of final degree of the teaching staff, or on the disciplines in which instructors' degrees were earned. College presidents have chastised Statistics Canada, perhaps unfairly in view of its budget and staffing limitations, for collecting only degree information (as limited as it is) for college staff, when most feel that work experience and specialized diplomas or certificates may be more appropriate measures of staff qualifications for their institutions and programmes.

Similarly, statistical surveying and data collection on adult education were stopped by Statistics Canada in 1978 as a result of a federal budget cut which was applied with particular severity to its work. As a consequence, the only data available on adult education in Canada are on part-time studies for credit at the university level. We have virtually no data on the non-credit work of the

universities, and no statistics on continuing education at the community colleges or at the secondary schools whether of a part-time credit or a non-credit nature. Surveys of part-time credit courses in secondary schools were discontinued in 1977. The job-vacancy survey and the occupational employment survey have also been discontinued. Thus, in a number of areas relating to postsecondary education and highly qualified personnel requirements, we have less information now than was available in the 1970s.

As our society grows in size and complexity we need more information, not less, in order to make both personal and community decisions relating to postsecondary education and to highly qualified personnel questions. The need for such information was urged by the Canadian Association of University Teachers in a 1977 resolution of its Council which called upon academic, professional, and government agencies to co-operate in the preparation, publication, and annual revision of five- to ten-year projections of positions available and of graduate degrees granted in each academic discipline at Canadian universities. As the C.A.U.T. noted, such projections would allow individual students a better opportunity to plan future careers, and universities a better opportunity to encourage Canadian talent in areas of projected needs through the development of adequate graduate programmes in those areas.

Many articles and reports before and since that time have pointed to the need for more and better information about highly qualified personnel trends and requirements upon which students, educational institutions, governments, and the private sector could base sensible decisions. Eva Ryten, for example, has drawn attention to the fact that sufficient information about highly qualified personnel requirements in the medical sciences is not available, and to the need to collect more detailed data to support medical manpower forecasts.[1] Many professional organizations, such as the Canadian Council of Professional Engineers, have also called for national studies of the supply of and demand for graduates in their field.[2] None the less, as a report commissioned by the Ministry of Colleges and Universities of Ontario has observed, Canadian studies of highly qualified personnel have been largely limited to descriptions or origins, and to some current work characteristics of certain groups.[3]

In another report prepared for the Ontario Ministry of Colleges and Universities, Paul Anisef and others have pointed to "the remarkable fact that no regular and reliable monitoring strategy for identifying accessibility *trends* has ever been developed for the province or for Canada as a whole".[4] Max von Zur-Muehlen and Jo-Anne Belliveau have noted that no systematic attempt has ever been made in Canada to find out what happens to university teachers who resign.[5] More broadly, no research has focused directly on the issue of job mobility of academics and professionals. Indeed, as Linda K. Moffat has observed, "there have been more studies of the immigration and emigration of professionals than on internal job changes in the Canadian market".[6] More information and analyses are needed about such aspects of postsecondary education as enrolment levels, participation rates, student mobility, and

university financing including fees, salaries, and categories of costs. The basic data needed for state of the art studies have yet to be collected for most academic disciplines and professions. We need to know, as well, more about what is going on in other countries and what their statistics and analyses may indicate or suggest about our own operations.

The list of basic data not gathered and of fundamental work not done concerning postsecondary education and highly qualified personnel in Canada is a long one. When even the fundamental tasks of data collection have been so neglected, the conclusion of Dr. Laura Selleck that "the methodology of occupational forecasting is still underdeveloped" and that "reliable forecasts three or four years in the future have not yet been produced" should come as no surprise.[7] As the OECD study of 1976 showed, the absence of such research and of informed long-term planning has been a striking characteristic of Canadian higher education.[8]

It is not only in Canada that researched data about highly qualified personnel is in short supply. A research seminar in the United Kingdom, for example, recently concluded that "the scarcest commodity in the market for highly qualified people appeared to be information."[9] But despite the obvious need for such information, there are hesitations and even resistance on the part of the university community to the compilation of data about highly qualified personnel and to the preparation of analyses or projections based upon them. There is clearly a fear that the assembling of such data, and the preparation of better informed analyses and projections based upon them, will lead to more government intervention and direction in manpower planning. Three questions may be ventured about this point of view. First, would it not be better for everyone concerned to have more complete information and better projections than are now available? Second, is it conscionable for universities with their commitment to the enlargement of knowledge to oppose, however subtly, the enlargement of knowledge about the current state and future requirements for highly qualified personnel in our society? Third, does it necessarily follow that more and better knowledge about highly qualified personnel conditions and needs will result in governments telling the universities what to do?

Certainly, the Commission does not advocate more government intervention in the affairs of universities, including the manpower planning aspects of higher education. The Commission does note, however, the urgent need for more and better information concerning highly qualified personnel in order that individuals, institutions, professions, and public policy-makers can reach more informed decisions and do a better job. It does not follow that the availability of such information will lead to greater *dirigisme*. Whether it does or not will depend on how well the universities themselves, and other educational institutions, make use of the information. But perhaps the most important consideration is the need, and the right, of the individual to have access to such

information. As the Carnegie Commission observed years ago:

> If we are to rely in large part on the sensitivity of student choices of fields . . ., we need to provide students with the best possible information.[10]

Professor David Stager has noted that there is a good deal of evidence that students do respond to detailed labour market information in making or re-adapting their course of studies and career plans.[11] However, as Professor Stager also points out, students need dynamic as well as static information. "Dynamic information includes changes, such as changes in relative earnings or entrance qualifications which would lead potential employees to revise career choices, while static information deals with enduring conditions such as differences in the work environment of biologists and accountants."[12] Students are reasonably well aware of the static information or they will not find it too difficult to obtain. But they are not well equipped with the dynamic information about current conditions and prospective changes, and they will have great difficulty in getting such information because no one else is very well informed about such matters either, including their parents, teachers, counsellors, guidance officers, and governments.

In the current circumstances of tight employment, financial constraints, and shifting economic conditions, it is vital that such dynamic information be available to students and to educational institutions. Such information has always been important. But the need for it is acute in today's conditions when many young people face crushing problems in terms of career planning and job placement. Thus, highly qualified personnel data must not only be researched and assembled; it must be properly disseminated and allowed to be of service. It is only by making such information widely available that some of the exaggerations and distortions about the employment prospects of well-qualified graduates can be corrected. The need of students and others for information about job opportunities and labour market conditions points also to the desirability of shifting the emphasis in highly qualified personnel statistics from the collection of enrolment data (in-take) to the assembly and analysis of placement data as the basis for educational planning.

It is an unfortunate fact that federal-provincial rivalries and lack of co-operation in the fields of manpower and education have contributed substantially to the incompleteness, unreliability, and time-lags in Canadian highly qualified personnel data. For the purposes of gathering statistical information by Statistics Canada and by many other national organizations and agencies, Quebec, at least in the sphere of postsecondary education, might be described as having *de facto* separated from Canada. In tabulation after tabulation it will be found that Quebec data are either estimated or missing. Given the size, cultural significance, and demographic importance of that province, the implications of this statistical apartheid for national data collection and planning are enormous. Among the other provinces, some have been more co-operative than others. Moreover, as noted in this volume, serious

problems also arise because of lack of agreement on definitions, or lack of co-operation between departments of government and amongst educational institutions and organizations.

Such rivalries and lack of co-operation, combined with inadequate provision of financial resources arising from a failure to grasp the fundamental importance of good information about the requirements for highly qualified personnel, have deprived Canadians in many situations of the information they need, individually and as a society, to make informed and sensible decisions. Given the challenging economic and highly qualified labour market problems the country now faces, it is essential to develop an effective national capacity to collect, analyse, and disseminate information about education, highly qualified personnel, and labour market conditions and prospects. To this end, a major and sustained effort is required in which the federal and provincial governments work together in co-operation with representatives of the educational community and the private sector. The Commission is proposing, therefore, the establishment of a Canadian Centre for Educational Statistics. If circumstances prevent the establishment of such a Centre, the Commission would propose that, at a minimum, there be created a National Committee on Education and Labour Market Statistics, representative of the federal and provincial governments and of the educational and private sector communities, to advise and support Statistics Canada with its work in this field. Either way, it is imperative that Statistics Canada be given the financial resources required to enable it to meet more fully the country's needs for information and analysis about postsecondary education and highly qualified labour market conditions. The Commission recommends:

1 the creation of a Canadian Centre for Educational Statistics;
2 that the Centre be housed in Statistics Canada and funded by the government of Canada;
3 that the Centre have a national advisory board composed of representatives of appropriate departments and agencies of the federal government, of the Council of Ministers of Education, of the educational community, and of the private sector including the professions, industry, and labour;
4 that the Centre be given a clear mandate to collect, to analyse, and to publish data on educational questions, including labour market conditions and placement projections for highly qualified graduates;
5 that the Centre, through Statistics Canada, be given the financial resources required to enable it to meet the country's needs for statistical information and analyses about postsecondary education and highly qualified personnel questions;
6 that the Centre work closely with Employment and Immigration Canada on the analysis of both labour market and educational statistics in order to increase the ability of the educational system to respond to the need for highly qualified personnel in Canada.

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4. Anisef, Okihiro and James, iii.
5. von Zur-Muehlen and Belliveau, 7.
6. Moffat, 17.
7. Selleck, *Manpower planning*, 59-60.
8. OECD. *Reviews . . .*
9. Higher education and the labour market, 169.
10. Carnegie Commission on Higher Education, 187.
11. Stager. *Dynamic information . . .*
12. Ibid, 3-4.

III

SETTING THE CONTEXT: POSTSECONDARY EDUCATION AND PROBLEMS OF EQUILIBRIUM IN A PERIOD OF GROWTH, 1945-1975

Much has been said and written about the social, cultural, economic, and political development of Canada since the end of the Second World War. During the years from 1945 to 1975, there was a revolution in the expectations of the Canadian people and a rise in Canadian cultural consciousness. Some of the cultural mile-posts along the way were the Massey-Lévesque Commission, the advent of Canadian television, the formation of the Canada Council, the renaissance of Canadian theatre and arts, the work of the Royal Commission on Bilingualism and Biculturalism, and the emotional outpourings of Centennial Year and Expo '67.

The period also saw, among other phenomena, the awakening of a new sense of identity and mission in Quebec, a flexing of economic and political muscle in the West, the emergence of a new set of concerns in the North, a growing pattern of multi-culturalism, an increasingly militant movement among the Native peoples, and a renewed concern about the problems of Americanization and Canada's role as a separate and sovereign nation in the North American context. Canada became an immensely more complex society, both culturally and politically.

During these three decades Canada experienced, as did other Western industrialized nations, unprecedented economic growth and personal prosperity. Government became increasingly involved in the lives of Canadians and the social history of the period is marked by the development of a great array of government programmes and policies. One of the most important areas of social change was education. The post-war baby boom and the decision to increase access to education had momentous results for schools, colleges, and universities.

The national advance to power, plenty, and cultural self-expression imposed on the universities, in particular, enormous responsibilities and made them the focus of significant expectations. A university education was viewed as the key to personal, social, and economic mobility. Education was packaged as if it were nothing more than a commodity and young Canadians were exhorted to stay in school: a ticket to the good life could be won in the libraries and lecture halls of the land. There was more. University graduates were seen by industry as the human stock for our developing industrial base and for our research capacity. Through these graduates, and for them, the arts and letters would also bloom. Because of these attitudes and expectations, a national infatuation with education began and the university was the object of much of the attention.

This infatuation has been described in a number of ways and in a large number of reports. The reasons for the interest in postsecondary education, particularly in university education in Canada, were outlined in the Bladen Report of 1965:

> Perhaps the most important factor has been the steady increase in personal incomes which has made it easier for more and more Canadians to finance higher education. At the same time, there have been strong influences reinforcing their desire for further educa-

> tion; the excitement of the explosion of knowledge; the growing recognition of the high financial return which could be expected, on the average, from investment in such education; the fears of unemployment in an age of automation, and the belief that the incidence of unemployment varies, and will continue to vary, in inverse proportion to the number of years of schooling; the recognition that social mobility is most effectively promoted by wider participation in higher education, so that the ambitious and socially mobile seek it. Those who wished to promote a more egalitarian and democratic society were encouraging students to seek higher education. Governments, concerned with economic growth and national security, were preaching "don't be a drop out" . . .[1]

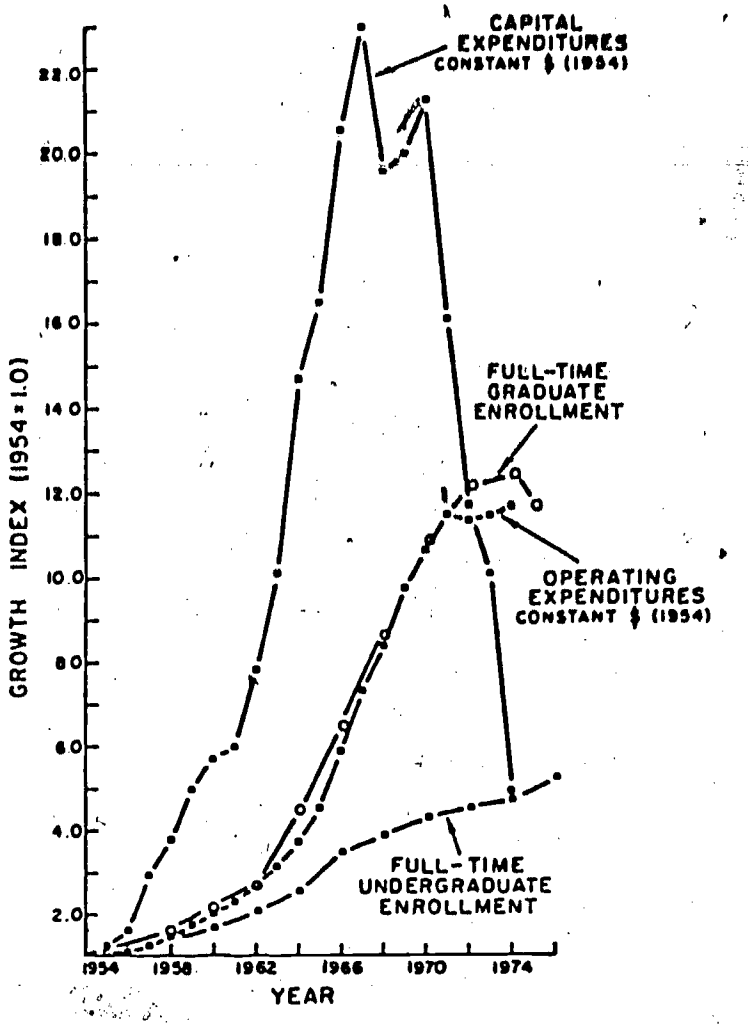
Such attitudes gave rise to a dramatic increase during this period in the number of people who wanted to pursue postsecondary education. Governments responded to this interest with an open purse. Indeed, government pressure was a major factor in university expansion. As Professor Peter Leslie has observed, "the expansion of Canada's universities in the latter 'fifties and throughout the 'sixties was not merely unrestrained: it was stimulated by governments, industry, and the universities alike . . . ."[2] It is not surprising that the scale of university expansion was unprecedented and that it outstripped all expectations. During this period, too, the various provincial community college systems were developed in response to the growing demand for non-university postsecondary education.

Full-time university enrolments doubled between 1955 and 1962, and they doubled again between 1962 and 1969. For a longer-term view, Table 1 indicates the growth in university enrolment for selected years from 1920 to 1980. Table 2 indicates the number of degrees awarded by Canadian universities in each of the same years over this sixty-year period.

Although student enrolments and the number of degrees awarded provide an obvious index of growth, there are other possible measures of change in the system, including increases in the numbers of staff, the development of graduate schools, the growth of research capacity, and investment in physical plant. Chart 1, from the Leslie Report, provides some selected indices of growth between 1954-55 and 1975-76. Capital and operating expenditures are shown in constant dollars with expenditures at the 1954-55 level assigned an index figure of 1.0. Full-time enrolments at the graduate and the undergraduate levels are also indexed. As the chart indicates, undergraduate enrolments grew fivefold over the twenty-year period, while both operating expenditures and graduate enrolments grew twelvefold in the same period of time. It was in capital expenditures, however, that the pattern of growth was most dramatic: constant dollar investments in physical facilities attained twenty-three times their former height in a period of little more than a decade, and then dropped sharply, especially after 1970-71. A further demonstration of changes in investment

CHART I

SELECTED INDICES OF UNIVERSITY GROWTH 1954/55 TO 1975/76



Sources: Statistics Canada. *Financial statistics of education, 1967/68 to 1974/75* (Cat. 81-208); *Prices and price indexes*, various years (Cat. 62-002); *Education in Canada*, 1973-1977 (Cat. 81-229); *Fall enrolment in universities* Part I, 1975/76 (Cat. 81-204).

Leslie Peter, *Canadian universities 1980 and beyond.* Ottawa, 1980, AUCC, p. 6.

TABLE I
FULL- AND PART-TIME UNDERGRADUATE AND GRADUATE UNIVERSITY ENROLMENT FOR SELECTED YEARS, 1920 - 1980

Academic Year Commencing:	Full-Time Undergraduate	Full-Time Graduate	Part-Time Total	Total University	Average Annual Growth
			(THOUSANDS)		
1920	22.8	0.4	-- a	23.2 b	
1930	31.6	1.4	-- a	33.0 b	3.6 b
1940	34.8	1.6	-- a	36.4 b	1.0 b
1950	64.0	4.6	-- a	68.6 b	6.5 b
1960	107.2	6.5	-- a	113.7 b	5.2 b
1970	276.3	33.2	156.6	466.0	10.5
1975	330.5	39.9	185.3	555.7	3.6
1980	340.1	42.5	245.1	627.7	2.5

Notes: a/ not available
b/ Full-time enrolment only

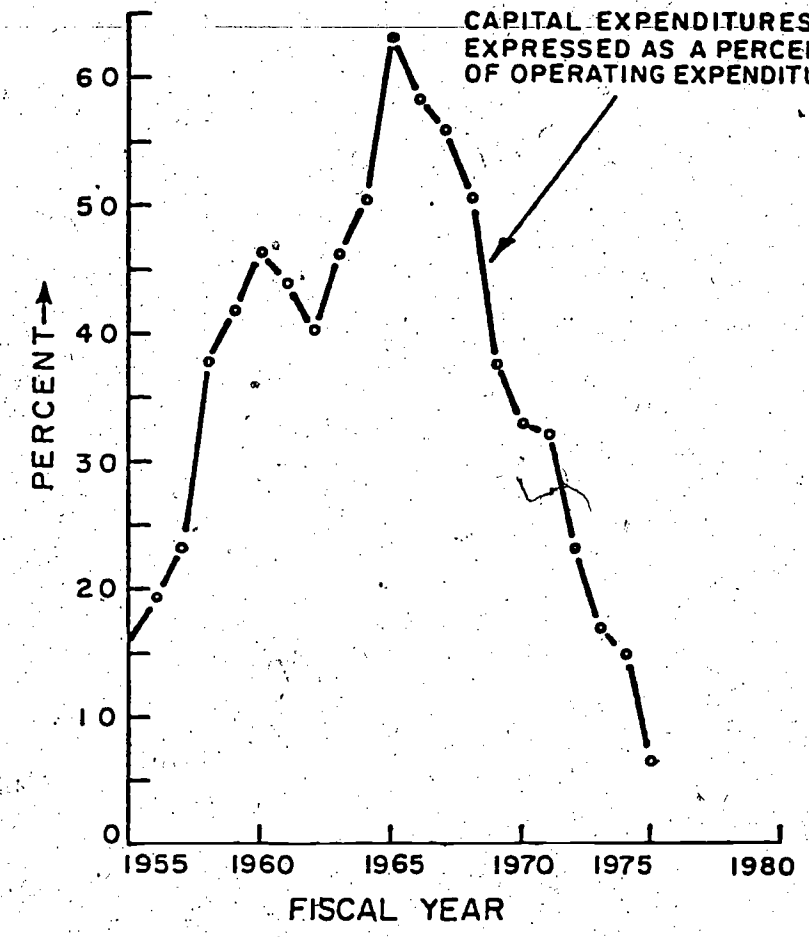
Sources: Statistics Canada. *Historical compendium of education statistics.* Ottawa, 1978; (Cat. 81-568), and Statistics Canada. *A statistical portrait of Canadian higher education.* Ottawa, 1983, Table 1, p. 26.

patterns is provided in Chart 2, also from the Leslie study, which expresses capital expenditures as a percentage of annual operating budgets.

This period of growth was one of frenzied optimism. Universities, it seemed, could or would know no bounds. It was a time during which academic empires were built on promises to the Canadian taxpayers which could not, in retrospect, be fully kept. The economic value of a university education, and of the university itself, was loudly proclaimed. Rather than selling the public on the more legitimate notion that higher education aids the development of knowledge, of intellectual abilities, of humanistic understanding, and of aesthetic sensitivity, and that it can thereby contribute to the enjoyment of a fuller life and to the general welfare of society, governments and many educators stressed the

CHART II

RATIO OF UNIVERSITY CAPITAL EXPENDITURES TO OPERATING EXPENDITURES 1954/55 TO 1974/75



Sources: Statistics Canada. *Financial statistics of education,* 1967/68 to 1974/75, (Cat. 81-208); *Education in Canada,* 1976, (Cat. 81-229).

Leslie, Peter, *Canadian universities 1980 and beyond,* Ottawa, 1980, AUCC, p. 7.

economic benefits, perhaps in large part to still concerns about the enormous costs being incurred. In 1973-74, Ontario universities alone spent over 800 million dollars, and in the period from 1974-75 to 1978-79 university expenditures in this one province totalled nearly six billion dollars.[3] The arguments about the economic benefits of higher education have played into the hands of those who now argue that the economic returns from the investment in university education are no longer worth the cost. However, as Peter Leslie writes:

> It was not a period for thinking much about where the money was coming from or the conditions which in later years might be imposed upon the universities in return for continued public support. Nor was it a time in which the universities could always afford to apply the highest standards in hiring, or to hesitate over the duration of the contracts which staff recruits were enticed to sign. A university which did not eagerly snap up public money and scarce talent would lose out in the race with other more aggressive universities which were, after all, only responding to the prodding of governments to open up new places for the progeny of the high schools.[4]

The boom in enrolments and the massive expansion of the university physical plants brought with them a host of problems. There was a need, for example, to develop graduate programmes in order to train the highly qualified personnel required to staff the universities and to serve Canadian society.

TABLE II
DEGREES AWARDED BY CANADIAN UNIVERSITIES IN SELECTED YEARS, 1920 TO 1980

Years	Bachelors and First Professional Degrees	Masters	Doctorates	Total
1920	4,007	218	24	4,249
1930	6,231	458	46	6,735
1940	8,153	587	75	8,815
1950	17,185	1,564	202	18,951
1960	19,797	2,228	306	22,331
1970	60,523	8,424	1,372	70,319
1975	80,754	11,068	1,840	93,662
1980	86,410	12,432	1,738	100,580

Sources: *Statistics Canada. Historical compendium of education statistics.* Ottawa, 1978, (Cat. 81-568) Table 28 p. 247; and tabulations provided by Statistics Canada to the Commission, 1983.

generally for the future. In some cases, programmes were launched with inadequate staff and scanty laboratory or library resources. Very often such programmes had difficulty attracting students of the calibre that justifies graduate training. But there was a sense that, in the competition with other universities for resources and prestige, each university had to seize every opportunity to grow and to attract funding. Prestige and resources were vital in another competition, the race to attract qualified personnel. One result was the expansion of graduate programmes during much of this period without adequate overall planning and co-ordination within universities, between universities, and between universities and governments.

The great expansion in the university community posed fundamental problems in regard to faculty recruitment. University administrators had to find staff both for existing institutions as they expanded and for the new universities, of which more than twenty were established across the country in the 1960s. The number of full-time faculty members in Canada in 1960-61 was 7,760. By 1970-71 it was 24, 612.[5] An estimated 24,000 new faculty members were engaged during the decade to take care of both growth and attrition.[6] But the total number of doctorates awarded in Canada during the decade was only 8,684.[7] Moreover, these highly qualified people were in demand by government and industry, as well as by the universities, with the result that not more than two-thirds, about 5,600, were employed by the universities.

Of course, not all the university faculty appointed during this period held Ph.D.s. But many did, and the doctorate was fast becoming in Canada as in the United States, for good or ill, the *sine qua non* of academic employment. Despite the fact that Canadian administrators were well aware of the immense shortfall of Canadian Ph.D.s to staff our universities, they nevertheless increasingly insisted on this qualification for university employment. Given this insistence, the additional numbers had to come from elsewhere. As shown in Table III, they came on a large scale from other countries. In the three academic years 1968-69, 1969-70, and 1970-71, a total of more than 6,000 non-Canadian faculty were hired, representing over two-thirds of the new appointments made by Canadian universities in those years. For the nine-year period, from 1962-63 to 1970-71, 10,366 of the 19,043 new faculty appointments, 54.4 per cent, went to citizens of other countries.

The sheer magnitude of these numbers and percentages created considerable controversy, both in Canadian academic circles and among the public at large. There was a growing fear that the university systems of Canada were being alienated from the Canadian community, and a growing uncertainty about whether Canadians were receiving fair consideration for academic appointments. One of the oft-stated reasons for importing academics had been to help in the development of Canadian graduate schools in order to produce scholars to staff the universities of the 1970s and 1980s. But as the flood of foreign academics grew, there was increasing concern that there would be serious problems in providing employment for well-qualified Canadian

graduates when they became available to apply for positions in Canadian universities. Would not the jobs for which Canadian graduates were being prepared already be filled by those who had been brought in from other countries to teach them? Would university expansion continue indefinitely, thus opening an unending series of academic vacancies? If not, was it reasonable to expect that many of the professors who had come from elsewhere would be able or willing to return to their own countries in order to make room for Canadian graduates in the universities of this country? By the early 1970s these and other questions were beginning to be asked with increasing insistence.

TABLE 3.
TOTALS OF NEW UNIVERSITY FACULTY REQUIRED AND TOTALS AND PERCENTAGES OF NON-CANADIAN UNIVERSITY TEACHERS HIRED, 1962-1963 TO 1970-1971

Year	Total Full-Time Faculty (in study)	New Faculty Hired to Fill New Positions	New Faculty Hired as Replacement	Total New Faculty (in study)	Total of Non-Canadians Hired (in study)	Percentage of New Faculty that were Foreign
1962-63	8,003					
		878	200	1,078	390	36.2
1963-64	8,881					
		1,441	222	1,663	539	32.4
1964-65	10,322					
		1,440	258	1,698	672	39.6
1965-66	11,762					
		2,301	294	2,595	1,085	41.8
1966-67	14,063					
		2,301	352	2,653	1,410	53.1
1967-68	16,364					
		2,301	409	2,710	1,986	73.3
1968-69	18,665					
		3,077	467	3,544	2,398	67.7
1969-70	21,742					
		2,558	544	3,102	1,886	60.8
1970-71	24,300					
Totals, 1962-63 to 1970-71				19,043	10,366	54.4

Note: Data derived from the Department of Employment and Immigration. Given the basis of the sample used, the figures differ slightly from the official Statistics Canada data.

Source: von Zur-Muehlen, Max. "The Ph.D. dilemma in Canada: a case study" from *Canadian higher education in the seventies*. Sylvia Ostry (ed.). Ottawa, Economic Council of Canada, 1972, p. 95.

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3. Canada. Statistics Canada. *Education in Canada*, 1977/78, 141.
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IV

THE FACULTY CITIZENSHIP QUESTION: HIRING CANADIANS FOR CANADIAN UNIVERSITIES

The issues involved in the faculty citizenship question are large, complex and sensitive. For many people the issues are very personal, touching, for example, on the value of their own qualifications and capabilities, on their livelihood and career prospects, and on their feelings about their country. More broadly, the issues are concerned with the nature and extent of the highly qualified manpower needs of Canadian society; more broadly still, they deal with the nature and future of Canada itself.

It is, thus, not surprising that discussions of faculty citizenship questions have often turned into arguments highly charged with emotion. In these debates, charges and counter charges have been hurled about which have created an atmosphere in which it has been exceedingly difficult to work out reasonable and acceptable solutions. Indeed, by the mid-seventies the situation had become so intense, the debate so strident, and the faculty so polarized, the problems were, at least for that time, virtually insoluble. While much of the academic community was sharply divided on the issues, those who held views somewhere in the centre saw no hope of actually establishing middle ground. They became alienated from the entire dispute and simply hoped that the question would go away. This, however, has not happened. Although some of the circumstances have changed, the basic issues have not gone away. On the contrary, unless appropriate steps are taken now, Canadian universities will again be confronted in the coming decade with an acute shortage of qualified teachers and with the consequent prospect of once more having to import teaching staff in large numbers from other countries.

The Commission hopes that passions have now cooled sufficiently to allow a rational discourse about the issues and that these issues can at last be addressed in a fair and sensible way. The evidence does support the view that many of the concerns that have been expressed about the faculty citizenship question are justified or that there is at least some substance to them. The universities have been lax and have lacked foresight in their handling of many of the issues involved. The Commission has no interest in assigning blame for what has happened, nor would that be a profitable exercise. To do so would simply re-open the debate in terms that would once more render acceptable solutions unlikely. The need now is for more empirical data and for broad agreement on some postsecondary objectives and on appropriate policies to attain such objectives.

The Commission cautions against the dangers of xenophobia and flag-waving in this area of academic policy making, as in every other area. As in its first two volumes, the Commission stresses the importance of a full and balanced Canadian participation in the activities of the international scholarly community. It makes no arguments for impeding the range and freedom of academic inquiry or for building educational barricades against the intellectual and research achievements of other lands. On the contrary, it underlines, again, the importance of the spirit of free scholarly inquiry, of improved scholarly communication, and of the free exchange of information and ideas. What the

Commission does want to urge in this volume is that Canadian scholars, now and in the future, be given full and fair opportunities in their own country to obtain academic appointments, and that there be balance and reciprocity in the hiring of foreign faculty. In making this argument, the Commission is continuing and extending the theme of its first two volumes, which pointed to the need for a reasonable balance in the curriculum and research interests of our universities and colleges that would allow appropriate attention to be given to the particular needs and circumstances of this country.

The two themes, of scholarly interest in Canadian studies and of fair opportunity for Canadian scholars, are closely linked. The Commission does not agree with those who believe that the citizenship of a professor is a reliable indication of that person's interest in or capacity to contribute to teaching and research about Canada. There are many examples of faculty members who are citizens of other countries making a special contribution to teaching and research about Canada. There are also, unfortunately, many examples of Canadian academics expressing indifference and even hostility towards scholarship about their own country. None the less, every academic appointment has implications for the content of curriculum and for the orientation of research. It is understandable that faculty members from other countries bring with them their own background of interests in teaching and research, and that these will often be concerned with the perspectives and subject matter of their own society, just as the interest of many well-qualified young Canadian graduates will be engaged by the Canadian problems and subject matter that are at hand and with which they are familiar.

A. THE HISTORICAL CONTEXT

There had been concerns in the more distant past about the development of the Canadian professoriate and about the directions of the university:

> Our university must be a national one, not a colonial one. We cannot afford to have the growth of our national spirit tampered with or delayed. We must have our professors in touch with Canadianism . . .
>
> I do not believe in giving the chair (in political science) to a Canadian only because he is a Canadian. It must be given only to a competent man. But if there is a Canadian with the natural ability to fill the chair, then he has the prior claim, for his salary comes out of the hard earnings of Canadians . . .
>
> Why should we starve Canadian genius and fatten foreigners, the glory of whose achievements Canada can never claim? Why should we drive our men away to fill chairs in the United States, and refuse them admittance within our own university? Let it be known that Canadians are preferred and Canadians will straightaway prepare themselves for such important positions. Must we supply the

> money and some other country supply the brains? Surely this is humiliation . . . the sooner we think for ourselves the greater and more honourable our country will become. Is our University to be a shelf for foreign scholars, or is it to be a developer of Canadian thought?

The author of this letter was taking a stand in the debate surrounding the appointment to the first chair of political science in Canada, at the University of Toronto. The letter appeared in *The Varsity* of 3 March, 1888. Other members of the University of Toronto had written to *The Varsity* about this particular appointment, too. The arguments posed then, regarding nationalism *vs.* internationalism in faculty appointments and the orientation of curriculum, parallel quite closely the kinds of arguments that appeared in the academic and public press in Canada in the 1960s and 1970s as the debate about the Americanization of Canadian universities heated up.

However, the debate at the University of Toronto in the 1880s was somewhat unusual for its time. The Department of Political Economy at that university was consistently headed by British academics from the appointment of W.J. Ashley in 1888 until the selection of Harold Innis, the first Canadian head, in 1937. To a substantial extent, English-speaking Canadian society was intellectually colonial with a Britannic focus, from Confederation to the First World War and later, while French-speaking Canadian society owed much to the influences of continental Europe. A change in focus, towards the United States, primarily in English-speaking Canada but also in French-speaking Canada, began to occur during the inter-war years and accelerated after 1945. In the earlier period, Canadian universities applied themselves "chiefly to the transmission of a European cultural heritage,"[1] largely ignoring the realities of their own social and physical context. Consequently, it is not surprising that to many people "education seemed somewhat exotic, European rather than native."[2] Thus, the social sciences in Canada commenced by importing the major disciplines as mature and well-established techniques from Europe and, later, from the United States.[3] From time to time a lone cry against this pattern was heard, as the 1888 letter to *The Varsity* demonstrates, but generally speaking the colonial tradition of Canadian universities was left unchallenged until well into the middle of the Twentieth Century.

One of the results of these colonial attitudes was that Canadian universities were slow to develop roots in their own country, depending instead upon their older roots in other countries and in other traditions. This dependence led, in turn, to an unquestioning reliance on the universities of other countries for the production of a large proportion of the highly qualified personnel needed by Canada at the graduate level. Rather than developing graduate schools at Canadian universities, our institutions imported the faculty they required and urged promising young Canadian graduates to pursue their studies at the universities of the United Kingdom, the United States, or Europe. A reading of

Hugh MacLennan's account of his early years at McGill conveys the atmosphere in which the importation of foreign academics to take up posts as professors and department heads at Canadian universities was common and not too often challenged.[4] Thus, it is not surprising that, when it became clear in the 1960s that Canadian universities were faced with a crisis of manpower, their almost automatic response was to import teachers from foreign university systems rather than pursuing fully the potential available in Canada.

Representatives of the Council of Ontario Universities, appearing before the Ontario Legislature's Select Committee on Economic and Cultural Nationalism in the early 1970s, described the choices before the universities in the following way. Canadians could "limit the growth of the universities", but this option was unrealistic given the growing needs of the country for highly qualified manpower. Alternatively, Canadians could "build second-rate institutions staffed by improperly qualified faculty or inadequate numbers of faculty", but the question of what constituted properly qualified faculty was never clarified. The third choice was to ". . . meet the demand by importing faculty and living off the generosity of the U.S. and the U.K." The C.O.U. testified that the "latter choice was the only choice and in fact was consistent with our history of importing skilled people until we are in a position to produce our own." These three options were presented in much the same way by many university leaders all across Canada, although francophone universities often made a greater effort to foster and recruit indigenous staff (Table 13).

One may well dispute the way in which the options available to Canadian universities were presented by such spokesmen and wonder whether other alternatives were sufficiently considered. In particular, might it not have been a reasonable and legitimate experiment to have given probationary appointments to many more young Canadian graduates and, thus, to have allowed them an opportunity to show their merit, whether or not they had yet published much material or completed a Ph.D.? More could also have been done to recruit potential university staff from other sectors of Canadian society.

However, only a few voices argued at the time for these and other measures that would have reduced the dependence of Canadian universities on foreign faculty and given a greater opportunity to many promising Canadian scholars. Instead, the third option, a massive importation of foreign faculty, was adopted. This option is still being pursued to a considerable extent. Despite the growing ability of Canadian universities to produce well-qualified graduates, non-Canadian teachers are still being recruited in large numbers by Canadian universities. As indicated in Table 11, more than one-quarter (27.6%) of the university teachers hired in 1980-81, the most recent year for which statistics are available, were non-Canadians.

The extent of the country's dependence on other countries for the preparation of highly qualified manpower and of the need to develop more opportunities for post-graduate education in Canada were underlined by the findings of the Highly Qualified Manpower Survey of 1973. As shown in Table

4, Canadian institutions had produced much less than one-half the doctorates (42.3 per cent) then held in this country. Very nearly one-third of the doctoral degrees in Canada had been earned in the United States. As shown in Table 5, more than three-quarters of the doctorates in economics (78.4%) and sociology (77.4%), nearly two-thirds of the doctorates in English (63.4%), and about one-half the doctorates in engineering (50.9%) and chemistry (46.3%) had been earned in other countries.

Problems about the availability and reliability of data make it difficult to report on the citizenship of university staff in Canada with any accuracy before 1976. "Information on the citizenship status of university staff has been published as an integral part of the (Statistics Canada) survey (of universities) since 1972 but prior to 1976 the response to the question (about citizenship) was insufficient to permit the generation of valid statistics for all staff".[5] For that reason, the statistics presented in Table 6 for the citizenship of full-time university faculty in 1976 provide perhaps the first reasonably complete and accurate picture of the citizenship of faculty at Canadian universities. Even then it must be noted that Statistics Canada has often, in the absence of firmer data, taken the country of a faculty member's first degree as a proxy for his or her citizenship. In doing so, Statistics Canada has assumed that "most of those who received their first degree in Canada are either native-born Canadians or at least naturalized Canadians of long standing . . . "[6]

As Table 6 indicates, 72 per cent of the full-time faculty teaching in Canadian universities in 1976 possessed Canadian citizenship. There were notable variations by region. In the Atlantic provinces, 29.2% of university faculty were citizens of other countries, 20.8% in Quebec, 25.7% in Ontario, and 36.4% in the western provinces. In Canada, overall, more than a quarter of all university faculty members, 28 per cent, were citizens of other countries.

A comparison of these figures with the percentage of non-citizens teaching in the universities of other countries is instructive. In 1976, 92% of the professoriate at British universities were British, 98% of the professoriate in the United States were American citizens, 99% of the faculty of Swedish universities were Swedish citizens, and virtually 100% of the faculty of French universities were French citizens. At the same time only 72 per cent of Canadian university faculty were Canadian citizens. Yet, in that same year, 36 per cent of the new appointments made at Canadian universities went to citizens of other countries.[7] During the period 1969-70 to 1972-73, as indicated in Table 7, the number of Canadian citizens teaching at American universities averaged about one-tenth of one percent (0.1%) of the total number of university faculty members in the United States. Yet in 1976, as shown in Table 6, American citizens constituted more than 10 per cent (10.4%) of the full-time faculty at Canadian universities. In the mid-seventies, Canadians were being forced to compete with the world for academic appointments inside Canada, while having only very limited opportunities to compete for such appointments in the universities of most other countries.

TABLE 4
DEGREE ORIGIN OF HIGHLY QUALIFIED MANPOWER IN CANADA BY COUNTRY, 1973

Countries Where Degrees Awarded	Masters**	Earned Doctorates**
Canada	67,815 (72.4)	11,595 (42.3)
United States	20,565 (21.9)	8,730 (31.8)
United Kingdom	1,980 (2.1)	3,825 (14.0)
Other Europe	[illegible] (1.5)	2,485 (9.0)
Other Countries	1,970 (2.1)	810 (3.0)
Sub-total Foreign	25,905 (27.6)	15,820 (57.7)
Total (in study)	93,720 (100.0)	27,415 (100.0)

Source: Highly qualified manpower survey of 1973, unpublished data, and von Zur-Muehlen, Max. *Foreign students in Canada and Canadian students abroad,* Ottawa, Statistics Canada, 1978, p. 14.

**The masters and earned doctorates columns include also those degree holders who have obtained their graduate degrees between 1971 and 1973 in Canada, but excludes landed immigrants who arrived after 1971 and those Canadians who returned after 1971 with a graduate degree.

TABLE 5

ORIGIN OF EARNED DOCTORATES BY COUNTRY AND SELECTED DISCIPLINES, 1973.

Country	Economics	Sociology	English	Chemistry	Engineering
Canada	200 (21.6)	105 (22.6)	350 (36.6)	1,630 (53.7)	1,230 (49.1)
United States	485 (52.4)	280 (60.2)	390 (40.8)	435 (14.3)	520 (20.8)
United Kingdom	80 (8.6)	30 (6.5)	160 (16.8)	665 (21.9)	520 (20.8)
France	65 (7.0)	30 (6.4)	5 (0.5)	30 (1.0)	25 (1.0)
Other Countries	95 (10.3)	20 (4.3)	50 (5.2)	275 (9.1)	210 (8.4)
Sub-Total Foreign Countries	725 (78.4)	360 (77.4)	605 (63.4)	1,405 (46.3)	1,275 (50.9)
Total	925 (100.0)	465 (100.0)	955 (100.0)	3,035 (100.0)	2,505 (100.0)

Source: von Zur-Muehlen, Max. *Foreign students in Canada and Canadian students abroad.* Ottawa, Statistics Canada, 1978, p. 16.

TABLE 6

CITIZENSHIP OF FULL-TIME UNIVERSITY TEACHERS BY REGION AND IMMIGRATION STATUS, 1976

REGION	Canada	United States	United Kingdom	Other	Employment and Other Visas	Total Non-Canadian	Number Reported
				Percent			
Atlantic Provinces	70.8	11.6	6.3	5.5	5.8	29.2	3,552
Quebec	79.2	5.1	1.8	7.5	6.4	20.8	6,952
Ontario	74.3	12.1	5.5	5.6	2.5	25.7	12,657
Western Provinces	63.6	11.6	5.1	4.4	15.3	36.4	8,487
Canada	72.0	10.4	4.7	5.7	7.2	28	31,648

Source: Statistics Canada. *"Citizenship of university staff." Service bulletin: education statistics,* Vol. 3, No. 1, (1981), p. 6. (Cat. 81-002).

The composition of the faculty of the Canadian university system in the mid-1970s, at the end of the great period of expansion, was strikingly different from that of other countries. No other industrialized nation was so dependent on the university systems of other nations for the production of highly qualified personnel, and no other university system in an economically developed country was so heavily staffed by the citizens of other countries.

This situation had been created by the nature of the Canadian response to perceived university needs. Expansion of Canadian universities on such a massive scale in such short order would have been handicapped without foreign teachers. Canada had relied on imported skills for the development of virtually every facet of the university structure. Our country was, and is, a nation of immigrants. The British and the Americans, in particular, had played a major role in the development of our academic life both through the training of young Canadians in their university systems and through the export to Canada of many university teachers. It is not surprising that, when the demand came for large and rapid expansion, the university administrators of the country turned to foreign

TABLE 7.

THE NUMBER OF CANADIAN CITIZENS TEACHING IN U.S. UNIVERSITIES, BY YEAR AND PERCENTAGE

Year	Total U.S. Citizens teaching in the U.S.	Total Foreign Professors in the U.S.	Total Canadian Professors in the U.S.	Total Number of Professors in the U.S.
1969-70	533,341 (97.7%)	12,659 (2.3%)	677 (0.12%)	546,000
1970-71	561,953 (97.9%)	12,047 (2.1%)	652 (0.11%)	574,000
1971-72	581,687 (98.3%)	10,313 (1.7%)	579 (0.09%)	592,000
1972-73	589,152 (98.2%)	10,848 (1.8%)	600 (0.10%)	600,000

Source: Figures from Open Doors Publications and from the U.S. Office of Health, Education and Welfare.

academic communities, and especially to the universities of the United Kingdom and the United States. There was, apparently, little recognition of some of the problematic consequences of this action for the longer-term development of Canadian universities with respect to the restriction of future opportunities for Canadian graduates and to the desirability of ensuring that a reasonable amount of attention would be paid to teaching and research about Canada itself in its own universities.

Canada had imported academic manpower in the past, but it had done so for a small and relatively undeveloped university system. This time it was importing on a vast scale for the development of graduate schools and to provide universal access to postsecondary education for the children of the baby-boom. Working on the assumption of ever increasing numbers and flush with the financial resources required for expansion, Canadian universities adopted the easiest and most familiar solution to their staffing problems.

Other interests in Canadian society left the universities to pursue this short-term solution to their staffing problems without hindrance and with little comment. The federal government, through the Department of Manpower and Immigration as it was then called, issued immigrant visas without question to foreign academics destined for the university. In addition, the federal government provided a two-year "tax holiday" to attract presumably reluctant foreign professors to our shores. In theory, those who came on the tax holiday scheme were to return to their own countries at the end of the two years. But in practice, after enjoying the benefits of this exemption from taxes for two years, many arranged to stay on. Under the point system, Canada's immigration policy was heavily weighted in favour of prospective applicants for university appointments. Furthermore, there were no restrictions placed on the number of university teachers admitted to the country. This open door policy was followed until 15 April, 1977, when new procedures were introduced to require the university to " . . . prove to the Employment and Immigration Commission that the position was thoroughly advertised in Canada, thereby ensuring that Canadian candidates have been properly considered." The government was moving, not too effectively as it turned out, to close the barn door after the horses had come in.

Although federal immigration laws stated that a Canadian employer could not hire a foreigner, defined as a person who was neither a Canadian citizen nor a landed immigrant, unless the employer could prove that there were no qualified Canadian candidates for the job, universities and colleges were explicitly granted exemption from this condition. From April, 1977, universities and colleges were required only to prove that they had advertised the teaching position in Canada. In 1976-77, there had been 2,162 new appointments in Canadian universities and 65.3 per cent of these had gone to Canadian citizens (Table 11). In 1977-78, the first full year in which the new procedures were applied, 69.2 per cent of the 2,106 appointments went to Canadians. Despite the

new procedures, more than thirty per cent of the new appointments at Canadian universities were still going to non-Canadians.

It is presumably because these procedures were judged to be ineffective that the Minister of Employment and Immigration announced another policy on 7 May, 1981, requiring universities to advertise in Canada and to evaluate Canadian candidates for positions before seeking foreign academics for teaching posts. More will be said about this new policy further on.

From the late 1960s to the end of the period of large-scale university growth, about 1975, a serious and extensive debate had developed in Canada about the wisdom of such heavy dependence on citizens of other countries to staff the universities of Canada. There was, in particular, deep concern about the concentration of Americans in the institutions that hold a major responsibility for Canadian intellectual, scientific, and cultural life. Many questions were raised about the impact on Canadian universities of such large numbers of professors from the United States in terms of curriculum, course content, and research priorities. Concerns were raised about what was seen as the destruction of indigenous patterns of higher education: the erosion of the honours B.A.; the weakening of the Canadian tradition of high quality undergraduate education in the arts and sciences; a down playing of the importance of good teaching in the academic world; the growing addiction to the Ph.D. syndrome and to the related belief that one must publish or perish; and the new and immense priority given to graduate and professional education. There was disquiet about the cultural impact on Canadians of a university system so largely dominated by teachers from other societies. The fact that so much of the publishing industry in Canada was American owned or controlled added to this disquiet.

As the newly founded or recently expanded graduate departments produced young Canadian Ph.D.s, especially by the early 1970s, the competition for positions became intense and there was a growing suspicion that the universities were gradually being closed to Canadian job-seekers. Canadian graduates found themselves increasingly in competition for jobs at Canadian universities with American graduates from those universities in the United States that had produced so many of the members of the hiring committees. It was charged by some that "hiring networks" or "old-boy" networks, dominated by faculty from or trained in other countries, were blocking qualified Canadians in the selection of faculty for Canadian universities.

The issue of the citizenship of the professoriate, especially the question of the Americanization of the Canadian university, quickly overshadowed many of the other pressing postsecondary issues of the day. The debate was joined on campuses across Canada; the issues were discussed in legislatures and in the media. Organizations of concerned citizens and academics spoke out on the matter. In Ontario, a Select Committee of the Legislature on Economic and Cultural Nationalism included the question of faculty citizenship in its terms of reference. Various national scholarly bodies, especially some of those most directly affected by the situation, debated strategies and took positions on

questions of research orientation, methodology, curriculum content, hiring, promotion, and tenure. Articles and monographs appeared, of which the best known and most influential was *The Struggle for Canadian Universities*, edited by Robin Mathews and James Steele.[8]

B. SOME IMPLICATONS OF THE FACULTY CITIZENSHIP ISSUE

The debate about faculty citizenship was, in reality, a debate about human resources: about the extent and nature of Canadian needs for highly qualified manpower and about the preparation and proper use of highly qualified personnel. At an even deeper level, it was a debate about the nature and future of Canada itself. At one end of the spectrum were those who felt that Canadian universities had been seriously damaged by the importation of excessive numbers of foreign faculty and that the longer we continued to depend on the United States for academic staff and academic models, the more the damage would be compounded. At the other extreme were those who, styling themselves internationalists, deplored any concerns about faculty citizenship and Canadian content as a form of narrow provincialism unworthy of the ideals of a university. At this extreme, too, were some of those who, having been invited into Canada and having been paid out of the Canadian taxpayers' pockets, made a point of denigrating things Canadian and exacerbating the situation by their determined insensitivity to Canadian issues and circumstances. Unfortunately, the negative feelings generated by people in this latter category often obscured the fact that many of those who had come from other countries to teach at Canadian universities were making very significant contributions both to Canadian education and to scholarship about Canada. A large body of people, who found themselves in the middle of this human resources debate, were often confused and uncertain about both the scope of the problem and the suggested solutions.

As more and more well-qualified Canadian graduates vied for positions at Canadian universities, the focus of the faculty citizenship debate shifted from the general issue of the importation of so many foreign academics to more specific questions about the development and operation of "chain migration" systems that were said to play a major role in recruiting faculty members from other countries. The existence of "hiring networks" or "old-boy networks" was difficult to prove and virtually impossible to quantify. But it is a fact that, throughout the years of great expansion, most Canadian universities did most of their faculty hiring without advertising the positions concerned and without holding open competitions for these posts. Presumably contacts in academe were employed by search committees. Only one-sixth of the academic job vacancies in Canada were advertised in the AUCC vacancy lists during the period between 1964 and 1968, and between 1970-71 and 1971-72 probably only one-third of the available positions were recorded there.[9] These were the years of

the heaviest immigration into the Canadian professoriate, especially from the United States.

A report prepared for the Deputy Registrar of Canadian Citizenship of the Department of the Secretary of State examining university faculty and citizenship acquisition questions with the University of Calgary as a focus for research, concluded that there was an historical hiring pattern at the University of Calgary which linked that institution to universities in the United States. The authors said:

> This process has been identified as the "old boy network", or in more scientific terms; "chain migration". A careful assessment of the national background of various departments in Canadian universities will reveal a clear pattern. During the period of hiring "foreigners", networks were established between the Canadian university (actually a department) and various academic departments in the U.S.A. or Great Britain. (In fact, other evidence suggests that this is true for other nationals in Calgary.) These contacts were maintained and sustained because recruitment was necessary every year to meet the increased enrolments. The networks became very regionalized and reciprocal patterns emerged. Departments in Calgary would send their M.A. and Ph.D. students to these schools that were in turn sending teachers to Canada. The result was a high proportion of instructors for some department from a region or country . . . The introduction of Canadian Ph.D.s educated in Canada into the Canadian market was slow in coming.[10]

Using the hiring patterns of one university as a basis for their study, the authors concluded that hiring networks, especially with universities in the United States, did indeed exist. There can be little doubt that their conclusion is correct and that the practice of recruiting faculty members from other countries through unofficial, "old-boy", hiring networks has been, and still is, widespread.

True or not, the widespread belief among Canadian academics and graduate students that considerable "chain migration" was taking place through old-boy hiring networks was often damaging to the morale of Canadian citizens working within the university system. They felt engulfed in a process that took decisions out of their hands and involved them in a competition in which the rules of the game were unclear, unequal, and unfriendly. It was also damaging to the morale of many young Canadians aspiring to a career in Canadian academe. The sense of anger and frustration apparent in many of the briefs and letters received by the Commission, as well as in the academic and popular press, reveals a deeply held conviction that the competition for academic positions in Canada was loaded against Canadian graduates of Canadian universities.

The sense of anger and frustration arising from this perception of discrimination in faculty recruitment can be illustrated by several examples from the Commission's files. One professor wrote:

> The massive hiring of foreigners in the 1950s and 1960s may have created a situation that is virtually irreversible. The percentage of foreigners in Canadian universities is not the key figure; rather it is the figure of the number of departments in the English-speaking universities that are controlled or significantly influenced by foreigners. I think the figure is enormous, and that is where the problem lies. I have not the slightest hesitation in saying that Americans have used their influence in the Universities to hire fellow Americans. Nor do I blame them — why should they hire anyone with a degree and background they don't understand when they can hire someone with a degree from a university they respect and the support of someone they know and trust.
>
> At any rate, I believe that non-Canadians are now holding down dozens if not hundreds of positions that Canadians are qualified to fill. The frustration and resentment of persons like myself would explode were it not for two things: we are afraid to speak out because of the number of foreigners on committees; and most of us regard the situation as hopeless, our actions as futile.
>
> There is little faith in senior tenured Canadians — after all, they helped create the problem; they hired the Americans; they let the Americans dominate; they are the ones who say it is anti-American and anti-academic for a Canadian to demand a job in Canada; and they are the ones who often believe that American students are better than Canadian ones. When you add this group to the foreigners you have the reasons for the present situation, the reasons why it will be extremely difficult to change it, and the reasons why people in my situation do not protest, namely fear and hopelessness.

Another Canadian academic wrote:

> The days of university expansion are over; staffing is virtually frozen; and American academics currently employed in our universities are for the most part unable to leave, for few new appointments are being made in the U.S. Still, dead men's shoes should provide an occasional opening for a Canadian to slip through . . .
>
> Many Canadians (myself included) employed in the Canadian universities are made to feel like foreigners in their own land . . . If my tone seems somewhat strident, I can only observe that I am one of two Canadians in this 22-man department . . . for years I was the only one; and the problems listed above become intensely personal.

The same sense of anger surfaced at faculty meetings, at meetings of learned societies, and in the press on numerous occasions. For example, in an article in *The Chronicle of Higher Education* reporting on the 1975 meeting of the

Canadian Association of University Teachers (CAUT) and the development of CAUT's "Canadianization" guidelines, one professor is quoted as saying that the guidelines were "an attempt to redress a situation in which we have allowed some of our most important cultural institutions to be colonized and, in fact, continentalized."[1] At the same meeting, another professor observed that "Canada has been a dumping ground for American academics," and that some departments are "so dominated by Americans that they do their only serious recruiting at meetings of the U.S. academic societies such as the Modern Language Association." As the article in *The Chronicle of Higher Education* noted

> One reason the Americans rankle so much — in addition to their sheer numbers — is that U.S. Labour Department regulations make it extremely difficult for Canadian academicians to take permanent teaching jobs at American universities. In contrast, almost any non-Canadian with a *bona fide* job offer can get through Canadian immigration.

The Commission received correspondence on this point from many Canadians working in the United States or seeking employment in that country. For example, this passage appeared in a letter from a Canadian citizen who had worked in the United States for several years and who, on applying for an immigrant visa, found that he was denied permission to stay in the United States on the grounds that Americans were available to fill faculty positions in his field. He, incidentally, had tried and had failed to find employment in Canada.

> Apparently academic positions in the United States are being effectively reserved for American citizens through denial of certification by the Department of Labour and compulsory waiting periods. This policy has severe implications for all Canadian Ph.D.s and graduate students who are obliged to compete with Americans for the few positions in Canada, but are denied access to opportunities in the United States . . . Some recent advertisements by American universities in professional journals specify "U.S. citizens only."

Another example of the difficulties faced by Canadians in finding employment in Canadian universities, which is also instructive about the operation of old-boy hiring networks, appeared in *Canadian Forum* in September, 1972. A Canadian described how he obtained a teaching job at a university in Western Canada from a temporary teaching position at an American university. The episode took place at the time when the debate about Americanization and charges about the existence of American hiring networks had reached a high pitch. Clearly a Canadian candidate was required to help defuse the issue in the university in question.

> The way I got the job is interesting. A member of the search committee at the university (in western Canada), a U.S. citizen . . . 'phoned some friends in New York and Boston to find out if they knew a person — preferably Canadian — who could fill the available job. These friends were former classmates of mine in the U.S. and suggested my name; eventually a position was offered. It was, however, through a network of U.S. contacts that I was able to find the job. I had sent a letter to the same university in response to a *University Affairs* advertisement but had received the usual form letter in reply.
>
> Even more interesting, and depressing, is that about one week before officially accepting the job and sending my signed contract back I received a letter from the Department of Manpower and Immigration . . . it was a personal letter noting that I had been appointed to a university position in Canada. It advised me to get in touch with Canadian Immigration immediately in order to make sure I complied with Canadian immigration requirements. It seems that a large enough percentage of new university appointments in Canada is filled by U.S. citizens for such letters to be sent automatically. I more or less had to masquerade as a U.S. citizen to get back into Canada and am evidently being received as one.[12]

Reports like the Frideres and Goldenberg study and accounts of personal experiences such as those cited here indicate that faculty hiring networks have existed in this country. Despite the increasing availability of well-qualified Canadians in many disciplines, especially in the social sciences and humanities, there are reasons to believe that these networks still operate, giving preference to foreign academics, although on a reduced scale. In 1980-81, the most recent year for which reasonably reliable statistics are available, 27.6 per cent of all new appointments (both replacement and newly created positions) were filled by citizens of other countries (Table 11).

As the Commission has reported in Volume I of *To Know Ourselves*, some American sociologists working in Canada were forthright enough to tell the Commission that they would not hire Canadians for "their" departments because "once one hires a few of them they will be pushing for more and more." It is no wonder that the Commission encountered Canadian academics who felt themselves strangers in their own land.

More often than not, however, it was not the existence of any scheme to exclude Canadians that influenced hiring decisions. Rather, it was that good scholars trained in another national tradition were blinded to the possible merit of scholars raised in the academic traditions of this country who might have teaching and research interests and approaches different from their own. However, when non-Canadians and Canadians trained in other systems favoured "those they know and trust" at the expense of Canadian university graduates or Canadian professors, the result was the same as if there had been

formal restrictive hiring practices or the operating of deliberate "old-boy" networks. None the less, over the past several years the percentage of Canadians receiving university appointments has increased and the percentage of these appointments going to citizens of other countries has declined. Whereas in 1976-77, 34.7 per cent of the new appointments at Canadian universities went to citizens of other countries, this figure, as shown in Table 11, had dropped to 27.6 per cent by 1980-81. As Professors Frideres and Goldenberg concluded:

> Recently, however, changes have taken place. First of all, Canadian universities are producing their own Ph.D.s. Secondly, there is much less need for a large number of Ph.D.s. Enrolment is dropping and the number of vacancies per year is small. In addition, immigration policy changes have forced a more thorough evaluation of potential Canadian applicants before allowing external search. Because of these factors, the networks between other countries and Canadian universities have slowly been broken as intra-national pressures and ties have emerged as challengers.[13]

The Commission has taken pains in its first two volumes to point out that it makes no argument for impeding the range and freedom of academic inquiry, or for raising barriers against the cultural and research achievements of other lands. On the contrary, it warned against the dangers of intellectual xenophobia and urged the importance of a full and rounded Canadian participation in international scholarly activity. What the Commission argued for in those two volumes is the need for a reasonable balance in the curriculum of our universities and colleges that will allow sufficient attention to be given to the particular problems and circumstances of this country.

What the Commission argues for in this volume, continuing and extending that theme, is that Canadian scholars be given full and equal opportunities in their own country to compete for academic appointments. The Commission argues, further, that many more opportunities must be opened up for Canadian graduates in teaching and research if our educational system is to come anywhere near to meeting future Canadian needs for highly qualified personnel.

On a related point, while it is, of course, important for the Canadian academic community to participate in and to contribute to international scholarship, this essential aspect of its work should not be pursued to the exclusion or detriment of teaching and research in areas of national interest, or *vice versa*. As John Holmes has written, "We have been intimidated by the almost universal belief in unity as an end in itself, by the insistence that internationalism requires the extinction of nationalism . . . Internationalism too often has been a negative belief that barriers should be torn down, that national boundaries are unnatural and offensive to human dignity."[14]

It is important, as well, that we do not have a false idea of what constitutes internationalism in the world of scholarship. Perhaps unconsciously, and perhaps also as the result of a long process of conditioning, many Canadians

tend to confuse and to equate continentalism with internationalism. We have "international unionism", which is in reality continental unionism. We sign agreements with the United States that are in reality bi-lateral arrangements and we call them "International Joint Commissions", or some such name. We have grown accustomed to participating in a vast array of organizations and activities which are styled 'international', but which are, in reality, American organizations and activities with Canadian bits and pieces tacked on the end. In academe, as in many other fields, Canadians have become used to taking part in a multitude of societies and activities that are called international but that are really American activities in which Canadians participate. In scholarly activities as in other areas of endeavour, such a restricted interpretation of international links can obscure perceptions and retard development. Academic continentalism, while it may often be worthwhile in itself, is a limited or stunted form of academic internationalism. Canadians should not continue to mistake continentalism for a truer and more complete internationalism, which must involve association and participation in the world beyond North America.

As the Commission noted in the chapter on Curriculum in Volume I of *To Know Ourselves*, a number of disciplines in Canada including, for example, sociology, anthropology, and political science, exhibit signs of continentalization. Critics of the situation and of the process that brought it about have been labelled nationalists who have no true appreciation of the importance of international scholarship. But the editor of *Saturday Night* has put this argument in perspective:

> . . . American professors and their supporters argue, of course, that they are not interested in issues of nationalism, as such; what concerns them is excellence and international standards. In fact, they are no more "international" in their outlook than anyone else. They reflect in their work the world that produced them: the American university system and its values.[15]

Without abandoning their valuable American ties, Canadian universities and Canadian scholars should surely be seeking to participate in, to contribute to, and to draw from the wider international community of scholarship, while at the same time developing a Canadian perspective on the world and advancing knowledge and understanding about Canadian issues and circumstances. In short, Canadian universities should be to Canada what British universities are to Britain, French universities are to France, or American universities are to the United States. While this may be simple to say, however, it is difficult to achieve. The universities and the scholars of Canada need, and deserve, more public support to help them to realize these goals.

Most other western or developed countries have a serious regard for the nature and composition of their academic communities. Perhaps too much so in some instances. France and some other European countries, for example, require all professors to be citizens and, indeed, to be civil servants. By

comparison, it may fairly be argued that Canada has been lax in its attention to the nature and composition of its academic community. This has led to some curious situations. *The Globe and Mail* of 17 September, 1974, could report that China had cancelled entry to an official Canadian delegation because it had only two Canadians among its seven members. A similar concern was expressed in one letter to the Commission:

> What is to be done about a country that allows itself to be represented at Commonwealth university conferences by American citizens who happen to be on Canadian faculties?

What is regrettable is that these situations, and our tolerance of a one-sided academic common market with the United States, are justified with the rhetoric of internationalism when the internationalism concerned is in reality only continentalism.

Comparative statistics make clear that most other countries think it is important to hire their own citizens to teach in their universities and colleges. The two countries from which we draw the largest proportion of our imported faculty, the United States and Britain, recruit relatively few foreign professors. In the United States 98 per cent of the academic community are citizens of that country and in Britain 92 per cent are citizens of the United Kingdom. Yet the universities of these two countries are well respected for their contributions to international scholarship and to human understanding. Those who seek to perpetuate the present faculty mix in Canada, or to justify the continuing extensive importation of faculty into Canada at a time when there are capable young Canadians qualified and willing to teach in our universities, argue that a higher proportion of Canadian faculty members would make our universities closed and parochial institutions. That argument is nonsense, as the experience of so many other university systems around the world amply demonstrates. In fact, the argument is an insult to Canadians, especially to those who have devoted their lives to the development of what is steadily becoming a world-class university system.

We need to provide in our university system a creative outlet for our most talented and brilliant minds. By building a university system that relies unduly on manpower imported from elsewhere, and in so doing denying opportunities to our own graduates, we run the risk of driving some of our own brightest people out of academe, if not out of the country altogether. It may also be that we risk importing many of those who are not able to compete in the highly developed university systems of their own countries. It has been argued by some of those corresponding with the Commission that we have, in fact, been able to attract only those who have lost the race in their own countries and, further, that by sending so many of our students abroad to foreign graduate schools, rather than developing our own, we have also accelerated the permanent export of some of our best minds. This kind of argument, if pressed too far, does a disservice to those Canadians who are working in our university system, as well

as to the many immigrants and new Canadians who are contributing greatly to our intellectual life. But there is, none the less, a grain of truth in this line of argument. Many who have come to Canada to teach appear to be waiting eagerly for the first opportunity to return to their own country. As Frideres and Goldenberg put it:

> The present study characterizes American professors as permanent sojourners. That is, American professors subjectively define their position in Canada as temporary but do not act accordingly. This stance is taken when they first decide to move to Canada and is carried through their early years in Canada. With the now restricted market movement and the pressure by Canadian universities to "hire Canadian", the American professor is caught between objective realities and subjective definitions.[16]

At the heart of the debate about faculty citizenship are disagreements about what constitutes good scholarship and teaching, about what are appropriate research priorities and methodologies, and about what are appropriate attitudes towards the national community in which the universities are located. The issue is not simply a question of the legal status of individuals. What is important are the attitudes, values, and approaches that individuals bring to their teaching and research. The bias, background, and perspective of teachers and researchers are very relevant considerations in any effort by a university community to achieve a semblance of cultural balance. The Canadian community cannot be well served if it is dominated by academics who base their teaching and research on assumptions, priorities, and orthodoxies developed in an alien educational system. This is particularly so if these persons, be they Canadians, new Canadians, landed immigrants, or foreigners, implicitly or explicitly denigrate the scholarly interests and traditions of Canada.

In its first two volumes, the Commission reported that insufficient effort had been put into the development of teaching and research about Canada in the first half of the 1970s by Canadian universities and colleges. Few other countries with a developed postsecondary system were paying so little attention in the university curriculum and in research to the study of their own culture, problems, and circumstances. In some situations, the interest shown by students and younger faculty in Canadian studies had been rebuffed, or even actively discouraged, by the attitudes of indifference or hostility adopted by some members of the faculties and administrations of Canada's universities. Indeed, the Commission found that in some disciplines the amount of attention directed to Canadian concerns had actually been diminishing at many universities.

The central legacy for Canadian universities from the period of the 1950s to the mid-1970s was a continuing and more pronounced disequilibrium in the composition and supply of highly qualified manpower. This had, in turn, implications for balance in the attention given to Canadian subject matter in both teaching and research. Our universities adopted policies, based on certain

habits and assumptions, which solved an immediate shortage of highly qualified manpower but created a longer-term human resource problem of immense complexity. By adopting a short-term and relatively easy solution to the problem of a shortage of professors, they created a situation that has contributed to the erosion of public confidence in the university, limited the scope of action of subsequent university administrations, and stunted the growth of teaching and research about Canada and of a Canadian perspective on the world.

C. CONCERNS ABOUT FACULTY CITIZENSHIP IN THE 1980s

On 7 May, 1981, the Minister of Employment and Immigration, the Hon. Lloyd Axworthy, announced a new policy with respect to the importation of foreign academics to teach in Canadian universities. Given the fact that, compared to the early and mid-seventies, relatively little had been written or said about the faculty citizenship issue recently, this announcement may have come as a surprise to those who believed that "the citizenship question, which was so prominent a few years ago, seems to have subsided and may become a non-issue."[17]

The new policy of the Department of Employment and Immigration requires universities to advertise for Canadian candidates and to evaluate their suitability before seeking foreign academics to fill post-secondary teaching positions in Canada. The policy prior to this, established in 1977, had allowed universities to advertise and to seek for academic staff simultaneously in Canada and abroad. It was intended to ensure that, with certain exceptions (exchange and visiting professors, guest lecturers, graduate assistants), foreign academics were not admitted to Canada to take a university appointment on a permanent or temporary basis until and unless the university involved had demonstrated that the position had, through adequate advertising, been brought to the attention of Canadian citizens and permanent residents. Studies conducted by the Department caused it to conclude that there were major problems with this earlier policy and to move a step further, to the policy announced in May, 1981, under which universities are required to assess applications generated as a result of advertising for Canadian candidates before resorting to recruitment of non-citizens from outside the country. Only if no suitable candidate is identified by this means will the Employment and Immigration Commission approve a job offer to a foreign applicant. In effect, this policy embodies a decision by the Canadian government to require Canadian universities to determine whether or not a suitably qualified Canadian is available before seeking candidates elsewhere. This policy came into effect in the 1982-83 academic year.

Announcing the new policy, the Minister stated: "Because of the large number of postgraduates now leaving our universities each year, I feel it is only fair that we find out if there are qualified candidates available on the Canadian market before advertising abroad." As in the past, the policy leaves it entirely to

the universities to judge the merits of competing candidates and to select the candidate they consider best suited, as long as the position has been advertised in accordance with the guidelines of the Employment and Immigration Commission.

As might have been anticipated, the reaction to the announcement of this policy has been lively and diverse. Many of the executive heads of universities, but not all, have protested against the policy and urged the Minister to reconsider or withdraw it. An ill-conceived and unhelpful discussion of the subject took place between some heads of universities and the Minister at a turbulent meeting of the Association of Universities and Colleges of Canada in Winnipeg in the fall of 1981. At the other end of the opinion scale, the Minister has had many hundreds of letters in support of the policy. More than half of these have been from members of the academic community. A recurrent theme in these letters is the concern expressed that the university hiring system is still not operating in favour of Canadians and, indeed, that it continues to allow conscious and/or unconscious discrimination against Canadian candidates. It is puzzling, and disturbing, that many of the academics expressing these concerns request anonymity lest they be penalized by their universities for holding such views.

The most recent year for which comprehensive and reliable statistics about the citizenship of faculty at Canadian universities are available from Statistics Canada is 1979-80. Statistics are available for subsequent years, but they are often incomplete and are progressively less reliable. Statistics for 1980-81 and later, for example, do not include data for Quebec. For 1981-82 and 1982-83, data are missing for a large number of universities elsewhere in Canada as well as in Quebec. Moreover, the accuracy of such data as Statistics Canada does have depends on whether the information given to it by the universities is accurate and up-to-date. This, in turn, depends upon whether the personnel files kept by the universities are complete. The universities depend, in their turn, upon their faculty to provide accurate and current information. It is, as yet, a slow, cumbersome, and not very reliable chain of communications.

There is a particular problem with information about the legal status of newly appointed faculty. At many universities there is a sizable group for whom such information is simply "not reported", as indicated in Table 8. In 1980-81, the legal status of 76 newly appointed faculty members at one university was not reported. At another university, the legal status of 50 new faculty members was not reported. For the four-year period from 1977-78 to 1980-81, five universities failed to report on the legal status of nearly 500 newly appointed faculty members. Such large numbers of "not reported" point to the need to review both reporting procedures and monitoring arrangements for statistical data about citizenship and legal status.

There are other problems about data concerning faculty citizenship that are reflected in the discrepancies in the figures and percentages provided on this subject by Statistics Canada, by the universities, and by other organizations.

These and related statistical problems, both of reporting and of interpretation, have been discussed earlier in chapter two of this volume where some recommendations are proposed to remedy the situation. Despite these problems, the following tables and data do give a realistic overall indication of the present situation.

TABLE 8
UNIVERSITIES WHICH HAD A SIZABLE GROUP IN THE "LEGAL STATUS NOT REPORTED" CATEGORY AMONGST NEWLY APPOINTED FACULTY MEMBERS, 1977-1978 TO 1980-1981

Institution	1977-78	1978-79	1979-80	1980-81
A	8	-	12	10
B	10	-	6	-
C	-	5	10	10
D	15	26	27	50
E	70	41	81	76
Total	103	72	136	146

Source: von Zur-Muehlen, Max. *Foreign academics at Canadian universities: a statistical perspective on new appointments during the seventies*, Ottawa, Statistics Canada, 1981, Table A-15, p. 33.

Table 9 reports on the citizenship of full-time university teachers by teaching field in the academic year 1979-80. In that year, slightly less than one-quarter (23.2%) of full-time teachers at Canadian universities were citizens of other countries and 76.8 per cent were Canadian citizens. The percentage of Canadian citizens varied from a high of 83 per cent in education, engineering, and health sciences to a low of 66 per cent in fine and applied arts. Approximately 27 per cent of full-time teachers in both the humanities and social sciences were citizens of other countries. Nearly 4,000 full-time teachers at Canadian universities (12%) were citizens of the United States, including over 20 per cent of the full-time faculty in fine and applied arts. Close to one in six of the full-time teaching staff in both the humanities and social sciences were American citizens. Even in education, more than one in ten were citizens of the United States.

Table 10 provides data for 1980-81 about the citizenship of university teaching field at Canadian universities, excluding Quebec for which such information was not available. The point that a higher proportion of Canadian citizens are employed by the francophone universities than by the anglophone

universities is reflected in the fact that, when data from Quebec is excluded, the percentages of Canadian faculty members are lower for Canada as a whole and for every academic field. Similarly, the percentages of university teachers who are citizens of the United States are higher in every academic field, when data from Quebec are excluded. About 14 per cent, or one in seven, of the teachers at Canadian universities, excluding Quebec, were American citizens in 1980-81.

As Table 10 also indicates, nearly 20 per cent of the faculty members with senior administrative duties at Canadian universities in 1980-81, excluding Quebec, were citizens of other countries. For the purposes of its table, Statistics Canada defined university faculty "with senior administrative duties" to include deans, vice-deans, associate deans, department heads, co-ordinators, and chairmen. More than 10 per cent of these senior positions are held by citizens of the United States.

There has been notable increase in the proportion of full-time university teachers who are Canadian citizens. This proportion has risen from 57 percent in 1969-70 to nearly 77 per cent in 1979-80.[18] To a substantial extent, however, this rise in the percentage of Canadian citizens amongst full-time faculty is the result of landed immigrants who were already on staff taking out citizenship in larger numbers than had previously been the case, rather than of the appointment of larger numbers of Canadians.

The importance of this factor, that is of changes in citizenship by those already on staff, is underlined by the fact that in every year since 1972 the percentage of Canadian citizens among newly appointed full-time university teaching staff has been lower than the percentage of Canadian citizens already on staff as full-time teachers.[19] Again, there is debate and uncertainty as to the exact figures. But the essential point is clear: the increase in the proportion of Canadian citizens who are full-time teachers at Canadian universities is less the result of university hiring policies than of other factors. As Table II indicates, there has been an increase in the percentage of Canadian citizens amongst newly appointed full-time university teachers from 59.1 per cent in 1972-73 to 72.4 per cent in 1980-81. But in every year this percentage was less than the percentage of Canadians already on staff and the nine-year average for the percentage of Canadian citizens amongst those newly appointed was, at 67 per cent, barely two-thirds of the new appointments made by Canadian universities.

Table 12, also from Statistics Canada, gives higher figures than does Table 11 for the percentage of Canadians among newly appointed full-time faculty for the four years, 1977-78 to 1980-81. The difference between the figures in the two tables may lie in the fact that the number of those whose legal status is "not reported" is much higher in Table 12 than it is in Table 11. It would appear that the higher the percentage of those whose legal status is "not reported" then the higher the percentage of Canadian citizens will appear to be. One might perhaps conclude from this that a high proportion of those whose legal status is "not reported" are not Canadian citizens. As Table 12 indicates, the legal status of more than 600 newly appointed full-time faculty members was not reported

TABLE 9
CITIZENSHIP OF FULL-TIME UNIVERSITY TEACHERS BY TEACHING FIELD, 1979-1980

Teaching Field	Canada	United States	United Kingdom	Other Commonwealth	Belgium/France	Other Europe	Other	Total Reported (in study)	Not Reported	Total (in study)
Education	2,609	330	83	40	33	21	29	3,145	23	3,168
	(83.0)	(10.5)	(2.6)	(1.3)	(1.0)	(0.7)	(0.9)	(100.0)		
Fine and Applied Arts	1,008	329	90	25	8	47	15	1,522	18	1,540
	(66.2)	(21.6)	(5.9)	(1.7)	(0.5)	(3.1)	(1.0)	(100.0)		
Humanities	4,116	889	276	60	106	119	50	5,616	25	5,641
	(73.3)	(15.8)	(4.9)	(1.1)	(1.9)	(2.1)	(0.9)	(100.0)		
Social Sciences	5,890	1,256	317	176	147	135	165	8,086	47	8,133
	(73.9)	(15.5)	(3.9)	(2.2)	(1.8)	(1.7)	(2.0)	(100.0)		
Agriculture & Biological Sciences	1,770	295	113	45	22	35	21	2,301	14	2,315
	(76.9)	(12.8)	(4.9)	(2.0)	(1.0)	(1.5)	(0.9)	(100.0)		
Engineering	1,988	109	98	54	47	55	42	2,393	69	2,462
	(83.1)	(4.5)	(4.1)	(2.3)	(2.0)	(2.3)	(1.7)	(100.0)		
Health Sciences	3,964	249	294	96	31	68	70	4,772	19	4,791
	(83.1)	(5.2)	(7.2)	(2.0)	(0.6)	(1.4)	(1.5)	(100.0)		
Mathematics & Physical Sciences	3,276	408	245	110	48	115	68	4,270	36	4,306
	(76.7)	(9.6)	(5.7)	(2.6)	(1.1)	(2.7)	(1.6)	(100.0)		
Sub-total	24,621	3,865	1,516	606	442	595	460	32,105	251	32,356
	(76.7)	(12.0)	(4.7)	(1.9)	(1.4)	(1.9)	(1.4)	(100.0)		
Not Reported	306	28	20	3	2	2	2	363	84	447
TOTAL	24,927	3,893	1,536	609	444	597	462	32,468	335	32,803
	(76.8)	(12.0)	(4.7)	(1.9)	(1.4)	(1.8)	(1.4)	(100.0)		

Source: von Zur-Muehlen, Max. *Foreign academics at Canadian universities: a statistical perspective on new appointments during the seventies*, Ottawa, Statistics Canada, 1981, Table 3, p. 6; revised and up-dated, 1982.

TABLE 10
CITIZENSHIP OF TEACHERS IN UNIVERSITIES, BY TEACHING FIELD, TOTAL CANADA EXCLUDING QUEBEC, 1980-1981

	Canada		United States		United Kingdom		Other Commonwealth		Belgium France	
	No.	%	No.	%	No.	%	No.	%	No.	%
1. A. Total	19,238	75.6	3,497	13.7	1,386	5.4	531	2.1	116	0.5
B. By field										
2. Education	1,874	82.0	281	12.3	71	3.1	34	1.5	3	.1
3. Fine and applied arts	634	60.6	293	28.0	72	6.9	12	1.1	4	.4
4. Humanities and related	3,379	72.3	790	16.9	257	5.5	52	1.1	68	1.5
5. Social sciences and related	4,411	71.8	1,125	18.3	259	4.2	152	2.5	20	.3
6. Agriculture and biological sciences	1,329	75.8	254	14.5	97	5.5	44	2.5	2	.1
7. Engineering and applied sciences	1,443	84.6	80	4.7	79	4.6	38	2.2	4	.2
8. Health professions and occupations	3,157	81.4	245	6.3	283	7.3	97	2.5	2	.1
9. Mathematics and physical sciences	2,518	77.3	345	10.6	213	6.5	77	2.4	6	.2
10. Other	493	68.6	84	11.7	55	7.6	25	3.5	7	1.0
E. By administrative duties										
18. With senior administrative duties	1,934	81.1	259	10.9	124	5.2	30	1.3	8	.3
19. Without senior administrative duties	17,304	75.0	3,238	14.0	1,262	5.5	501	2.2	108	.5

Source: Statistics Canada, *Teachers in universities*, 1980/81 Ottawa, 1982, Table 2D, p. 30. (Catalogue 81-241).

TABLE 11
CITIZENSHIP OF NEWLY APPOINTED FULL-TIME UNIVERSITY TEACHERS, 1972-1973 TO 1980-1981

Year of appointment	Canada	United States	United Kingdom	Other Common-wealth	France & Belgium	Europe	Other Countries	Sub-Total	Not Reported	Total (in study)	Total* Faculty
1972-73	1,094	332	165	69	56	66	68	1,850	456	2,306	27,903
	59.1	17.9	8.9	3.7	3.0	3.6	3.7	100.0			(8.3)
1973-74	1,108	296	134	63	31	67	51	1,750	187	1,937	28,458
	63.3	16.9	7.7	3.6	1.8	3.8	3.9	100.0			(6.8)
1974-75	1,280	361	177	64	43	57	69	2,051	203	2,254	29,710
	62.4	17.4	8.6	3.1	2.1	2.8	3.4	100.0			(7.6)
1975-76	1,293	325	144	78	40	62	72	2,014	134	2,148	30,784
	64.2	16.1	7.1	3.9	2.0	3.1	3.6	100.0			(7.0)
1976-77	1,399	319	154	87	44	57	84	2,144	18	2,162	31,648
	65.3	14.9	7.2	4.0	2.0	2.7	3.9	100.0			(6.8)
1977-78	1,422	273	148	56	41	48	67	2,055	51	2,106	32,181
	69.2	13.3	7.2	2.7	2.0	2.3	3.3	100.0			(6.5)
1978-79	1,743	250	153	63	37	56	62	2,364	26	2,400	32,645
	73.7	10.6	6.5	2.7	1.5	2.4	2.6	100.0			(7.4)
1979-80	1,518	228	138	67	33	55	65	2,104	56	2,160	32,890
	72.1	10.8	6.6	3.2	1.6	2.6	3.1	100.0			
1980-81	1,302	231	102	50	9	37	67	1,798	63	1,861	33,411
	72.4	12.8	5.7	2.8	0.5	2.1	3.7	100.0			
Nine year totals (in study)	12,159	2,615	1,315	597	334	505	605	18,130	1,204	19,334	
	67.0	14.4	7.3	3.3	1.8	2.8	3.3	100.0			

*Newly-appointed faculty expressed as a percentage of total faculty in brackets.

Note: 1980-81 figures are based on incomplete data.

Source: von Zur-Muehlen, Max. *Foreign academics at Canadian universities: a statistical perspective on new appointments during the seventies*, Ottawa, Statistics Canada, December, 1981, Table 4, p. 7. Data for 1979-80 and 1980-81 revised and up-dated by Statistics Canada subsequent to publication.

TABLE 12
LEGAL STATUS OF NEWLY APPOINTED FULL-TIME UNIVERSITY TEACHERS, 1977-1978 to 1980-1981

	Canadian citizen	Not reported
1977-78	1,743 (71.3)	139
1978-79	1,743 (76.0)	105
1979-80	1,537 (76.9)	181
1980-81	1,568 (77.6)	184
Total (in study)	6,591 (75.2)	609

Note: For Quebec universities, as well as for four other universities, 1979-80 data have been substituted for 1980-81.

Source: von Zur-Muehlen, Max. *Foreign academics at Canadian universities: a statistical perspective on new appointments during the seventies,* Ottawa, Statistics Canada, 1981, Table 5, p. 9.

during this four-year period. As shown in Table 14, the legal status of nearly one in five of those appointed to the rank of full professors between 1977-78 and 1980-81 was not reported.

An examination of the legal status of newly appointed full-time university teachers by region reveals considerable variations from one part of the country to another and between English-speaking and French-speaking universities in the percentage of Canadians appointed (Table 13). In the four-year period from 1977-78 to 1980-81, of the new full-time university appointments 68 per cent went to Canadians in Western Canada, 72.5 per cent in Ontario, and 73.6 per cent in the Atlantic Region. In Quebec, 88.3 per cent of the new full-time appointments at French-language universities went to Canadians, whereas only 52.9 per cent of such appointments went to Canadians at the English-language universities.

An examination of the citizenship by academic rank of newly appointed full-time university teachers for the four-year period, 1977-78 to 1980-81, also

TABLE 13
LEGAL STATUS OF NEWLY APPOINTED FULL-TIME UNIVERSITY TEACHERS BY REGION, FOUR YEAR TOTAL: 1977-1978 TO 1980-1981

Region	Canadian No.	Citizen %
Atlantic	894	73.6
Quebec English-Speaking Universities	258	52.9
Quebec French-Speaking Universities	1,197	88.3
Ontario	2,272	72.5
Western	1,922	68.0
Sub-total	6,543	72.6
Other Institutions	161	82.1
Total (in study)	6,704	72.8

Source: von Zur-Muehlen, Max. *Foreign academics at Canadian universities: a statistical perspective on new appointments during the seventies,* Ottawa, Statistics Canada, 1981, Table 7, p. 11.

raises some interesting questions (Table 14). At the full professor level, almost four in every ten appointments (38%) went to citizens of other countries. At the associate professor level, 33.6 percent of the new appointments also went to citizens of other countries. Thus, in the two senior academic ranks at Canadian universities, more than one-third of the new full-time appointments went to citizens of other countries in the most recent four-year period for which statistics are available.

At the level of assistant professor, nearly three in every ten (27.2%) full-time appointments also went to citizens of other countries. Even at the junior levels of lecturer and instructor, more than one in six of the new appointments (16.7%) went to citizens of other countries.

One may wonder if Canada is indeed so barren of qualified and capable people that close to 40 per cent of its most senior academic appointments must go to citizens of other countries. It is even more puzzling that at the most junior levels, where reputations have yet to be made, so many of the full-time academic appointments are going to citizens of other countries at a time when many well-qualified young Canadian graduates are available.

TABLE 14
LEGAL STATUS OF NEWLY APPOINTED FULL-TIME UNIVERSITY TEACHERS BY ACADEMIC RANK, FOUR YEAR TOTAL: 1977-1978 TO 1980-1981

	Canadian Citizen	Not Reported
Full Professor	307 (62%)	74
Associate Professor	625 (66.4%)	91
Sub-total	932 (64.9%)	165
Assistant Professor	2,645 (72.8%)	234
Instructor/Lecturer	2,173 (83.3%)	135
Sub-total	4,818 (77.2%)	369
Other	391 (74.0%)	63
Total (in study)	6,141 (74.8%)	597

Source: von Zur-Muehlen, Max. *Foreign academics at Canadian universities: a statistical perspective on new appointments during the seventies*, Ottawa, Statistics Canada, 1981, Table 6, p. 10.

From the foregoing it would seem that the concerns that lie behind the new policy announced by the Minister of Employment and Immigration in May, 1981, have substance, and that the intent of the policy — to ensure that qualified Canadian graduates receive fair and equitable consideration in the filling of university teaching appointments — is not unreasonable. There are, however, a number of problems arising from or related to this policy that need to be addressed. Moreover, some of the deeper issues involved in the faculty citizenship debate will not be resolved simply by the enunciation of advertising requirements for academic vacancies or by other stipulations from the Department of Employment and Immigration.

D. GUIDELINES AND RECOMMENDATIONS

Concerns about the size and impact of the foreign faculty at Canadian universities have been sharpened by the emergence of a number of issues about the supply of, and job opportunities for, highly qualified Canadian university graduates. As noted elsewhere in this volume, this country may find itself, through lack of planning and organization, unable to make full and proper use of the talents of many capable and well-qualified graduates of its own educational institutions. At the present time, and for years to come, there are and will be comparatively few university teaching and research appointments available. Because of the present age structure of the faculty, the potential retirement rate for faculty members at Canadian universities over the coming decade is exceedingly low. At the same time, current economic conditions and demographic factors point ahead to the probability of a period of continuing cut-backs and to the certainty of limited growth for the universities. In this climate of little or no growth and of financial retrenchment in the mid-to-late 1980s and into the early 1990s, the job placement prospects for Canadian university graduates interested in teaching at the university are bleak indeed. Moreover, many of those who are on the faculty in junior or non-tenured positions may well feel threatened. The prospect is not encouraging for young untenured Canadian university teachers or for promising undergraduate and post-graduate students who might be considering a career in teaching and research.

As noted in a subsequent chapter, it is estimated that Canada will be producing more than three doctorates for every university position available as the result of mortality and retirement during the five years from 1983 to 1987. While the odds improve somewhat thereafter, there will still be two Ph.D.s graduating in Canada for every opening available at a Canadian university until well into the 1990s. For the first time in our history, we have now and for the foreseeable future a surplus stock of well-qualified young Canadian academics who are graduates of our own institutions.

While there are serious problems now and in the immediate future if we are to find appropriate employment opportunities for some of these graduates, projections make clear that in the 1990s there will be a sharp increase in the demand for qualified academic staff because of the combination at that time of expanding student enrolments and more numerous faculty retirements. If arrangements are not made now, despite the current adverse economic climate, to prepare the Canadian graduates who will be needed for these academic positions, this country will again face in the 1990s the prospect of having to import foreign faculty on a massive scale to staff its universities as it did in the 1960s. Aside from whether or not it would be desirable to do this on academic and national grounds, demographic patterns similar to our own exist in many other countries, particularly in the United States, and a similar reservoir of foreign candidates for Canadian posts may not then be available. Thus, because

of future circumstances, both external and internal, Canada needs to proceed with the development of its own resources of highly qualified personnel. Far from discouraging our citizens who have the interest and capabilities to pursue graduate work, we need to assist and encourage more of them to develop their talents and qualifications in preparation for careers in teaching and research, as well as in the whole range of activities that mark an increasingly complex society. We need, as well, to develop ways to involve them in the academic life of our universities and colleges in the short-term, so that they will be able and willing to join the university community in the longer-term when the demand for experienced faculty once more increases.

Given this situation, it is surprising that so many of the limited number of appointments at Canadian universities, more than one-quarter (27.6%), are still going to citizens of other countries. While it is true that in some academic fields, such as management and administrative studies, there are not yet sufficient qualified Canadian graduates available to fill such appointments, one may ask why so many of the newly appointed faculty in many other fields, for example some 25 per cent in the social sciences, are being drawn from other countries when many well-qualified Canadian graduates are at hand?[20] One must wonder if this practice suggests that those engaged in hiring the faculty for Canadian universities lack confidence in the quality of the product they themselves have produced.

Indeed, the attitude of many university administrators towards an orderly and thoughtful discussion of the issues involved in the foreign faculty question would make an interesting research project. A frequent phenomenon observed by the Commission was that the dean or other senior academic administrator would conclude his or her defence of the present situtation by pointing out that he, or she, was, after all, a Canadian and the fact that he, or she, had made it to the top was proof positive that there was nothing very much wrong with the system. This attitude comes dangerously close to the philosophy of "I'm all right, Jack. If someone else is having trouble it must be their own fault." From this point of view, the fact that other Canadians of similar or even greater merit are having difficulty is unfortunate but irrelevant. It is understandable that those who often have been prevailed upon against their own wishes to undertake the unenviable responsibilities of academic administration in these difficult times are disinclined to tackle the very sensitive and complex issues involved in the foreign faculty question. Their daily lives are already a constant series of harassments and frustrations, crowned in too many instances by humiliation and ignominious departure. None the less, it must be said that the reluctance of many senior academic administrators to address the issues squarely, and sometimes even to acknowledge their existence, is a major factor in the substantial gap that exists between the declared policy of many universities of hiring qualified Canadians and the reality of the statistics.

The reality of the statistics cannot be ignored. As shown in Table I-3, in the four-year period from 1977-78 to 1980-81 almost one-third (32%) of the new full-

time academic appointments in Western Canada went to citizens of other countries, as did more than one-quarter of all such appointments in Ontario (27.5%) and in the Atlantic region (26.4%). In the English-language universities of Quebec barely one-half (52.9%) of the new appointments went to Canadians. Only in the French-language universities of Quebec, where nearly ninety per cent (88.3%) of such appointments went to Canadians, was the picture appreciably different. Overall, more than one-quarter of the full-time faculty appointed by Canadian universities in this recent four-year period were citizens of other countries. Moreover, as shown in Table 12, the legal status of 600 of the newly appointed faculty members was "not reported".

It was, presumably, in the light of such figures that the Minister of Employment and Immigration, the Honourable Lloyd Axworthy, announced in May, 1981, the new policy concerning the recruitment of faculty for postsecondary teaching positions in Canada requiring universities to advertise for Canadian candidates and to evaluate their suitability before seeking foreign applicants for academic appointments. Only if no suitable Canadian or permanent resident is identified by this means will the Employment and Immigration Commission approve a job offer to a foreign candidate. As in the past, this new policy leaves it entirely to the university to judge the merit of competing candidates and to make their selection, as long as the procedures required by the new regulations are observed.

Announcing this new policy, the Minister expressed particular concern about the large number of foreign appointments still being made at the junior academic levels, where candidates "are selected as much on their potential as on their record of academic achievement." Given the large and growing number of Canadian graduates, he felt it "only fair that we find out if there are qualified candidates available on the Canadian market" before looking in other countries.[21]

The announcement of the Minister was, of course, roundly denounced by many, although not all, university administrators. Some saw it as an infringement on academic freedom. Others saw it as a measure that would undercut the attainment of high international standards. Still others were concerned that the new requirements would slow the hiring process and drive up advertising costs. But many graduate students and members of faculty welcomed the new policy. Some, indeed, thought it did not go far enough. The Canadian Sociology and Anthropology Association, for example, urged a much tougher policy: that, if no qualified Canadian were available, the vacancy should remain open until one was; and that "for a five-year period there should be an absolute moratorium on the hiring of other than Canadian citizens for any positions available to sociologists and anthropologists..."[22]

There are certainly some question marks and unresolved problems relating to the new policy. Moreover, many of the key issues about faculty hiring will not be solved by government announcements. Answers can be found only within the universities themselves. None the less, it is not unreasonable that the

Department of Employment and Immigration should take seriously its responsibility to ensure that the employment opportunities of Canadian citizens and permanent residents are properly protected by legislation and regulations relating to immigration. Whatever its imperfections, the new policy announced by the Minister is an attempt to address at least some of these questions and it should be perceived by the universities as a signal that they had better work out their own solutions to these problems before public opinion leads to further government policies that could represent a real intrusion on their academic freedom.

Some of the ambiguities and difficulties relating to the new policy announced in May, 1981, have been sorted out in subsequent discussions and negotiations between the Minister and the universities. It has been clarified, for example, that permanent residents are to be treated on the same basis as Canadian citizens under the new policy, and that it is not the intent of the policy to exclude from eligibility Canadian citizens who may be living outside Canada at the time an academic vacancy is advertised. Assurances have been given by the Department of Employment and Immigration that permits will be issued as promptly as possible, to offset the time taken in those cases where an academic appointment is offered to a citizen of another country after first seeking and rejecting Canadian candidates. There has also been agreement on some reduction in the amount of information universities must provide to support their request for permission to hire non-citizens. There has been, as well, some revision in the terms and wording of the advertising stipulated by the Department. In particular, and most happily, the Employment and Immigration Commission has made clear that its concern is with the recruitment process, to ensure first and fair consideration for Canadian candidates, and that it has no wish to intrude upon the assessment and selection process which it recognizes to be an exercise in professional academic judgement. However, a number of significant questions still remain to be worked out. To what extent, for example, is the Department prepared to make exceptions in the case of particular academic fields in which university representations can successfully establish that there is an acute shortage of qualified Canadian candidates? Such an exception has been made in the case of management and administrative studies. Are there other academic areas for which exceptions should be made, in order that universities may seek candidates in other countries at the same time as they are seeking Canadian candidates, without having to delay their foreign search until they have completed their Canadian search? What should be the criteria and procedures for the granting of such exemptions?

How will some of the other provisions for exceptions in the new policy work? For example, exceptions can be made under the existing policy in instances "where a person of international renown in his field of specialization is sought by a university." By what criteria and procedures are such candidates to be identified? And by whom? So far, no university has applied for an exemption from the regular requirements under this provision. Yet surely this is exactly the

kind of special provision which, if properly used, would allow universities to recruit outstanding foreign academics in support of high international standards about which they express such concern. Similarly, regional offices of the Employment and Immigration Commission may exercise discretion in allowing exceptions from the policy requirements when a proposed appointment is at "a senior level", or when a university may have "particular staffing difficulties" in a special field, for example in aspects of veterinary medicine. So far, little use has been made by the universities of these provisions for allowing exceptions from the requirements of the Department's policy. In these and other ways, universities have not yet explored the range of possibilities within the policy.

The policy exempts short-term arrangements involving foreign faculty such as those for visiting and exchange professors, guest lecturers, and graduate assistants. There have, however, been a number of sharp disputes between the Department and various universities about the granting of visas or entry permits to some academics in these categories who have been invited for short visits by Canadian universities. While it was the understanding of the academic community that the new regulations did not require work permits for visiting professors or guest lecturers coming to Canada for only a short visit, visas have been denied to some distinguished scholars. A Nobel Prize winner, invited to deliver a memorial lecture at one of the country's oldest universities, was hassled and delayed inexcusably on her arrival at Dorval Airport. This is clearly an area in which agreement is needed about definitions and procedures. What, for example, is the definition of "short-term" in such short-term visits? It would not be unreasonable to suggest that it be defined for such purposes as anything less than a course load for one academic term and that no work permit be required for an invited academic visitor making such a short-term visit.

For cases in which entry is none the less denied by government to short-term academic visitors, there is still no agreed procedure for review, or to enable the invited scholar or those extending the invitation to appeal the decision. Is it really, for example, a threat to Canadian security to allow professor X to attend a Pugwash Conference or professor Y to give a memorial lecture or professor Z to read a paper on grasshoppers to the botanists of Saskatchewan? At present situations of this sort are a source of continuing conflict between the Immigration Department and the Canadian academic community. It is time for the Department to establish an independent review mechanism to hear appeals in such cases, as recommended by the Canadian Association of University Teachers. The establishment of an independent body to hear such appeals would be consonant with the recommendations of the McDonald Commission.[23] It would also be in keeping with Canada's obligations to ensure the free passage of *bona fide* visiting scholars under the terms of the Helsinki Accord.[24]

In addition to such short-term visits, there would be value in the creation of a category of longer-term but non-tenure-track visits and exchanges. Such visits, for a number of academic terms or even for a period of one or two years, might often be in the best educational and cultural interests of this country and its

universities, as well as being of interest to some foreign scholars. Appointments of this kind for a somewhat longer duration might be arranged under the academic and cultural agreements that Canada now has or may negotiate in the future with other countries. Such agreements should include reciprocal provisions for Canadian faculty members to have similar opportunities for longer-term non-permanent appointments at the universities of other countries. The creation of a category of longer-term visiting academic opportunities should, thus, not be the cause of any reduction in the career and employment opportunities of Canadian scholars. On the contrary, the creation of such positions would enlarge the career opportunities of many Canadian academics.

There is also a need for a consultative committee to which the Department of Employment and Immigration could turn for comment and advice on the implementation of policy and on the formulation of future policies that are of concern to the academic community. The government needs such a body with which it can discuss, on a continuing and knowledgeable basis, the problems of definition, procedure, and possible exemptions which are involved in its policies. The consultative committee might also provide a review mechanism to advise the Department on appeals that may arise in some of the cases in which permission to proceed with the appointment of a foreign citizen to a full-time position is denied. Such appeals there will be, and a mechanism which can enable the academic community to feel that its concerns and point of view have been heard will be required. More broadly, a consultative committee would provide an avenue for the Department to communicate on a regular basis with a body representative of the academic community. Abuses of government policy may exist and will arise. The Department will need advice on how best and most fairly to correct such abuses, without creating new problems and unnecessary friction.

Nor are all the problems on the side of government policy and practice. Universities need to work together to ensure that ground rules which they have set for themselves are observed, in spirit as well as in form. Those institutions or academic departments that go too far in developing skills for getting around the rules do a disservice to the rest of the academic community and, ultimately, to themselves. While nearly all full-time academic vacancies are now, at last, being advertised, as the Association of Universities and Colleges of Canada has long recommended to its members, a proportion of the non-tenure-track appointments are still not being advertised. Yet, in the current economic climate, at many universities most of the new academic appointments being made are of a non-tenure-track nature. The temptation always exists, because of convenience, or lack of time, simply to appoint someone one knows, or feels comfortable with, or who is already near at hand. Universities do have an obligation, particularly under present conditions when so many highly qualified graduates are available in many fields, to ensure that all academic positions are advertised. In situations in which the requirements of time necessitate an immediate appointment to fill an unexpected gap, such an appointment should be made only for the

completion of a course or term, while arrangements can be made for the post to be properly advertised.

A more difficult problem for the universities is how best to ensure that the advertisement of academic positions is not merely a *pro forma* exercise. It is apparent that hiring networks, or habits, are still at work, although on a reduced scale, and that many appointments have been virtually pre-arranged before the advertising is placed. Job descriptions are tailored to suit the preferred candidate and the reality of a genuinely open competition does not exist. The recruitment of at least some of the numerous faculty from other countries that is occuring is the result of such pre-arrangements. Some knowledgeable observers suggest that as much as one-half of the academic hiring that now goes on is pre-arranged in this fashion.

Universities will need to guard against such abuses and, indeed, to monitor closely many aspects of the recruitment of faculty, both those resulting from public policy and those arising from policies they have set for themselves. If, for example, such monitoring can establish, after a year or two's experience, that the new government policy is resulting in increased costs or harmful delays in staffing, then it would be reasonable for the universities to press for modifications in the policy through the mechanism of the proposed consultative committee. There is, unfortunately, no escaping the fact that all this will sometimes result in workloads that are somewhat heavier and routines that are often tiresome for academic administrators. In the long run, however, establishing the definitions, procedures, and mechanisms that are required may reduce workloads and strengthen the position of the universities. The development of appropriate policies and mechanisms may restrict somewhat administrative discretion in the universities, but, properly done, it need not involve any infringement of academic freedom. On the contrary, it may enhance it.

The essential task for the universities in the controversial area of faculty hiring is to work out reasonable policies that can be applied in a reasonable way. The closest approximation to this desideratum so far provided is the statement of *Guidelines on Canadianization and the University* prepared by the Canadian Association of University Teachers (Appendix 1). Unfortunately, this thoughtful document, approved by the council of the C.A.U.T. in 1977, has not received much attention or support from university administrations, or even from the C.A.U.T's constituent faculty associations on their individual campuses. In fact, it was probably the failure of the academic community to take the *Guidelines* seriously that paved the way for further government intervention in the form of the new policy announced in May, 1981. It may be useful, therefore, to review these *Guidelines* and to see what action has been taken along the lines they proposed.

Guideline 1, recommending that there be no distinction in treatment between Canadian citizens and those who are already landed immigrants at the

date of application for a university post, continues to be observed in practice, as it was before the guideline was written.

Guideline 2 called for the qualifications relevant to an academic opening and the relative importance of each to be clearly stated, and for these qualifications not to be of such a nature as to place Canadian graduates at an unfair disadvantage. This guideline has perhaps been observed to a greater extent than used to be the case. None the less, the approach to job definition it recommends is still often not followed, particularly in the faculties of arts. The qualifications relevant to the opening and their relative importance are frequently not clearly stated. Failure to do this is unhelpful to candidates. In other instances, as noted earlier, the qualifications are stated in such a way as to facilitate a pre-arranged appointment, or the selection of a preferred individual. In some cases, this bias in the statement of desired qualifications has put Canadian candidates at an unfair disadvantage.

Guideline 3 recommended that the position and the required qualifications be drawn to the attention of Canadian applicants "by appropriate procedures such as wide advertisement, letters to Canadian universities, etc. That is, there should be active search for qualified Canadian candidates." As noted earlier, there has been an enormous advance in the advertising of full-time tenure-track appointments. Nevertheless, many non-tenure-track appointments are still not being advertised. The larger point raised in the guideline, however, is the recommendation that there be *active search* for qualified Canadian candidates. It is a measure of the fact that this has often not been the case, that the Minister of Employment and Immigration thought it necessary to introduce the new policy requiring universities to seek and evaluate Canadian candidates before directing their recruitment efforts to other countries.

Guideline 4 called for each university to establish a university-wide appointments review committee. The duties of the committee would include advising the president on all appointments; reporting annually to the senior academic body of the university on such appointments and whether each was, in its view, adequately advertised in Canada; ensuring that these guidelines were adhered to and, in particular, ensuring that the qualifications listed were reasonable and the selection procedures fair, and that an active effort was made to recruit Canadians. The department seeking to make an appointment of a non-Canadian should be charged with making the case for the appointment to the satisfaction of this committee.

This proposal for the establishment of a university-wide appointments review committee was central to the *Guidelines* proposed by the C.A.U.T. Only one or two of the seventy Canadian universities and degree-granting colleges have acted on the recommendation in the half-decade since the proposal was made. In the absence of such a university-wide appointments review committee, individual departments have often followed different procedures in faculty

recruitment and practised markedly varying degrees of openness and thoroughness in their search for qualified Canadian candidates. Moreover, the senior academic bodies of many universities have lacked any overall picture of what has been occurring in their institutions with regard to the procedures being followed, the criteria being used, and the selections being made in the area of faculty appointments. Many well-meaning faculty members dismiss the absence of such knowledge about what is happening with the comment that the president or dean or some other administrative officer is dealing with it. But the fact of the matter is that the president and senior administration, without the advice and support of a university-wide appointments review committee, are often unable to ensure that fair and appropriate procedures are being followed. Indeed, in some situations in which they may well doubt that the reality of due process and of an open active search is being observed, they simply lack the means to come to grips with the abuses involved. Many department chairmen and senior professors, who have been doing pretty much as they please in the absence of a university appointments review mechanism, are not disposed to support the establishment of such a body.

Guideline 5 was addressed on the same subject to universities with a unicameral system of government, where it has met with much the same fate.

Guideline 6 recommended that the appointment be offered to the best-qualified Canadian who meets the stated requirements, unless the university-wide review committee, or if it does not exist, the senior academic body, is persuaded that the appointment of a non-Canadian is justified. While there has been much talk and some movement in the direction of appointing the best-qualified Canadian who meets the stated requirements, the fact that only one or two universities have established university-wide appointments review committees means that few universities have an apparatus to determine whether the appointment of non-Canadians in specific instances is justified. Nor has the senior academic body been used, as suggested, to exercise this function in the absence of a review committee.

Guideline 7 recommended that, once appointed, the nationality of the faculty member should not affect the terms and conditions of employment including, for example, academic freedom, salary, promotion, and tenure. In general, this has continued to be the practice of Canadian universities, as it was before the guideline was written. None the less, the question has aroused fierce debate. On the one hand, there are those who feel, as does the C.A.U.T., that once foreign academics are admitted to Canada, and allowed to hold teaching posts, there should be no discrimination against them in their employment rights and right to participate fully and on an equal footing with Canadian faculty members in the academic life of this country. At the other end of the spectrum, there are those who argue that all academic appointments in the case of non-citizens should be short-term only, and not leading to a permanent position in a Canadian university. Those holding this view oppose, in particular, the granting of tenure to non-citizens, arguing that the granting of tenure involves a long-

term commitment by Canadian institutions and Canadian society, financial and otherwise, to the individuals concerned. In such situations, they argue, there should be a reciprocal obligation on the part of the individual receiving tenure to be or to become a citizen.

The Commission concurs with the view that, once they have been appointed, individual faculty members of Canadian universities should not be discriminated against on the grounds of citizenship unless a special arrangement about the short-term nature of the position has been made at the time of the appointment, as is done in a number of other countries. The right time to sort out the question of citizenship is prior to making such appointments. Once a university has made such an appointment, it has an obligation to treat the faculty member concerned with fairness and impartiality, regardless of nationality, provided that the responsibilities of the individual are properly discharged. The Commission does, however, recognize the feeling held by many Canadians that it would be an appropriate and welcome step if continuing and long-term members of faculty from other countries were to seek Canadian citizenship, and it draws this feeling to the attention of faculty members who are at present citizens of other countries. In particular, the Commission notes the strength of the feeling that the granting of tenure involves, or should involve, a reciprocity of commitment and that there is at least an onus on faculty members who are not Canadian citizens to give serious consideration to applying for citizenship when they are applying for or receiving tenure at a Canadian institution. Such a step would be timely and widely appreciated by many of their Canadian colleagues.

The preamble to the C.A.U.T. *Guidelines* urged that "academic, professional, and government agencies co-operate in the preparation, publication, and annual revision of five- to ten-year projections of positions available and of graduate degrees granted in each academic discipline at Canadian universities." As the C.A.U.T. noted, these projections would give individual students a better opportunity to plan future careers, and universities a better opportunity to encourage Canadian talents in areas of projected needs through the development of adequate graduate programmes in those areas. Nothing has been done about this recommendation. The Commission has, in every chapter in this volume, drawn attention to the absence of such data and to the need for them. Recommendations on this point have been made in chapter two on "The Need for Adequate Statistical Information."

No one, and least of all a teacher, should object to the participation in Canadian university teaching of a reasonable number of citizens of other countries. On the contrary, there is much to be gained from this. In certain departments, for example those teaching foreign languages, history, the arts and culture, it is of course particularly desirable to have such participation. It is a matter of balance. Is the present proportion and distribution of foreign faculty in reasonable balance? Within that question, there is a second question: are the very real potential advantages of having an international element in the faculty

of Canadian universities being obtained when so many of the foreign faculty members are citizens of just one other country?

As suggested in this and other chapters of this volume, as well as in the two earlier volumes of *To Know Ourselves*, there are many considerations to be borne in mind in developing policies and procedures for faculty recruitment which will ensure, among other things, that Canadian candidates receive fair and equitable treatment. These considerations include:

- the need to assemble the data and to prepare the analyses required for the planning of rational policies and programmes concerning faculty recruitment and highly qualified graduates, and to do so on an on-going basis;
- the need to ensure that qualified Canadian graduates have fair access to academic positions in their own country;
- recognition that every academic appointment carries implications for the content of curriculum and for the orientation of research, and to ensure in faculty appointments that adequate attention will be given in teaching and research to Canadian needs and circumstances;
- the need to recognize and to honour the obligations that exist in regard to citizens of other countries who now hold appointments at Canadian universities;
- the need for balance in the composition of the foreign faculty presence and, in particular, for not equating continentalism with the representation of a wider internationalism;
- recognition of the fundamental importance of a full Canadian participation in international scholarly dialogue and exchange;
- the desirability of academic reciprocity;
- adequate provision for short-term international visits, appointments, and exchanges;
- the avoidance of long-term dependence on the human resources of other countries;
- the need to proceed now with the preparation of highly qualified graduates to meet the country's future requirements;
- the establishment of appropriate policies, definitions, procedures, and mechanisms, concerning faculty recruitment;
- recognition that governments have an area of legitimate interest in some aspects of faculty recruitment through their public policy responsibilities in the fields of education, employment, immigration, finance, and international relations;
- the need for government to work more closely and to consult more fully with the academic community in formulating and implementing policies affecting faculty recruitment;
- the need for universities and colleges to plan and to act more effectively in the area of faculty recruitment, and to work more closely together in developing their practices and procedures in this area.

To these ends, the Commission recommends:

1. that the Department of Employment and Immigration es[illegible] Consultative Committee on Academic Relations to provide [illegible]s for the Department to exchange views and to seek comment and advice on a regular basis with a body representative of the academic community; that the Department seek the comment and advice of the Consultative Committee both on the implementation of current policy and on the formulation of any new policies; that the Department discuss with the Consultative Committee, on a continuing basis, the problems that may arise from its policies concerning definitions, procedures, and exemptions;
2. that the Consultative Committee, or a panel of the Committee, be asked to serve, further, as a review body to advise the Minister on appeals that may arise in some of the cases in which permission to proceed with the appointment of a foreign citizen to a full-time academic appointment is withheld by the Department; or in which a Canadian candidate feels unjustly treated;
3. that work permits not be required for scholars invited to Canada on short-term visits as visiting or exchange professors, external examiners and supervisors, and guest lecturers; that a short-term visit be defined for these purposes as anything involving less than a course load for one academic term;
4. that the Department of Employment and Immigration establish an independent review body to advise the Minister in cases where entry or a work permit has been denied to scholars invited to Canada for a short-term visit;
5. that consideration be given to the development of a category of reci[illegible]cal longer-term, non-permanent academic visits and exchanges w[illegible] the universities and colleges of other countries; that the provision of such [illegible]ger-term visits be negotiated in appropriate instances through the [illegible]dium of the academic and cultural agreements that Canada now has or may negotiate in the future with other countries;
6. that all academic positions, both tenure-track and non-tenure-track, be advertised in an open way; that, in situations in which the requirements of time necessitate an immediate appointment to fill an unexpected gap, such appointments be only for the completion of a course or a term, while arrangements are made for the post to be properly advertised;
7. that the qualifications relevant to each academic opening be clearly stated, and that these qualifications not place Canadian candidates at an unfair disadvantage;
8. that, in addition to advertising in *University Affairs* and whenever possible in the appropriate academic and professional journals, an *active search* be made for qualified Canadian candidates, including communication with other universities and with the appropriate Canadian learned societies.

9. that each university establish a university-wide appointments review committee, to advise the president on certain aspects of all appointments, and to ensure, before recommending approval of new appointments, that the qualifications listed for the position were reasonable, that the selection procedures were fair, and that an active effort was made to recruit Canadian candidates; that the committee report on such matters on a regular basis to the senior academic body of the university; that the committee be elected by the senior academic body of the university and that a representative of the faculty association sit on the committee as a non-voting member;
10. that academic appointments be offered to the best qualified Canadian candidate meeting the stated requirements, unless the university-wide appointments review committee is persuaded that the appointment of a non-Canadian is justified in a particular instance;
11. that, once appointed to the faculty of a Canadian university, members of faculty who are citizens of other countries not be discriminated against on the grounds of their nationality in the terms and conditions of their employment, including academic freedom, salary, promotion, and tenure; that continuing and long-term faculty members who are citizens of other countries give consideration to seeking Canadian citizenship and, in particular, to doing so when they are applying for or receiving tenure at a Canadian institution;
12. that the universities, colleges, and professional and learned societies work closely with the proposed Canadian Centre for Educational Statistics to develop annually revised five- and ten-year projections of positions available and of graduate degrees granted in the highly qualified manpower field.

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V

SOME CONCERNS ABOUT THE CURRENT STATE OF CANADIAN HIGHER EDUCATION: PROBLEMS OF EQUILIBRIUM IN A PERIOD OF CONSTRAINT, 1976-1985

Canada now faces a series of human resource problems that are even more complex than the shortages and the citizenship questions of the past. Many of these are the result of conditions created during the period of growth, from 1945 to the mid-1970s. Our present ability to respond to these problems is very much affected by the solutions we chose when attempting to solve the problems of that earlier period.

A. SOME IMPLICATIONS OF THE PRESENT SITUATION FOR CANADIAN STUDIES

With regard to Canadian studies, the Commission's first two volumes argued for "a reasonable balance" in the curriculum and scholarly activities of our postsecondary institutions to allow sufficient attention to be given in teaching and research to the particular problems and to the physical, historical and contemporary circumstances of this country. That this was not the case in many faculties and disciplines in 1975 was demonstrated by the Commission in its review of the university curriculum at that time. A subsequent study by one of the authors of this volume, commissioned by the Department of the Secretary of State, found that there has been some encouraging progress in the development of Canadian studies since the appearance of Volumes I and II of the Commission's *Report*, especially on the part of government departments and agencies and non-governmental voluntary organizations. Nevertheless, although a growing number of universities and colleges appear to have taken the Commission's first two volumes seriously, there is still much that needs to be done if Canadian students are to have adequate opportunities to know themselves and their society.

It is going to be difficult, however, to improve much further or faster on the state of teaching and research about Canada because of the human resource problems that at present plague Canadian universities. These difficulties are compounded by the acute financial problems faced by our universities.

In order, then, to appreciate some of the reasons why Canadian studies are still underdeveloped in many disciplines and departments, it is important to examine a number of issues related to the health of postsecondary education in Canada. These may, at first glance, seem somewhat distant from the Commission's central concern with the state of teaching and research about Canada. But these problems, pertaining to the general state of Canadian higher education, have a direct effect on the current condition and future prospects of Canadian studies.

In the late 1970s, enrolments began to level off at Canadian universities, breaking from the pattern of soaring growth that had marked the preceding fifteen years. At many institutions there was a decline in the rate of growth, and at some there was even an actual drop in full-time enrolment. Despite the

increase that has been evident in the early 1980s, demographers expect to see a prolonged enrolment decline in full-time postsecondary education in the years following 1983.[2] There are two major causes of this change. The first is demographic: the completion of the passage of the post-war baby boom through university. The second is both social and demographic: the change in the rate of participation in university education by the age group (18 to 24) that has traditionally provided the bulk of university enrolment.

At the same time, the universities are suffering from financial crises brought on by this enrolment situation, by the rising costs of operation, and by the increasing disinclination of governments to fund universities on the scale required to meet these rising costs. At many institutions reductions in staff have occurred or are projected. Canadian faculty salary scales, although not high in comparison to those of some other professions and vocations, are higher than those in many parts of the United States. The financial implications of this situation are compounded by the fact that, because of the age-structure of the present professoriate, the distribution of professors within the academic ranking system at Canadian universities is moving increasingly towards the higher end of the salary scale.[3] In addition, there is currently an upswing at the undergraduate level in some areas of high cost professional education, whereas the sometimes less costly arts and science faculties have experienced some decline in enrolments and now constitute a smaller proportion of the total university enrolment than was the case in the early 1970s (Table 15).

Because of these problems concerning both enrolment and financial constraints, there is little room for growth or change in the professoriate. The number of new or replacement positions available each year is perhaps one half of what it was a decade ago and, consequently, there is less faculty mobility.[4] The large current professoriate, in the main hired during the late 1960s and early 1970s, is effectively blocking the introduction of much new blood into the system. The universities, in terms of manpower, are silted up. Not surprisingly, we are beginning to see a decline in some areas of graduate enrolment, although there are still large numbers of graduate students in the social sciences even though the university holds out little promise for their employment. The decline in Ph.D. enrolments is particularly pronounced in the natural and applied sciences where it dropped from over 4,000 in 1970-71 to less than 3,000 in 1980-81. The number of graduate students at the doctoral level in Canada was actually lower in 1981-82 than it was in 1971-72 (Table 22).

Many questions concerning the arrangements for foreign students in Canada and their place in Canadian higher education need to be examined. Questions about the need for, and supply of, highly qualified graduates are central to our foreign student policies — or lack of them. What are Canada's responsibilities for the preparation of human resources for developing nations? Fewer than three per cent of our foreign visa students come from twenty-five of the least developed countries in the world.[5] The bulk of foreign students now at Canadian universities come from developed nations with developed university

TABLE 15
FULL-TIME UNDERGRADUATE ENROLMENT BY FIELD OF SPECIALIZATION, SELECTED YEARS, 1962-1963 TO 1981-1982

	1962-63		1967-68		1972-73		1977-78		1980-81		1981-82	
Specialization	Total	Percent	Total	Percent	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Arts & Science	70,827	53.4	133,088	58.1	150,177	52.7	155,074	46.5	152,300	45.1	160,527	45.3
Commerce and Business Administration	7,854	5.9	13,381	5.8	22,266	7.8	34,259	10.3	42,308	12.5	45,913	12.9
Education	16,061	12.1	28,101	12.3	36,770	12.9	44,645	13.4	36,071	10.7	37,421	10.6
Engineering and Applied Sciences	15,950	12.0	23,280	10.2	25,656	9.0	34,911	10.5	38,441	11.4	39,875	11.2
Fine and Applied Arts	719	0.5	1,938	0.8	9,005	3.2	11,863	3.6	12,302	3.6	12,714	3.6
Health Sciences	10,179	7.7	13,020	5.7	18,648	6.5	23,086	6.9	22,237	6.6	22,701	6.4
Law	2,892	2.2	5,067	2.2	8,134	2.9	9,451	2.8	9,743	2.9	9,718	2.7
Others	7,173	5.4	9,319	4.0	10,028	3.5	13,724	4.1	14,657	4.3	14,128	4.0
Unclassified	1,026	0.8	2,105	0.9	4,213	1.5	6,487	1.9	9,856	2.9	11,755	3.3
GRAND TOTAL	132,681	100.0	229,299	100.0	284,897	100.0	333,500	100.0	337,915	100.0	354,752	100.0

* Includes dentistry, medicine, nursing, pharmacy and other health sciences.

** Includes agriculture, household science, religion and theology, veterinary medicine, and environmental studies.

Source: Statistics Canada. Tabulations prepared for the Commission, 1983.

systems and they constitute a significant proportion of the graduate and post-doctoral student population in Canada. Questions about differential fees policies, and about the value of having an international student presence on our campuses, need a more informed and sensitive consideration than they have so far received. The manner in which foreign students are selected and the way in which they are received and assisted once in Canada clearly require attention.

There are still serious questions to be raised about our continued importation of foreign professors, especially at a time when many well-qualified Canadians are available. As reported in the preceding chapter, more than one in four of the new or replacement appointments being made by Canadian universities go to citizens of other countries. There are, as well, legitimate questions to be asked about the extent and nature of the influence of the United States on the Canadian university system.

As if these and similar problems were not enough, fundamental issues about the national need for highly qualified manpower must be addressed as soon as possible. The federal government has set a gross expenditure target for research and development (R. and D.) of 1.5 per cent of our GNP. Success in meeting such targets depends upon the availability of highly qualified personnel. Given the decline in doctoral student enrolments in the natural sciences and engineering, and given the time that it takes to produce a Ph.D. and to prepare the courses and programmes required to make such production possible in the first place, it appears likely that we shall not be able to meet the manpower requirements of the national targets for R. and D. A crisis in national needs for university-trained highly qualified manpower is just around the corner.

An enrolment increase in the 1990s, as a consequence of the "baby boom echo", is expected by many experts. While this demographic bulge may be smaller than projected, it will come at a time when a high proportion of the current professoriate will begin to retire. If the current low production of Ph.D.s continues, we shall not have enough well-qualified Canadians available to assume the new and replacement academic positions that are expected then to open up. Through lack of foresight, on the part both of government and of the academic community, Canadian universities will again have to import university teachers on a large scale from other countries, thus reinforcing and recycling all the attendant problems of disequilibrium in our university system.

These crises and problems, some looming but most of them already upon us, have created within the university community a loss of self-confidence which is in itself damaging and frustrating. The public, also, has less faith in the university than it had during the golden years of the 1960s. Excessive faith in the university system, breeding expectations that cannot be fulfilled, does no service to higher education. But the extent of the uncertainty about the value of a university education that now appears to be prevalent in some quarters should be cause for concern.

All of these problems related to morale, confidence, enrolment, financial constraints, lack of mobility, job shortages, the preparation of doctoral

graduates, national goals for R. and D., the expected baby-boom echo, and the impact of these on university staffing, point to the need for a thorough review of the state of Canadian postsecondary education. Problems in the health of the postsecondary system have, in turn, direct implications for Canadian studies. There will, for example, be pressure for financial cutbacks to be directed at the new and emerging interdisciplinary programmes that often relate to teaching and research about Canada. The lack of academic job mobility and the scarcity of new university jobs means that many Canadian scholars, many of whom have demonstrated in their graduate work an interest in Canada far exceeding the interest of previous generations of Canadian scholars, are going to be frozen out of the university during the coming decade. If, in the 1990s, we are again going to have to rely on a massive importation of foreign faculty to staff our universities because of our present short-sightedness, the implications for the development of teaching and research about Canada will be substantial. For reasons such as these, the Commission has turned its attention to a number of postsecondary educational issues.

B. THE RIDDLE OF ENROLMENTS

On one occasion, in a burst of agreeable frankness, Statistics Canada in its annual publication, *Advance Statistics of Education*, entitled the section on enrolment projections "Your Guess is as Good as Mine."[6] Noting that projecting enrolments in institutions of higher education has never been easy, their analysts observed that it is now more difficult than ever before. Not only are the numbers of students in doubt, but even the trend, up or down, is uncertain. At the core of the uncertainty is the fact that the baby boom generation has now completed its passage through the 18 to 24 age range, the age range during which people have been, hitherto, most likely to attend a postsecondary institution. The Commission's review of what is, unfortunately, the still quite limited literature on this subject, indicates that enrolments declined in the late 1970s, have risen in the early 1980s, and are expected to have peaked in the 1983-1984 academic year, when the baby boom generation will have had its fullest impact on enrolments. Demographers expect a decline in enrolments after 1984, although the magnitude of the decline and the areas in which it will occur continue to be debated.

The Commission is not equipped to develop its own, additional, perhaps competing set of population and enrolment projections. Rather, it has attempted to examine briefly in the following pages some of the current studies and projections on these subjects. The purpose of this review is, first, to alert readers to the complexity and uncertainty of the projections and, secondly, to point out that, while the projections cited differ on many points, they agree on the broad direction of the trends. Taken together, they provide us with the best current guess at the enrolment prospects of universities and colleges in Canada to the end of the century.

Projections of postsecondary enrolment have not been as accurate as those for the elementary and early secondary grades, where attendance is mandatory and enrolment projections are virtually identical to population projections. Beyond the age to which school attendance is compulsory, the decision to attend an educational institution is influenced by a broad range of factors that may vary greatly in significance from person to person and from one region to another. Such factors include economic conditions, political and administrative policies, the status value of a degree, family and peer group pressures, differing perceptions of the intrinsic value of higher education, the cost of an education, social and sexual mores, and sheer whim. Some of the variables are impossible to quantify and most defy orderly prediction.

As Statistics Canada notes, a rise in postsecondary enrolment could be forecast as long as the number of 18 to 24 year olds was increasing rapidly. Conversely, when the sharp drop in the birthrate that occurred in the 1960s appears in the university/college age group, demographic factors will determine the direction of postsecondary enrolment trends. "Decline is all but inevitable".[7] Or is it?

Towards the end of the 1970s and in the early 1980s, the number of 18 to 24 year olds reached a plateau. Non-demographic factors have now become the main influence on postsecondary enrolment. But the extent, and even the direction, of their influence is uncertain. In large part, the level of postsecondary enrolment will reflect the trend amongst the 18 to 24 year age group, since more than 80 per cent of the full-time students are in this age bracket.[8] At this point in our history, the non-demographic patterns of this group appear fairly volatile. A brief discussion of the employment issue illustrates the point.

Statistics show that university education increases the likelihood of getting a job.[9] The rate of unemployment for university graduates is less than half that of secondary school graduates. Furthermore, because educational prerequisites for most jobs have risen, university graduates are now being hired for work that once may have required no more than a high school diploma.

The current high levels of unemployment may have mixed consequences for postsecondary enrolment. Students may stay in school or college because they think they can improve their chances in the labour market by doing so. On the other hand, with unemployment at a high level, they may take work when they can get it, regardless of what point they have reached in their formal education, considering themselves lucky to have found employment.

With an eye on the job market, students may opt for community college rather than university, but they may have difficulty in obtaining admission to the programme of their choice. If applications to Ontario community colleges for the 1981-82, 1982-83, and 1983-84 academic years are any indicator, this is a real possibility. The colleges were swamped with many more applications than they had places. Will students not accepted for the community college programme of their choice take another programme, for example general arts or science in a

university, or will they wait in hope of being accepted the following year? Or will they simply put aside the idea of further education and try to get a job?

As general arts degrees have become less valued in the job market, some secondary school graduates have decided not to proceed to university. Others have turned to professional, career-oriented disciplines, such as engineering or business administration. This has meant a slowing of growth and sometimes even a drop in enrolment at the undergraduate level in full-time arts and science courses in several of the past few years (Table 15). Dips in the arts and science enrolment have not necessarily been matched by a corresponding increase in the enrolment in professional programmes, in part because places in such programmes are frequently restricted.

Clearly, when non-demographic factors are dominant, it is impossible to project accurately what will happen to enrolments. As the Statistics Canada analysts point out, a projection is only as good as the assumptions underlying it. And the best assumptions are those that can be based on a quantification of the extent and the direction of the impact that each factor has on the projection. But in this case, the projected variable, enrolment, is affected by non-quantifiable factors, and it is not possible to foresee what educational choices students will make. Unless demographic factors again become the prime determinant of enrolment trends, postsecondary enrolment projections will remain little more than informed guesses.

Many of the differences in enrolment projections result from different assumptions about 'participation rates', which are calculations of the proportion of a given age group that will or may participate in the level of education under consideration. As with enrolment projections, variations in the ways participation rates are calculated can cause serious problems for the researcher and the reader. In his report, *Canadian Universities 1980 and Beyond*, Peter Leslie devotes a section to participation rates and enrolment forecasting and concludes that he "would be happy if the reader were convinced of the unwisdom of assuming that enrolments will follow whatever demographic curves some researcher has put in front of him."[10]

The significance of the participation rate for Canadian postsecondary education is illustrated by Table 16 which shows an increase in this rate from 11.1 per cent in 1962-63 to 19.9 per cent in 1975-76 for the 18 to 24 age group. The increase in the participation rate actually had a greater effect on full-time postsecondary enrolment during the period of growth than had the baby boom itself. It should be noted, however, that the participation rate for this age group has remained at about the 19 per cent level since it peaked in 1975-76. It should also be noted that the participation rate for full-time undergraduate enrolment in the 18 to 21 age group has declined somewhat since 1975-76, as has the participation rate for full-time graduate enrolment in the 22 to 24 age group, whereas it has continued to increase for full-time non-university postsecondary enrolment.

University enrolments in Canada since 1920 provide a picture of remarkable growth (Tables 1 and 17). Over the sixty-year period, full-time undergraduate enrolment has increased some fifteenfold, whereas the Canadian population increased only threefold. The growth in university education in Canada, however, was primarily a post-Second World War phenomenon, largely concentrated in the 1960s when the annual rate of increase exceeded 12 per cent.

The dramatic growth of postsecondary enrolment in the 1960s was the result of special circumstances, created by the confluence of economic, social, and demographic forces, combined with a rare burst of academic energy. The first pressure was the presence of the baby boom moving into the elementary and secondary school systems in the 1950s and early 1960s. Since the early 1950s school enrolments had been rising at an unprecedented pace, causing an almost insatiable demand for new teachers. This, in turn, increased postsecondary enrolment since universities were the principal supplier of new secondary school teachers as well as of many of the elementary school teachers. It is estimated that between 30 and 40 per cent of all university graduates during the 1960s entered teaching.[11] The next pressure was, of course, the arrival of the baby boom in the universities. The 18 to 24 age group, the source of about 80 per cent of full-time university students, grew by almost one million, from less than 1.8 million in 1962-63 to more than 2.6 million in 1970-71, an increase of some 50 per cent in less than ten years. But even more important than this rapid increase in population was the increase in the postsecondary participation rate for this age group, which grew from 11.1 per cent to 18.1 per cent during the same brief period (Table 16).

In 1972-1973 Canadian universities experienced a slight drop in full-time undergraduate enrolment. The decrease was marginal and it was followed by a renewed expansion which peaked in 1976-1977.[12] The tremor of 1972 was not recognized for what it was, and universities were unprepared for the decline and levelling off both in enrolments and in participation rates which have occurred, particularly at the full-time undergraduate level, since the mid-seventies. In the two-year period from 1976-77 to 1978-79 total full-time undergraduate enrolment dropped by 9,000 from about 335,500 to 326,500 (Table 17). Although this trend was then reversed and the climb in enrolments resumed, these oscillations in enrolment and participation rates were signals that the period of growth was coming to an end, unless the universities developed programmes to attract more students from age groups and parts of society in addition to those upon which they had traditionally drawn.

Sex and citizenship have each been significant factors in the enrolment changes of the past decade. In the 18 to 24 age group, the male participation rate in university education declined from 15.2 per cent in 1970-71 to 13 per cent in 1981-82. By contrast, the female participation rate increased from 8.3 per cent to 11 per cent in the same period (Table 16). Whereas men accounted for almost two-thirds of the total full-time university enrolment in Canada in 1970-71, the

percentage had dropped to an estimated 55 per cent by 1980-81. Since 1974-75, the number of foreign visa students at the university level has risen rapidly from 19,840 to an estimated 35,500 in 1982-83. Thus, the increases in the female participation rate and in the number of foreign students have played a key part in sustaining university enrolments. Both these factors are examined in greater detail in subsequent chapters.

While there may still be some growth in the short-term, it is clear that our universities face a longer-term prospect of a decline in full-time enrolments into the 1990s. What is not clear is the magnitude of the decline, or exactly when it will commence. Whatever their other differences, however, all the demographic studies examined by the Commission seem agreed that a decline will occur after 1983 if universities continue to rely for their enrolments on the age and socio-economic groups that have been their traditional constituency. It is imperative that universities now focus in their planning on this prospect of declining full-time enrolments.

To this end, it may be helpful to examine briefly some of the possible enrolment scenarios for the next twenty to twenty-five years. In preparing enrolment projections, assumptions must be made about the fertility rate, the survival rate of individuals within a given age group, gross immigration into Canada and gross emigration from Canada. The ensuing projections will differ greatly depending on whether one assumes that these factors will remain constant, will decline, will increase, or will alter in some mix of trends. A comparison of three recent studies illustrates this point, while providing three different predictions for university enrolment in the future.

In the first, the author, David Foot, works with four alternative projections. He provides the following brief description of their characteristics (or assumptions):

> In the "no change" projection, fertility rates are held constant at their estimated 1979 levels, survival rates are held constant at their 1976 levels (the latest year for which such data are available), gross immigration to Canada is held constant at its post-war average level of 140,000 persons per year, gross emigration from Canada is held constant at its more recent estimated average level of 75,000 persons per year and inter-provincial migration is held unchanged from the average 1976-79 patterns;
>
> in a "lower gross immigration" projection, gross immigration to Canada is reduced to 100,000 persons per year with all other characteristics remaining unchanged;
>
> in a "return interprovincial migration" projection interprovincial migration patterns are assumed to return to their average 1966-75 patterns with all other characteristics unchanged;

TABLE 16

FULL-TIME POSTSECONDARY ENROLMENT RATES BY RELEVANT AGE GROUP AND BY SEX, 1962-1963 to 1981-1982

Academic Year	Non-university 18-21	Undergraduate 18-21	Graduate 22-24	Total University 18-24			Total Post-Secondary 18-24	18-24 Age Group (Thousands)
				Male	Female	Total		
1962-63	5.2	12.5	1.2				11.1	1,770.1
1963-64	5.6	13.1	1.5				11.9	1,848.8
1964-65	5.6	13.9	1.8				12.5	1,941.7
1965-66	5.6	15.0	2.2				13.4	2,039.5
1966-67	5.9	15.6	2.4				14.2	2,191.7
1967-68	7.1	16.4	2.7				15.4	2,288.8
1968-69	8.9	16.4	2.7				16.4	2,413.8
1969-70	9.4	17.4	3.0				17.3	2,522.2
1970-71	10.6	17.6	3.1	15.2	8.3	11.8	18.1	2,623.4
1971-72	11.2	18.5	3.2	15.4	8.7	12.0	18.5	2,688.8
1972-73	11.9	17.8	3.3	14.8	8.7	11.8	18.8	2,729.6
1973-74	12.1	17.8	3.3	14.6	9.1	11.9	19.1	2,799.2
1974-75	12.3	18.0	3.2	14.4	9.6	12.0	19.3	2,891.7
1975-76	12.5	18.7	3.3	14.6	10.2	12.4	19.9	2,975.5
1976-77	12.5	18.6	3.3	14.2	10.5	12.4	19.8	3,046.7
1977-78	13.2	18.2	3.1	13.6	10.4	12.0	19.6	3,123.6
1978-79	13.4	17.5	3.1	12.9	10.1	11.5	19.3	3,201.0
1979-80	13.3	17.4	3.1	12.5	10.2	11.4	19.1	3,258.9
1980-81	13.6	17.7	3.1	12.6	10.6	11.6	19.5	3,295.0
1981-82*	13.7	17.8	N/A	13.0*	11.0*	12.0	19.6	3,325.1

*preliminary

Source: Belliveau, Kealey and von Zur-Muehlen. *Full-time enrolment trends at Canadian universities and their implications for the eighties*, Ottawa, Statistics Canada, 1981, p. 9; and further tabulations provided by Statistics Canada to the Commission, 1983.

TABLE 17

CANADIAN UNIVERSITY ENROLMENTS 1960-1961 TO 1982-1983

Academic Years	Full-time Undergraduate	Full-time Graduate	Undergraduate and Graduate Part-time only
1960-61	107,211	6,518	
1961-62	121,283	7,347	
1962-63	132,681	8,436	43,990
1963-64	146,827	11,133	56,925
1964-65	163,802	13,797	63,749
1965-66	187,049	17,196	73,023
1966-67	210,618	19,719	84,789
1967-68	229,299	24,187	97,864
1968-69	239,723	26,120	101,666
1969-70	263,915	30,231	122,006
1970-71	276,297	33,172	156,576
1971-72	287,118	35,908	155,387
1972-73	284,897	37,507	152,981
1973-74	294,976	37,148	161,164
1974-75	309,171	37,815	170,249
1975-76	330,537	39,879	185,254
1976-77	335,559	40,947	190,957
1977-78	333,189	40,996	211,692
1978-79	326,520	41,453	216,341
1979-80	329,591	41,768	229,866
1980-81	337,915	44,702	245,128
1981-82	354,752	47,159	251,851
1982-83*	379,950	48,850	258,100

* Preliminary

Source: Statistics Canada. Tabulations prepared for the Commission, 1983.

TABLE 18

TOTAL UNIVERSITY ENROLMENT, 1980-1981 TO 1984-1985

	Full-time Enrolment*			Part-time Enrolment*			Total Enrolment*		
	Under-graduate	Graduate	Total	Under-graduate	Graduate	Total	Under-graduate	Graduate	Total
Canada:									
1980-81	337,900	44,700	382,600	213,000	32,000	245,000	550,900	76,700	627,600
1981-82	354,500	47,200	401,700	220,600	32,200	252,800	575,100	79,400	654,500
1982-83**	379,900	48,900	428,800	225,900	32,100	251,100	605,900	81,000	686,900
1983-84***	363,600	48,300	411,900	235,100	33,600	268,700	598,700	81,900	680,600
1984-85***	357,400	48,500	405,900	242,600	34,600	277,200	600,000	83,100	683,100

* Figures rounded to the nearest 100.

** Preliminary.

*** Projected.

Source: *Statistics Canada. Advance statistics of education.* Ottawa, 1982, Table 8, p. 20 (Cat. 81-220); and tabulations prepared for the Commission by Statistics Canada, 1983.

CHART 3

TOTAL FULL-TIME UNIVERSITY ENROLMENT, CANADA, 1969-70 TO 1984-85

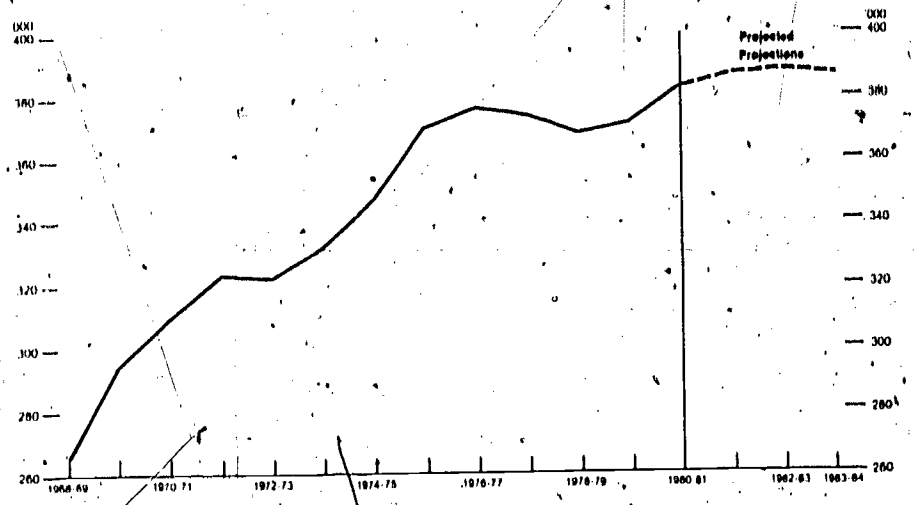
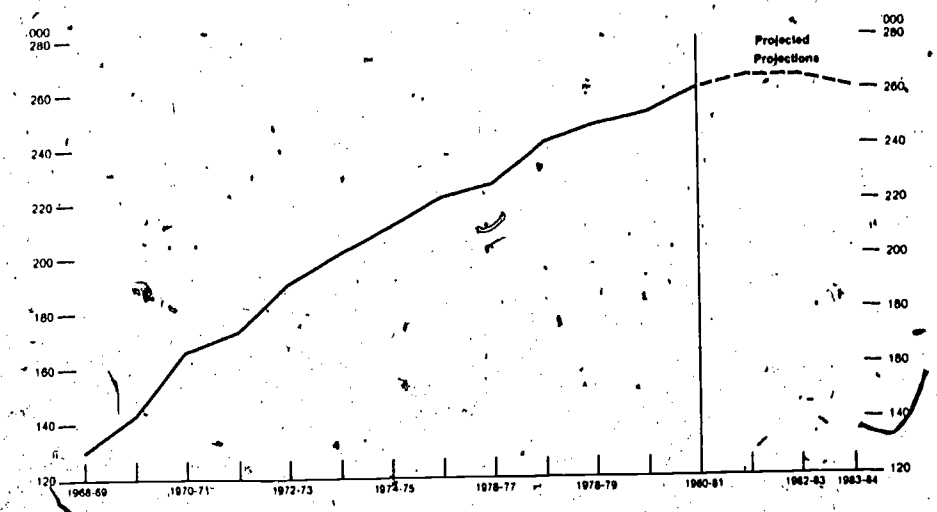


CHART 4

FULL-TIME COMMUNITY COLLEGE ENROLMENT, CANADA, 1969-70 TO 1984-85



Source: Statistics Canada. *Advance statistics of education*. Ottawa, 1982, p. 11. (Cat. 81-220).

> in a "further westward movement" projection, interprovincial migration patterns are assumed to reflect an even greater westward movement of the Canadian population than is contained in the 1976-79 patterns.[13]

From his review of the data, Dr. Foot concludes that we need to temper our view of the declining enrolment problem. He suggests that there will be declines in enrolment but that they may not be as marked as was thought in the mid-seventies:

> University enrolments can be expected to follow a "wave-like" pattern over the next two decades. Increases of approximately 5 per cent into the early to mid 1980's due to demographic changes alone (that is at constant enrolment rates) can be anticipated. The largest single age cohort (the 19 year olds) has just entered the university source population in most provinces and can be expected to remain there for at least the next three to four years, and the cohorts following are still relatively large (for example, currently there are approximately 450 thousand 15 year olds in Canada). So the downturn is not as imminent as would appear to be the current perception in some places. Beyond the peak, full time enrolment in Canada is expected to decline about 17 per cent to a trough in the late 1990's due to demographic developments alone. Thereafter the children of the baby boom generation of the late 1950's and early 1960's can be expected to increase university enrolments in the first decade of the next century. Overall, a 5 per cent increase followed by a 17 per cent decrease over the next 20 years, although not necessarily encouraging, could not exactly be described as "catastrophic" . . . the inclusion of the relatively older part-time population improves the outlook . . . Overall, *total* university enrolment in Canada can be expected to rise by 6.6 percent over the next 4 years then decline by 9.8 per cent over the subsequent 14 years due to demographic developments alone. A net loss of 3.2 percent over the next 20 years would appear to be an administratively "manageable" magnitude for most university planners and policy decisions. Of course, full-time equivalent enrolments would involve a somewhat greater net loss but again the magnitude (somewhere in the range of approximately 3 to 12 percent) would still appear to be administratively "manageable".[14]

In *Canadian Universities 1980 and Beyond*, Peter Leslie reaches a somewhat different conclusion. He provides what he calls "a range of plausible forecasts" in order to obtain "a sense of the variety of situations which may face the universities over the next two decades."[15] In discussing enrolment prospects, he notes that "estimates of future demographic trends are subject to greater error than many people apparently suppose. Second, while participation rates cannot

be manipulated at will, they may be substantially affected by policy, and changes in the university participation rate ought not to be treated as if they were inflicted upon poor mortals like university registrars and deputy ministers of education by the whims of fate."[16] Changes in the level of tuition fees, for example, may well affect the participation rate. Leslie's conclusion is that "enrolments are likely to decline, perhaps drastically, in most regions of Canada."[17]

A third projection of enrolments especially in the 1980s, appeared in several Statistics Canada publications in the late 1970s. For example, the projection presented in *Out of School -- Into the Labour Force* assumed a decline in the participation rate of 18 to 24 year olds in Canadian postsecondary education from the high of 19.9 per cent in 1975-76 to 17.4 per cent in 1986 because of:

> (1) a labour market surplus of postsecondary graduates in some disciplines, and consequent unemployment and decreasing wages relative to other workers; (2) a diminishing demand for teachers into the 1980s as elementary-secondary enrolment continues to decrease, and (3) continuation of the recent drop in the total proportion of government expenditures allocated to education (from 22.2% in 1970 to 17.0% in 1975).[18]

Statistics Canada analysts projected a slowly increasing 18-24 age group (1.2% per year) that, combined with a falling participation rate, would result in more or less stable enrolments at the postsecondary level between 1977 and 1982 of about 613,000 students (both graduate and undergraduate, both college and university). The subsequent demographic decline in the 18-24 age group is expected, in this projection, to cause enrolment to drop to about 550,000 by 1986, where it "is likely to continue into the early 1990s." They note, however, that because they excluded part-time students from their calculations, their projections are not comprehensive. Their projections, for full-time university students only, showed a peak of 383,000 in 1983 (both graduate and undergraduate) with a decline to 356,000 by 1986.

Despite their diversity, several points of consensus can be found in these varied projections. Stable or declining enrolments will severely limit the creation of new faculty positions in the next few years, at a time when there will also be comparatively few faculty retirements because the professoriate recruited during the period of expansion is still relatively young. Indeed, many universities may well face the prospect of laying staff off. The implications of this situation are immense for the present generation of students and young graduates who are interested in pursuing careers in colleges and universities in Canada. There are profound implications also for the future state of teaching and research in and about Canada.

The problems of coping with enrolment decreases are compounded by the fact that demographers expect that there will be an upswing in enrolments in Canada in the mid to late 1990s, or even somewhat later, as David Foot argues. Sometimes called the "baby-boom echo", this phenomenon is as shrouded in

controversy as are the questions about the probable declining enrolments in the intervening years.

Another Statistics Canada study anticipated that the 18 to 24 age group will peak in every province during the 1980s and then diminish until the mid-1990s (1992 in Alberta; 1998 in Newfoundland).[19] This study concludes that the low point in the postsecondary age group for Canada will be reached in 1996 and that there will be an increase of 6.4 per cent in this population cohort between then and the end of the century.

There are, of course, other interesting and differing projections for the upswing in university enrolment that is expected in the late 1990s or by the turn of the century. But there is no certitude about which, if any, of these projections will be realized. We cannot, however, adopt a "whatever will be, will be" attitude. There is far too much at stake for Canada, and especially for those who will want postsecondary education at that time. If we are to be prepared to meet Canadian needs in every field, including teaching and research about Canada itself, we must make sensible, educated guesses now about what is likely to occur and then plan and prepare accordingly.

The Commission's review of the literature leads it to conclude that the universities can expect full-time enrolments to decline from the mid-1980s to a low point in the early to mid-1990s. In all probability, there will then be an increase, perhaps more modest than is being projected at this point, in the years immediately preceding the turn of the century.

Data limitations are frequently used as a pretext for delaying analysis and decisions. But in this case the lack of precise information or the unreliability of certain data ought not to serve as an excuse for inaction. Available information clearly indicates that the universities will soon face a series of enrolment difficulties of some magnitude, even though specific figures may be questionable. Enrolment is the lifeblood of any educational institution. Demographic trends determine the size of the potential population to be educated, and, hence, the potential magnitude of the educational establishment itself. As the baby boom children worked their way through the system, expansion of services and facilities was necessary at all levels. The abrupt change in the fertility rate has already affected the elementary and secondary schools, resulting in the first enrolment declines since the 1940s. Soon the results of this change will appear at the postsecondary level as the troughs and crests of the population waves break against each level. The steady enrolment growth caused by the baby boom presented serious problems. In the eyes of some observers, however, the population age waves created by the alterations in fertility rates will produce difficulties much harder to manage.[20]

Within the broader implications for teaching and research of these questions about the sheer numbers of students who will enter Canadian universities, there are some important and more specific questions with respect to Canadian studies, at both the undergraduate and graduate levels. Some of these relate to the pattern of discipline or faculty choices that students are

making. Questions about graduate enrolment totals and patterns will be examined in the next chapter. It is worth noting here, however, as one of the problems for Canadian studies, that enrolment trends at the undergraduate level indicate a movement toward professional and job-oriented programmes and away from the arts and science disciplines in which much of the teaching about Canada's history, culture, institutions, and physical circumstances takes place. Between 1967-68 and 1981-82, the proportion of undergraduates in arts and science fell from 68 per cent to 45 per cent (Table 15). Even with the substantial increase in undergraduate arts and science enrolment that occurred in 1982-83, this proportion is little changed.

The shift in enrolment patterns away from the arts and science faculties has, in addition, implications for the career prospects for highly qualified graduates and faculty members in these fields. As will be seen, a high proportion of Canadian graduate students are clustered in the social sciences and humanities, especially at the Ph.D. level (Table 22). A significant number of these, studies show, hope to teach in a university. With both declining university enrolments, and a decline in the proportion of the student body enrolled in the social science and humanities departments at the undergraduate level, in particular, the likelihood of an increase in the number of newly created positions in arts and science faculties is remote. Further, as demonstrated in a subsequent chapter devoted to the age-structure of the professoriate, there will be few replacement positions open in the 1980s and early 1990s.

There are also substantial financial implications for the university in this shift in enrolment patterns. The professional faculties are frequently more expensive to operate than the social sciences and the humanities departments. The shift in enrolment to these faculties will often result in higher costs for the university.

The reasons for the shift in enrolments are complex. Salary levels for graduates with degrees in such fields as business, law, engineering, medicine, and most professions, are higher than the remuneration that can be gained, on the average, with degrees in such fields as chemistry, English, history, or sociology.[21] As the *Globe and Mail* put it in the headline for a feature story on this topic, "Desire for Security Drives Students to the Professions".[22] But many other factors are playing a part in the change in enrolment patterns, including the direction of public opinion and of student counselling, changes in student interests and expectations, and the growing importance attached to professional qualifications and credentials.

C. THE RELATIONSHIP OF UNIVERSITY FINANCES TO HUMAN RESOURCE QUESTIONS AND TO THE DEVELOPMENT OF CANADIAN STUDIES

The interdependence of the university and the society in which it is located provides the basic rationale for Canadian studies at Canadian universities. The most valid and compelling argument for Canadian studies, not only at the university but at every level of Canadian education, is the importance of self-knowledge, both for the individual and for the community. Members of this society need to know and to understand themselves: who they are, where they are in time and space, where they have been and where they are going, what they possess, and what their responsibilities are to themselves and to others. The university is the central vehicle for Canadians in this essential search for self-knowledge.

In its chapter on "The Rationale for Canadian Studies" in Volume I of *To Know Ourselves*, the Commission has explained why, in its view, Canadian studies are important for Canadian universities and for Canadian society. Such studies are, or should be, a vital element in the university's service both to Canadian society and to the international community. Canadian universities have a particular obligation to engage in Canadian studies because no other university system on earth has in the same way and to the same extent the opportunity, the resources, and the responsibility to learn and to teach about this society, including its place in and contributions to the wider world. Conversely, Canadian universities, as the principal centres for research and critical thought about the Canadian heritage, are important to Canadian studies. The difficulties that beset universities in our society pose, in turn, serious problems for the development of our capacity to know ourselves.

Any decline in enrolments or any rise in costs will exacerbate the already serious plight of university finances. Of these two problems, the first, the prospect of declining or oscillating enrolments, seems to attract most attention at present. But the second, rising costs, will become increasingly important and increasingly visible through the 1980s and into the 1990s.

The current method of financing higher education, based mainly on student numbers, was extraordinarily attractive to most universities during the heady days of the expansion occasioned by the baby boom. Public expenditures on university education rose dramatically from 1960-61 to 1982-83 (Table 20).

In this climate of accelerating growth, it was perhaps natural that universities should fall in with government proposals that their basic funding should be calculated through *per capita* formulae in which students became fractured entities known as BIUs (Basic Income Units). Only a few voices were raised in warning that, by following this route, the universities were building themselves into a corner from which it would be difficult to escape in the future when the era of massive enrolment growth came to an end. Only a few recognized, too, that a system of public funding of higher education based on

numbers might well prove to be in conflict with the values of scholarship and knowledge that are at the heart of higher education.

Instead, universities accepted, and indeed promoted, the simplistic assumption that maximum progress will result from maximum education. They accepted and promoted the tendency on the part of governments, based on this assumption, to try to make up for lost time by rushing to pump dollars into higher education in the hope of a bigger and quicker pay-off in the public interest. There was little assessment of the harm that could result from riding the crest of public pressure aimed at a vast enlargement of the postsecondary system, on short notice and over a comparatively brief period of time. Universities did, of course, benefit enormously from the great flood of public support and government funding that inundated them in the 1960s and 1970s. However, a strong case can be made that the universities and colleges of Canada were also done a good deal of harm by this well-meant flood of public money and public support, in particular by the expectations and demands that came with this support. When the economy receded in the 1970s, there was a marked change in government spending priorities and a reduction in their financial support that has threatened the balance, the well-being, and even the survival of the universities. In lending themselves so readily to the notion that they could be used as instruments of economic development, the universities had "badly compromised their vital role as islands of culture and critical thought in a materialistic society".[23]

The large increases in university enrolments during the 1960s and 1970s, arising from the growth in the size of the 18-24 year old population, were further accelerated by a rise in the participation rate (Table 16). The participation rate jumped in large measure because the universities did a very successful job of selling the notion that education was an investment that would pay off in the market place, both for the individual and for society. The then-prevalent theory of human capital held that an individual's earnings depended on the amount that he or she had invested in acquiring skills for the work place. These skills were considered to be of two types, job experience and years of formal education. Emphasis was placed on the latter. It was thought that by providing wider access to education, each person in society could maximize his or her opportunities for employment and for a higher standard of living.

Like many forecasts, this one was partially true. But a great deal depended upon how it was presented. Excessive emphasis on the personal economic gain that would result from more education would set the stage for many personal disappointments and do a disservice to the deeper values of higher education. None the less, it appears that the education-for-personal-economic-gain argument was supported by the experience of many university graduates in the 1960s and early 1970s, and thus came to be widely accepted. Since that time, however, the direct economic rewards of a university education have somewhat lessened.

The growth in the proportion of the working population having a postsecondary education is responsible, at least in part, for this turn of events.

As the number of job seekers with bachelor's degrees has increased, their labour market position appears to have deteriorated. A comparison of starting salaries in industry for graduates with bachelor's degrees shows that in 1965 a graduate's average starting wage was 10 per cent more than the average earnings for all industrial workers. This premium peaked in 1968 when starting salaries for those with a bachelor's degree were 18 per cent above the average earnings for all industrial workers. By 1977, however, the starting salaries of new graduates with a bachelor's degree were 12 per cent below the average industrial wage.[24] A similar trend has been evident in the United States, where findings indicate that the social rate of return for male graduates of American four-year colleges increased from 10.5 per cent in 1959 to 11.1 per cent in 1969 and then fell to 9.5 per cent in 1972 and to 7.5 per cent in 1974.[25]

The expansion of university education and the development of the community colleges created a 'qualifications spiral' in which more academic credentials were required to obtain employment in positions that had previously been accessible without such qualifications. The numerical result of this expansion is evident in statistics that show that by 1977 almost one in every three Canadian workers aged 25 to 34 had graduated from college or university, compared with one in four aged 35-44, one in 5.5 aged 45 to 54, and one in six aged 55-64.[26] Employers have long used educational qualifications to screen prospective employees. Throughout the first half of the century a secondary education was considered sufficient qualification to guarantee employment. By the mid-sixties almost any university degree was considered an automatic ticket to a job, while high school graduation meant less and less on the labour market. Today the spiral has gone even higher; bachelor's degrees in general arts and science are less valued in the labour market than they were only a decade ago.

This abrupt change has left some students saddled with attitudes and expectations that do not fit the reality of the job market. Studies and surveys by Statistics Canada and the Department of Manpower and Immigration have indicated for some time that "significant numbers of students have expectations that are out of line with labour market reality."[27] Evidence indicates that almost all students attending postsecondary educational institutions do so in large part to enhance their career and income opportunities. For many, it is their prime motivation. Various studies of the job placement records of university graduates within a few years of their graduation show, however, that the reality of today's job market comes as a severe jolt to many of them. Many graduates earn less, particularly at first, than some tradespeople, and many are having to accept jobs that, in their view, do not make proper use of their qualifications.[28] One American study has suggested that an income levelling between blue and white collar workers is developing as a result of the apparent surplus, at least in job market terms, of highly educated people in the United States.[29]

The growing gap between labour market realities and the expectations of university and college graduates has led to some disenchantment with education. This disenchantment is, in turn, responsible in part for the reduction

in public support for, and aid to, the university. The large increases in educational spending are not seen to be producing the predicted economic returns to society or, in many instances, to the individual. A review of the levels of public spending on education generally, and on university education in particular, provides a measure of the expectation. It shows that expenditures on education per capita of the Canadian population have risen dramatically over the fifteen years from 1967 to 1983 (Table 19). But it also reveals that the percentage of the GNP devoted to education peaked in 1970 and has fallen in the 1980s.

At the postsecondary level the large increases in expenditures occurred during the 1960s. Whereas the GNP rose annually by about 8.4 per cent between 1960 and 1970, university expenditures rose 21 per cent each year, reaching a high of 2.09 per cent of the GNP by 1970 (Table 20). University expenditure as a proportion of the GNP declined fairly steadily throughout the 1970s to 1.5 per cent of GNP in 1981-82. Similarly, university expenditures as a percentage of total educational expenditures climbed from 16 per cent in 1960-61 to a high of

TABLE 19
EXPENDITURES ON EDUCATION IN CANADA, 1967 TO 1983

Year	Percentage of government spending	Percentage of GNP	Percentage of personal income	$ per capita of population in Canada	Expenditures on education ('000,000)
1967	21.1	7.6	9.9	247	5,025.5
1968	22.2	8.0	10.4	279	5,777.1
1969	22.1	8.3	10.7	315	6,624.1
1970	22.1	9.0	11.5	360	7,676.0
1971	21.0	8.9	11.3	388	8,359.3
1972	19.5	8.2	10.4	398	8,675.7
1973	18.7	7.8	9.8	434	9,576.6
1974	17.1	7.5	9.5	495	11,061.4
1975	16.6	7.8	9.5	570	12,926.3
1976*	17.4	7.9	9.7	655	15,092.3
1977	17.8	8.3	10.1	746	17,364.3
1978*	17.1	8.0	9.7	784	18,456.0
1979*	16.7	7.7	9.5	852	20,247.1
1980**	16.0	7.7	9.4	940	22,621.6
1981***	N/A	7.8	9.4	1,072	26,016.9
1982***		N/A	N/A	N/A	29,038.5*
1983***					31,877.0

* Revised
** Preliminary
*** Estimated

Source: Statistics Canada, *Advanced statistics of education*. Ottawa, 1982, Tables 13, 14, 15, p. 24-29 (Cat. 81-220); and further tabulations prepared for the Commission by Statistics Canada, 1983.

24.7 per cent in 1967-68, dropping thereafter to an estimated 18.9 per cent in 1982-83 and 18.8 per cent in 1983-84 (Table 20). A financial analysis of the university system in Ontario indicates that between 1970-71 and 1980-81 university operating grants per full-time equivalent student declined in real terms in that province by about 17 per cent. In the four years from 1978-79 to 1981-82 government budgetary expenditures declined by 4 to 5 per cent in Ontario, but university operating grants declined in real terms by 12 to 13 per cent.[30]

The prospect of slight growth, no growth, or declining enrolments points to the probability of further shrinking in the real income of universities, both in fees and in grants. Financing formulae that universities welcomed during the years of enrolment growth will become increasingly burdensome and restrictive. Unfortunately, such formulae have often become embalmed in provincial operating grants which are simply allocated among the universities according to historical ratios. Consequently, universities find themselves barely able, if at all, to keep up with spiralling costs that are due only in part to inflation. As noted in a later chapter, an increasing proportion of university budgets will have to be spent on academic salaries, and benefits, because of the changing age and rank structure of the incumbent professoriate.

The consequences for the universities of this financial situation have been disruptive and could become even more drastic: larger classes; slashed library budgets; shelved research projects; and buildings, laboratories, and equipment visibly deteriorating. Universities will of necessity become increasingly preoccupied with financial questions, as the growing spate of conferences, articles, and studies on these questions already attests.

Professor Peter Leslie has painted a stark picture of the prospects for the universities of Canada in a section of his study entitled "Problems of No Growth or Shrinkage".[31] As he notes, universities experience difficulties of adaptation in the current financial squeeze which are not experienced to the same degree by business corporations or public bureaucracies. This is due to the nature of the tasks in which universities are engaged and also to the way in which they are staffed and structured. It is difficult for a university to reallocate resources because the human and physical capital that has been acquired by the university during the period of growth cannot be moulded into new forms overnight, if ever. "An astrophysicist cannot be retrained to teach molecular biology, and only the simplest forms of equipment can be used for any purpose but the specific one for which they were designed and built".[32] A situation of no growth creates acute staffing problems. Few or no younger faculty are hired, the circulation of senior faculty among the universities slows dramatically, and the aging of the professoriate without new infusions of talent can lead to a lessening of institutional vitality in many situations. As university incomes drop in real terms, the pressure to utilize the greatest possible portion of available funds for faculty salaries is intense. Already there are very few universities in Canada that have not cut back their budgets for equipment, supplies, physical plant and

maintenance, with a consequent deterioration of laboratory facilities, library services, and other resources that are required by both faculty and students if they are to work effectively.

There are other problems as well. Those universities most vulnerable to declining enrolments may try to compensate "by recruiting students who in an earlier period might not have been accepted for university. In part this may be achieved by lowering university entrance standards; but its other aspect is the tailoring of university curricula to suit essentially non-academic and even anti-intellectual tastes."[33] This may be a part of the reason for the unexpected enrolment increases in the early 1980s. The drive to attract students can take some strange forms and can be damaging to the image of the university in the community and, indeed, to the reality of the university itself. The student recruitment techniques being adopted by some universities, for example the use of radio jingles and life-style advertising to sell postsecondary education in the same fashion as beer or blue-jeans, are inappropriate for institutions that are committed to the advancement of knowledge and the promotion of critical thought. Indeed, one might argue that such conduct is a betrayal of the university's own goal to foster individual growth against the pressures to conform which threaten to suffocate us.

As Professor Leslie also notes, financial restraints can have deleterious effects on academic freedom and research. Fiscal constraints, with their consequences of depressed academic salaries and a severe shortage of research funds, "can and predictably will restrict the range of scholarly enquiry, and direct it towards unpromising and intellectually barren objectives."[34]

The effects of no growth are characterised as "The Sclerosis Scenario" in the Leslie Report: "If conditions do not change, and retrenchment becomes a permanent condition, it eventually may be discovered that the universities have suffered (to use a medical analogy) sclerosis: a morbid hardening of the tissue."[35] This kind of academic sclerosis has direct consequences for Canadian studies, including an "incapacity to develop new disciplines, to establish new faculties, departments, or programs, and inability to follow up promising lines of research."[36]

In the chapter on curriculum in Volume I of *To Know Ourselves*, the Commission on Canadian Studies has already noted that:

> There is both need and opportunity for greater activity in this field (of Canadian studies) at universities in every part of Canada. It is now time for a major expansion in the attention given to Canadian studies to meet the interest and the needs at both the undergraduate and the graduate levels. In the Commission's judgement, deliberate action by the universities, by funding agencies, by learned societies and associations, as well as by individual scholars and students, will be required to ensure that adequate and sustained attention is given in the university curriculum to subjects of particular Canadian interest. It is no longer good enough to rely on some natural un-

TABLE 20
EXPENDITURES ON UNIVERSITY EDUCATION FROM 1960-1961 TO 1983-1984 RELATED TO CERTAIN SOCIO-ECONOMIC INDICATORS

Year	Expenditure on University Ed. ($'000)	Percentage of Total Educational Expenditures	Population of Canada	Expenditure Per Capita $	University Expenditure As a Percentage of The GNP
1960-61	272,940	16.0	17,870,000	15.20	.70
1961-62	310,629	16.1	18,238,300	17.06	.78
1962-63	378,693	15.9	18,583,000	20.35	.87
1963-64	461,397	18.2	18,931,000	24.38	1.00
1964-65	597,326	20.7	19,294,000	31.05	1.17
1965-66	736,583	21.7	19,644,000	37.54	1.32
1966-67	991,647	23.9	20,014,900	49.71	1.60
1967-68	1,243,411	24.7	20,378,020	61.01	1.88
1968-69	1,359,972	23.5	20,701,000	65.57	1.88
1969-70	1,603,781	24.2	21,001,015	75.19	2.01
1970-71	1,790,842	23.3	21,297,000	83.88	2.09
1971-72	1,864,517	22.3	21,568,300	86.52	1.98
1972-73	1,867,801	21.5	21,801,300	85.57	1.76
1973-74	2,029,910	21.2	22,043,000	92.50	1.65
1974-75	2,372,171	21.4	22,363,900	105.93	1.60
1975-76	2,760,542	21.4	22,697,100	121.98	1.67
1976-77	2,976,710	19.7 r	22,992,600	129.69	1.56
1977-78	3,377,985	19.4	23,288,000 r	144.72	1.61
1978-79	3,624,705	19.7	23,534,000 r	154.84	1.58
1979-80	3,948,532	19.5	23,769,000 r	166.73	1.50
1980-81	4,437,704 r	19.6 r	24,058,000 r	185.58	1.51
1981-82*	4,960,911	19.0	24,343,181	203.79	1.50
1982-83**	5,503,599	18.9			
1983-84***	5,999,418	18.8			

r Revised
* Preliminary
** Estimate
*** Forecast

Source: Statistics Canada, *Advance statistics of education: 1982-83*: Ottawa, 1982, p. 24-25 (Cat. 81-220); and other tabulations prepared for the Commission by Statistics Canada, 1983.

guided process of self-correction to remedy the neglect of Canadian studies as so many have done in the past.[37]

The danger for Canadian studies in Professor Leslie's sclerosis scenario is that in this period of little or no growth the likelihood of a major development in Canadian studies to remedy the past neglect of research, teaching, and publication about Canada is greatly reduced. In fact, far from such a development occurring, teaching and research in the field of Canadian studies may be reduced. Unfortunately, the current period of substantial development in Canadian studies, and in the research and publication on which it must be based, began at precisely the same time as the financial-enrolment-manpower-aging crises descended on the university. While much has been done since the release of the first two volumes of this Commission's study in 1976, progress is slow and change difficult. The financial situation will make progress and change even more difficult to achieve. Yet, much more needs to be done if we are to provide the opportunities our society requires to come to know and to understand itself and its place in the world.

In some of our postsecondary institutions, the Commission's recommendations about Canadian studies, and the development of such studies, have been discreetly ignored or dealt with only cosmetically. The Commission must reiterate its concerns about the continuing failure of some of the universities of this country to give Canadian studies the reasonable amount of attention that such studies merit. All too often the content of the curriculum still reflects insufficient awareness of the major problems and opportunities that confront us as a society, nor does it give adequate recognition to the need to examine the particular history, institutions, and circumstances of this society. It is also still true that in many disciplines the university curriculum is not sufficiently attuned to the Canadian context in which it is being taught.

The current economic difficulties faced by the university ought not to be used as an excuse for continued neglect of Canadian studies. The development of such studies depends on the availability of highly educated and well-qualified teachers and researchers. Indeed, the future of Canadian society depends, more than anything else, on the quality of its human resources. Canada needs to have available an adequate supply of highly qualified graduates with a sensitivity to, and a knowledge of, Canadian society, its problems and its prospects.

Canadian studies are also important for the university in that the university needs to explain its purposes to society in terms that society can understand and appreciate. The failure of Canadian universities to do this, and their tendency to move away from some of their essential functions, is responsible for a large part of the crisis that these institutions face today. As one observer has put it:

> The delineation of the broad purposes of the university is an essential step in determining the arrangements for their funding. The universities will continually face difficulties in gaining support for their very valuable functions if it is not clearly understood what their functions are. In recent years especially, the universities have tended not to

express their goals, and have moved away from performing their essential functions.[38]

Of all institutions in Canadian society, the universities ought to be the most articulate about their raison d'être and about their legitimate claims for support. It is both ironic and symptomatic of their current state that they are having such difficulty in presenting their own case.

The university's primary purpose is to provide to those members of our society with the capacity for and the interest in higher, intellectual studies, opportunities to engage in such studies, both for their own good and for the general good of society. Universities are concerned with the preservation and advancement of knowledge, the attainment of self-knowledge, and the preparation of candidates for the intellectually demanding vocations and professions. They are the principal repositories of Canada's intellectual heritage and our central institutions devoted to free and critical inquiry.

The Report of the Commission on the Rationalization of Research in Canadian Universities saw the purposes of the university to be teaching (the transmission of knowledge and culture), research (the discovery and integrating of new knowledge), and service to the community.

> One duty of the university is to pass on knowledge and the essentials of the culture by teaching and encouraging cultural expression, a complex and exacting education task. ...
>
> The most important part of the body of knowledge that should be transmitted is the culture of which we are a part, and which sets most of the terms of our accomplishments and failures.[39]

Society needs such knowledge and is nourished by it. By providing it, the universities reaffirm unequivocally the importance of the university to society. As Dr. Ronald Watts of Queen's University has put it:

> In society, knowledge has always been vitally important; indeed, knowledge has always been power. Moreover, in this highly complex age, no society can continue to be viable nor can it offer a great culture without a strong intellectual and scholarly base. Thus the relationship between the university and society is clearly an intimate one. Neither can be isolated or independent of the other, for society needs the knowledge which universities preserve and extend, and universities in turn cannot fulfill this need without the culture and resources of society to nourish them. Society and its universities are, therefore, interdependent.[40]

It has been argued by many who think that Canadian studies are too parochial and too limiting for the university, that the university is part of an international scholarly community which ought not to be divided into separate societal elements. Hugh MacLennan responds:

> The only way a modern university can truly serve the international community is by first serving its own community. This is true because it is out of its own community that it grows; because it is its own

> community that supports it, because no community on earth can be loved and understood by foreigners in precisely the same way as by those people who have been born and bred in it, or have elected to become permanent citizens of it because they love and understand it, too. Just as Shakespeare, the supreme world poet, was a profound Englishman, so are certain universities the repositories and expressions of their nation's profoundest conscience and genius — Bologna in Italy; the Sorbonne in France, Oxford and Cambridge in England, Uppsala in Sweden, Heidelberg in Germany, Harvard and several others in the United States, the Hebrew University in Israel. The only way a university can become a harmonizer and a civilizer within the human chaos is by becoming harmonious within itself.[41]

Faced with crushing financial problems, and looming enrolment and staff crises, the Canadian university must be able to explain its value to the community that supports it in terms that the community can understand. If it fails to do so, it will be left without the resources that it needs to do its job or, indeed, to survive. The Commission believes that if the universities willingly shoulder their responsibilities to Canadian society, including their particular responsibilities for teaching and research about that society, those resources will be forthcoming. By becoming a focal point for balanced and legitimate academic attention to Canadian studies, amongst other things, the university will be better able to demonstrate its true value to the Canadian community.

The current problems and prospects of university financing pose acute difficulties for the development of highly qualified manpower in Canada and for the development of Canadian studies. In seeking solutions for these problems, a strong case can and must be made for more support to be given to higher education, by both government and the private sector. Such support is needed because of the importance of the universities in cultural and economic terms and because of society's own obligation to provide the conditions under which each of its individual members can develop his or her capabilities to the fullest. This case has not yet been effectively expounded by the universities and colleges of Canada. The development of the case will require, amongst other things, more research into the benefits gained by society as a whole from the creation of a larger pool of highly qualified graduates and from improvement in the state of our own knowledge and understanding of the society in which we live. That there are substantial benefits to the Canadian community from the operation of our universities, no reasonable person can doubt. "Universities should specify and attempt to value these benefits since they are the major rationale for public support.[42]"

At the same time, it should be clear that new directions are needed in the financing of Canadian universities, in regard both to policies and mechanisms. The present arrangements are not working well, and they will work less well year by year in the next phase of our academic history. The restructuring of financing techniques for Canadian universities, which is now urgently required, should

involve a new kind of co-operation between the several orders of government, a new degree of participation by the private sector, and a much greater sensitivity to actual performance in teaching and research. The chances of our universities and colleges receiving the level of funding they really require will be enhanced if they are perceived to be sensitive to and considerate of the needs and circumstances of the society from which they draw their resources.

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VI

MEETING CANADIAN NEEDS FOR HIGHLY QUALIFIED GRADUATES

A. "THE PH.D. DILEMMA": SHORTAGES AND IMBALANCES IN THE SUPPLY OF CANADIAN DOCTORAL GRADUATES

The great expansion of the Canadian university system in the 1960s and into the 1970s was substantially based on the importation of large numbers of professors from other countries. It was argued that Canada did not produce enough Ph.D.s to staff Canadian universities and that the Ph.D. was a *sine qua non* for appointment to a university faculty. For these reasons, among others, the rapid expansion in undergraduate enrolment throughout the 1960s and early 1970s was accompanied by an increase which was, proportionately, even larger in the number of graduate students in Canada. A conscious decision was made by many universities to expand their capacity to produce graduate degrees, especially at the doctoral level. It was believed that university expansion would be a continuing phenomenon and that, consequently, Canada would have to generate her own human resources to staff an ever-growing system of postsecondary education.

The resulting "Ph.D. Dilemma" has many sides.[1] In the late 1960s it seemed that this country had a surplus of Ph.D.s in a number of science disciplines, at least in relation to the traditional job markets, including academic posts. At the same time, Canada had an acute shortage of doctorates in the social sciences and humanities, which occasioned massive importations of foreign faculty in those disciplines. Now, as we move on into the 1980s, the reverse appears to be true. Canada has a shortage of Ph.D.s in many of the sciences and an apparent surplus of Ph.D.s in many of the social sciences and humanities. These cyclical swings, alternating between shortages and then apparent over-supplies of doctoral graduates, are the essence of the Ph.D. dilemma. In this chapter the Commission will describe how these cycles have occurred and comment on some of the implications of this situation for Canadian studies and, more broadly, for teaching and research in Canada.

As Table 21 indicates, the number of Ph.D.s graduating from Canadian universities has greatly increased since 1960. Between 1960-61 and 1972-73 the number of doctoral degrees awarded each year increased more than sixfold, rising from 306 to 1,929 during this thirteen-year period. However, as the table also shows, the number declined somewhat for the remainder of the 1970s and appears to have stabilized at the level of about 1,800 to 1,900 doctorates a year in the 1980s. Fewer Ph.D.s were awarded in 1982 (1,820) than a decade earlier in 1972-73 (1,929).

Similarly, as shown in Table 22, the number of Ph.D. students levelled off and then declined in the 1970s, dropping from a high of 13,331 in 1972-73 to 12,700 in 1979-1980. While there has been an increase in the number of doctoral students in the early 1980s, enrolment was lower in 1981-82 than it had been a decade earlier in 1971-72.

TABLE 21
EARNED DOCTORAL DEGREES IN CANADA
1960-1961 TO 1984

Year	Number of Doctorates Earned
1960-61	306
1961-62	321
1962-63	421
1963-64	481
1964-65	566
1965-66	696
1966-67	779
1967-68	1,006
1968-69	1,108
1969-70	1,375
1970-71	1,625
1971-72	1,724
1972-73	1,929
1974*	1,896
1975	1,840
1976	1,693
1977	1,702
1978	1,819
1979	1,803
1980	1,738
1981 [1]	1,789
1982 [2]	1,820
1983 [3]	1,860
1984 [3]	1,890

* Beginning in 1974 Statistics Canada changed the year basis for the collection of information on Ph.D.s awarded from an academic year to a calendar year.

1. Preliminary
2. Estimated
3. Forecast

Source: Belliveau, Kealey and von Zur-Muehlen. *Doctoral enrolment and graduation patterns at Canadian universities during the seventies and their implications for the eighties: a statistical documentation by discipline.* Ottawa, 1981, Statistics Canada, p. 20-21; and *Advance statistics of education: 1982-83.* Ottawa, Statistics Canada, 1982, Table 9, p. 21. (Cat. 81-220).

In addition, there have been notable shifts in the enrolment patterns in doctoral programmes. As Table 22 indicates, between 1970-71 and 1981-82 enrolment in doctoral programmes in the social sciences increased by nearly 60 per cent, from 3,345 to 5,319, whereas enrolment decreased by close to 15 per cent in the humanities and about 25 per cent in the natural and applied sciences. After an initial drop in the early 1970s, doctoral enrolment in the life sciences had climbed slowly back to its 1970-71 level by 1981-82. Thus, the main trends in doctoral enrolments have been away from the natural and applied sciences and towards the social sciences. Whereas in 1970-71 almost every third doctoral student was enrolled in the natural and applied sciences, this proportion had declined by 1981-82 to less than one student out of every four. The proportion of Ph.D. students in the humanities also declined, from 25 per cent in 1972-73 to 20 per cent in 1981-82.[2]

Shifts in enrolment patterns have been even more pronounced between specific disciplines, particularly in the case of some of the social sciences that have experienced considerable growth, although recently some of these patterns appear to have become more stabilized. As shown in Table 23, for example, the total of full-time and part-time enrolment in doctoral programmes increased

TABLE 22
PH.D ENROLMENT FULL-TIME AND PART-TIME BY MAJOR DIVISIONS, 1970-1971 TO 1981-1982

YEARS	DIVISION A Humanities and Related Disciplines	DIVISION B Social Sciences & Related Disciplines	DIVISION C Natural and Applied Sciences	DIVISION D Life Sciences	TOTALS
1970-71	3,088	3,345	4,182	2,199	12,814
1971-72	3,263	3,827	4,066	2,122	13,268
1972-73	3,379	4,169	3,845	1,938	13,331
1973-74	3,401	4,369	3,541	1,810	13,121
1974-75	3,295	4,640	3,352	1,774	13,061
1975-76	3,259	4,934	3,264	1,801	13,258
1976-77	3,084	4,951	3,183	1,808	13,026
1977-78	3,067	5,006	3,112	1,832	13,017
1978-79	3,008	5,102	2,957	1,902	12,969
1979-80	2,777	5,082	2,931	1,910	12,700
1980-81	2,671	5,276	2,962	2,053	12,962
1981-82	2,668	5,319	3,056	2,196	13,239

Source: Annual statistical reports of the Canadian Association of Graduate Schools.

from 198 to 336 in political science and from 308 to 440 in sociology during the decade between 1970-71 and 1980-81. Similarly, doctoral enrolment rose from 428 to 625 in economics, and from 929 to 1,254 in psychology. In the same period, the number of doctoral students dropped from 642 to 306 in mathematics, from 1,032 to 647 in chemistry, from 721 to 475 in physics, and from 1,462 to 1,178 in engineering. In the humanities, enrolment in such disciplines as English, French, and history increased to mid-decade and then declined. The doctoral enrolment in English, for example was 680 in 1970-71, peaked at 835 in 1974-75, and declined to 633 in 1980-81. In classics, English, French, history, and philosophy, in biology, botany, and zoology, in mathematics, chemistry, and physics, and in engineering, there were fewer doctoral students at Canadian universities in 1980-81 than there had been in 1970-71.

As shown on Table 24, there has been a very large increase in the number of foreign students who are full-time doctoral students at Canadian universities. This number more than doubled in the nine years between 1972-73 and 1981-82, rising from 13.1 per cent to 27 per cent. Thus, foreign students constituted over one-quarter of the full-time doctoral enrolment at Canadian universities in 1981-82. Conversely, the proportion of full-time doctoral students who were Canadian citizens or permanent residents fell from 87 per cent in 1972-73 to 73 per cent in 1981-82. Since the number of doctoral students was virtually the same in 1981-82 as in 1972-73, this means that the number of Canadian citizens and permanent residents taking doctoral studies declined significantly during this period. A survey conducted by Statistics Canada has found that eight out of ten foreign doctoral students plan to leave Canada on the completion of their degree, whereas one out of eight of the Canadian citizens or permanent residents plan to do so.[3] Thus, no matter how desirable on other grounds, as will be discussed in a subsequent chapter on foreign students, the increase in the proportion of foreign doctoral students has meant a decrease in the number of Ph.D. students who will be available for work in Canada.

In 1981-82, foreign students constituted more than one-third of the doctoral enrolment in mathematical and physical sciences (37%) and more than 50 per cent of the doctoral enrolment in engineering. Between 1972-73 and 1981-82, the proportion of foreign visa students increased from 12 per cent to 20 per cent in the humanities, from 11 per cent to 26 per cent in the social sciences, from 14 per cent to 25 per cent in agriculture and the biological sciences, from 21 per cent to 50 per cent in engineering, and from 13 per cent to 37 per cent in mathematics and physical sciences.

In some years during the 1960s as many as three out of four doctoral degrees were in the sciences, but this proportion declined gradually during the 1970s, so that in 1981 fewer than one-third were in the natural and applied sciences. The increase in Ph.D.s awarded was especially marked in the social sciences and related disciplines which rose from 334 in 1972 to 608 in 1981.[4] As shown in Table 25, the drop in such disciplines as chemistry and physics, both important

TABLE 23
FULL- AND PART-TIME DOCTORAL ENROLMENT BY FIELD OF STUDY AND SELECTED DISCIPLINES, 1970-71 TO 1980-81

	1970-71		1971-72		1971-73		1973-74		1974-75		1975-76		1976-77		1977-78		1978-79		1979-80		1980-81	
	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index
Education	874	100	987	113	1,082	124	1,183	135	1,271	145	1,346	154	1,437	164	1,349	154	1,458	167	1,548	177	1,679	192
Fine and Applied Arts	72	100	69	96	82	114	91	126	94	131	98	136	93	129	106	147	108	150	112	156	118	164
Classics	99	100	94	95	85*	89	82*	83	76	77	76	77	70	71	75	76	70	71	78	79	75	76
English	680	100	766	113	821	121	793	117	835	123	823	121	781	115	754	111	712	105	633	93	633	73
French	343	100	372	108	405	118	353	103	343	100	331	96	322	94	319	93	299	87	300	87	253	74
Other Languages and Literature	264	100	254	96	293	111	300**	114	324	123	292	111	269	102	296	108	269	102	349	132	341	129
History	515	100	539	105	551	107	558	108	523	108	562	109	535	104	504	98	473	92	457	89	448	87
Philosophy	463	100	460	99	507	109	479	103	463	100	478	103	460	99	432	93	417	90	474	102	455	98
Religious Studies	267	100	312	117	323	121	298	112	273	102	219	82	278	104	277	104	234	88	231	87	244	91
Other Humanities	113	100	158	140	157	139	186*	135	146	129	132	117	122	108	116	103	124	110	182	161	204	181
Sub-total Humanities	2,744	100	2,955	108	3,145	115	3,047	111	2,981	109	2,913	106	2,837	103	2,763	100	2,598	95	2,704	99	2,653	91
Anthropology (incl. Archeology)	156	100	171	110	165	106	173	111	196	126	217	139	222	142	228	146	224	144	219	140	242	155
Management and Admin. Studies	64	100	85	133	104	162	103	161	110	172	132	206	121	189	146	228	165	258	200	312	218	341
Economics	428	100	488	114	482**	113	582	136	599	140	623	146	632	148	659	154	629	147	635	148	625	146
Geography	195	100	225	115	250	128	243	125	238	122	224	115	237	122	235	121	226	116	217	111	227	116
Law	66	100	64	97	63	95	60	91	61	92	67	102	44	67	56	85	46	70	53	80	48	93
Political Science	198	100	258	130	338	171	294	149	305	154	2[illegible]	148	316	160	317	160	318	161	319	161	336	179
Psychology	929	100	1,018	110	1,095	118	1,177	127	1,208	130	1,31[illegible]	141	1,335	144	1,333	143	1,273	137	1,289	139	1,254	135
Social Work	28	100	34	121	36	129	37	132	40	143	44	157	61	218	45	161	46	164	54	193	56	200
Sociology	308	100	334	108	408	132	445	144	481	156	515	167	509	165	559	181	545	177	447	145	440	143
Other Social Sciences	271	100	255	94	322	119	334	123	280	103	318	117	374	138	367	135	374	138	243	90	245	90
Sub-total Social Sciences	2,643	100	2,932	111	3,263	123	3,448	127	3,518	133	3,742	142	3,851	146	3,945	149	3,846	146	3,676	139	3,691	140
Total Human Sciences	6,333	100	6,943	110	7,572	120	7,769	123	7,864	124	8,099	128	8,218	130	8,163	129	8,010	126	8,040	127	8,141	129
Agriculture	269	100	257	96	248	92	214	80	176**	65	230	86	260	97	245	91	245	91	241	90	272	101
Biology, Botany, Zoology	823	100	795	97	693	84	730	89	680	83	688	84	642	78	678	82	706	86	734	90	769	93
Other Biological Sciences	130	100	182	140	172	132	188	145	166	128	195	150	225	173	193	148	139	107	151	116	180	138

TABLE 23 (Continued)
FULL- AND PART-TIME DOCTORAL ENROLMENT BY FIELD OF STUDY AND SELECTED DISCIPLINES, 1970-71 TO 1980-81

	1970-71		1971-72		1971-73		1973-74		1974-75		1975-76		1976-77		1977-78		1978-79		1979-80		1980-81	
	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index
Sub-total Agriculture & Biological Sciences	1,238	100	1,234	100	1,113	90	1,132	91	1,022	83	1,113	90	1,127	91	1,116	90	1,090	88	1,126	91	1,221	100
Engineering	1,462	100	1,423	97	1,440	98	1,335	91	1,278	87	1,252	86	1,257	86	1,243	85	1,164	80	1,076	74	1,178	81
Health Sciences	791	100	686	87	646	82	586	74	558	71	589	74	573	73	614	78	702	89	760	96	804	102
Mathematics	642	100	659	103	672	105	598	93	543	85	543	85	547	85	528	82	485	76	465	72	306	48
Chemistry	1,032	100	961	93	889	86	763	74	683	66	659	64	644	62	644	62	625	61	653	63	647	63
Geology	244	100	253	104	242	99	242	99	253	104	268	110	260	107	252	103	234	96	263	108	244	100
Physics	721	100	697	97	581	81	508	70	496	69	489	68	492	68	475	66	476	66	467	65	475	66
Other Mathematics & Physical Sciences	104	100	91	83	117	112	140	135	117	112	133	128	92	88	70	67	64	62	122	117	233	224
Sub-total Mathematics & Physical Sciences	2,743	100	2,661	97	2,501	91	2,251	82	2,092	76	2,092	76	2,035	74	1,969	72	1,884	69	1,970	72	1,905	69
Total Sciences	6,234	100	6,004	96	5,701	91	5,304	85	4,950	79	5,046	81	4,997	80	4,942	79	4,840	78	4,932	79	5,108	82
Total	12,567	100	12,947	103	13,272	106	13,073	104	12,814	102	13,145	105	13,215	105	13,105	104	12,850	102	12,972	103	13,249	106
Not Specified	56	100	53	95	152	271	61	109	302	539	37	66	45	80	66	118	63	112	56	100	33	59
Grand Total	12,623	100	13,000	103	13,424	106	13,134	104	13,116	104	13,182	104	13,260	105	13,171	104	12,913	102	13,028	103	13,282	105

Source: Belliveau, Kealey and von Zur-Muehlen. *Doctoral enrolment and graduation patterns at Canadian universities during the seventies and their implications for the eighties: a statistical review by discipline.* Ottawa, Statistics Canada, 1982, p. 35; and further data prepared by Statistics Canada for the Commission, 1983

TABLE 24

LEGAL STATUS OF FULL-TIME DOCTORAL ENROLMENT BY FIELD OF STUDY, 1972-73 TO 1981-1982

Percentages

	Canadian Citizens		Permanent Residents		Foreign Students	
	1972-73	1981-82	1972-73	1981-82	1972-73	1981-82
Education	69.9	75.1	21.1	9.6	9.0	15.3
Fine and Applied Arts	75.9	68.9	22.2	17.8	1.9	13.3
Humanities	56.4	69.3	31.4	10.6	12.4	20.1
Social Sciences	59.9	64.3	28.5	9.6	11.6	26.1
Agriculture & Biological Sciences	53.0	70.1	32.9	4.8	14.1	25.1
Engineering	33.8	39.4	44.9	10.5	21.3	50.1
Health Sciences	61.3	76.3	30.2	6.5	8.5	17.2
Mathematical & Physical Sciences	45.4	56.7	41.6	6.4	13.0	36.9
Total	53.0	64.3	33.9	8.7	13.1	27.0
Number Reported	N/A	6,515	N/A	880	N/A	2,737

Source: Belliveau, Kealey, and von Zur-Muehlen, *Doctoral enrolment and graduation patterns at Canadian universities during the seventies and their implications for the eighties: a statistical documentation by discipline.* Ottawa, Statistics Canada, 1982, p. 13; Statistics Canada. *A statistical portrait of Canadian higher education:* Ottawa, 1983, Table 16, p. 40.

TABLE 25
EARNED DOCTORAL DEGREES BY FIELD OF STUDY AND SELECTED DISCIPLINES, 1969-70 TO 1983

	1969-70	1970-71		1971-73		1972-73		1974		1975		1976		1977		1978		1979		1980		1981	1982[1]	1983[1]
	No.	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	Index	Index	Index
Education	78	77	100	109	142	122	158	128	166	172	223	157	204	173	225	157	206	193	250	205	266	199	200	195
Fine and Applied Arts	3	6	100	6	100	5	83	4	67	7	117	5	83	11	183	7	117	11	183	9	150	7	5	5
Classics	4	3	100	14	467	7	233	7	233	7	233	10	333	3	100	7	233	11	367	10	167			
English	50	49	100	48	98	64	128	66	132	79	161	79	161	64	137	74	151	82	167	63	137			
French	15	18	100	20	111	21	117	25	139	27	150	19	106	34	189	18	100	27	150	16	67			
Other Languages and Literature	22	28	100	17	61	23	82	42	150	32	114	33	118	35	125	37	132	29	104	32	96			
History	29	36	100	49	136	35	97	47	131	61	169	55	153	52	144	48	133	54	150	39	105			
Philosophy	22	34	100	31	91	43	126	50	147	44	129	33	97	35	103	48	141	56	165	41	121			
Religious Studies	12	14	100	23	164	35	250	25	179	25	179	18	129	29	207	26	186	17	121	26	136			
Other Humanities	-	-	-	-	-	-	-	2	-	2	-	1	-	1	-	1	-	15	-	15	-			
Sub-total Humanities	154	182	100	202	111	228	125	264	145	277	152	248	136	256	141	259	142	291	160	242	133	291	300	310
Anthropology (incl. Archaeology)	6	7	100	4	57	10	143	15	214	9	129	22	314	15	214	24	343	23	329	19	271			
Management and Admin. Studies	1	4	100	6	150	10	250	10	250	19	475	12	300	10	250	19	475	18	450	16	400			
Economics	14	24	100	21	88	39	162	39	162	52	217	77	321	54	225	60	250	60	230	62	258			
Geography	14	18	100	22	122	24	133	31	172	39	217	28	156	30	167	31	172	28	136	24	133			
Law	3	15	100	10	667	5	33	4	27	7	47	9	60	5	33	4	27	6	40	3	26			
Political Sciences	7	9	100	16	178	20	222	19	211	20	222	19	211	25	278	26	289	30	333	19	211			
Psychology	86	119	100	109	92	121	102	133	112	148	124	153	129	142	119	169	142	154	128	184	155			
Social Work	2	1	100	1	100	6	600	1	100	7	700	5	500	8	800	4	400	3	300	3	300			
Sociology	6	9	100	15	166	23	255	31	344	41	455	44	511	43	477	57	633	44	344	58	644			
Other Social Sciences	27	23	100	27	117	32	139	42	183	30	130	39	170	25	109	29	126	26	113	18	65			
Sub-total Social Sciences	166	229	100	231	101	290	127	325	142	372	162	410	179	357	156	423	185	397	174	403	176	414	420	430
Agriculture	67	46	100	52	113	64	139	49	107	39	85	39	85	50	109	51	110	49	107	49	107			
Biology, Botany, Zoology	126	152	100	159	105	149	98	152	100	159	105	125	821	137	90	146	96	147	97	120	79			
Other Biological Sciences	42	38	100	29	76	37	97	46	121	43	113	35	92	41	108	42	111	28	74	41	108			
Sub-total Agriculture & Biological Sciences	235	236	100	240	102	250	106	247	105	241	102	199	84	228	97	239	101	224	95	210	89	219	225	230

TABLE 25 (Continued)

EARNED DOCTORAL DEGREES BY FIELD OF STUDY AND SELECTED DISCIPLINES, 1969-70 TO 1983

	1969-70	1970-71		1971-73		1972-73		1974		1975		1976		1977		1978		1979		1980		1981	1982[2]	1983[3]
	No.	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index	No. Index	No. Index	No. Index
Engineering	188	225	100	261	116	299	133	301	134	227	101	189	84	203	90	224	100	231	103	191	85	210	220	230
Health Sciences	95	142	100	151	106	178	125	153	108	122	86	103	74	105	74	125	88	134	94	137	96	108	110	110
Mathematics	61	85	100	97	114	113	133	101	118	92	108	75	88	98	115	91	107	61	72	46	54			
Chemistry	209	241	100	221	92	225	93	200	83	167	69	155	64	117	49	133	55	110	46	145	60			
Geology	37	38	100	43	113	39	102	30	79	34	89	48	126	47	124	53	139	46	171	42	111			
Physics	123	136	100	132	97	150	110	129	95	108	79	91	67	88	65	95	70	88	65	63	46			
Other Mathematics & Physical Sciences	6	28	100	31	111	30	107	14	50	21	75	11	39	19	68	13	46	17	61	38	136			
Sub-total Mathematics & Physical Sciences	436	528	100	524	99	557	105	474	90	422	80	380	72	369	70	385	73	322	61	334	63	338	340	350
Total (in study)	1,355	1,625	100	1,724	106	1,929	119	1,896	117	1,840	113	1,693	104	1,702	105	1,819	112	1,803	111	1,738	107	1,789	1,820	1,860

Source: Belliveau, Kealey, and von Zur-Muehlen, *Doctoral enrolment and graduation patterns at Canadian universities during the seventies and their implications for the eighties: a statistical documentation by discipline*; Ottawa, Statistics Canada, 1981 p. 51; and tabulations provided by Statistics Canada to the Commission, 1983; data for 1981, 1982, 1983 from *Advance statistics of education, 1982-83*. Ottawa, Statistics Canada, 1982, Table 12, p. 23. (Cat. 81-220).

1. Preliminary
2. Estimated
3. Forecast

to our scientific and industrial research capacity, has been precipitous. The number of doctorates awarded in chemistry declined from 241 in 1970-71 to 145 in 1980, and in physics from 136 to 63. By contrast, the number of doctorates awarded in education grew from 77 to 205 during the same period. The proportionate increases in doctorates awarded was even higher in some of the social sciences: in sociology from 9 to 58; in economics from 24 to 62; in political science from 9 to 19.

During the university hiring boom of the 1960s and the early 1970s, Canada relied heavily on the import of Ph.D.s in such disciplines as sociology and economics and was relatively less dependent in the sciences, although still hiring extensively abroad in these areas, too. As Table 5 "Origin of Earned Doctorates by Country and Selected Disciplines, 1973" shows, 78 per cent of the Ph.D.s in economics in Canada, and 77 per cent of the doctorates in sociology, at that time, had been earned at foreign universities. Obviously, there has been progress in developing our own productive capacity in these areas and it ought now to be possible for Canada to be less dependent on imported highly qualified manpower in these disciplines.

Projections for doctoral degrees continue to forecast growth in the numbers to be awarded in the humanities and social sciences, and little change in the number to be awarded in the health sciences and natural and applied sciences. Thus, the current and projected supply of Ph.D.s is repeating a cycle of surpluses and shortages. On the one hand, the humanities and some of the social sciences may be faced with increasing surpluses, at least in relation to the traditional job markets, especially if Ph.D. holders in these areas continue to look to the universities for employment. On the other hand, it seems highly improbable that the sciences and some applied social sciences, such as management and administrative studies, will produce enough doctoral graduates to meet the projected needs for highly qualified personnel in these fields.

The survey conducted by Statistics Canada of the postgraduation plans of 1981 Ph.D. graduates confirms this prognosis.[5] Of the doctoral graduates in that year, 19 per cent in the humanities and 10 per cent in the social sciences were not employed and seeking work at the time of their graduation, as opposed to about 4 per cent in mathematics and the physical sciences and in the health sciences and less than 6 per cent in engineering and the applied sciences. Of those who had found employment, a much higher proportion in the humanities (86%) and social sciences (68%) had done so in universities and other educational institutions than was the case in engineering and applied sciences (25%), mathematics and the physical sciences (38%), and agriculture and the biological sciences (43%). The dependence of many doctoral graduates on traditional academic job markets is further reflected in the fact that of those not yet employed 94 per cent in the humanities were seeking work in the universities, as opposed to 54 per cent in agriculture and the biological sciences, 50 per cent in engineering and applied sciences, 60 per cent in mathematics and physical sciences and 50 per cent in the social sciences.

The Ph.D. dilemma of a mis-match between the supply and demand for doctoral graduates continues unabated, although the terms of the dilemma have changed from the 1960s to the 1980s. A review of the enrolment data in Canadian doctoral programmes points to the absence of long-term and orderly planning in this field and underlines the need for such planning. Canadians are still a long way from realizing the fundamental importance of highly qualified manpower to the well-being and progress of almost every facet of the life of their society. Both more graduates, and more balance in the production of graduates, are needed if this country is to meet its present and future requirements in teaching and research and, indeed, in many other areas of activity.

B. AVOIDING THE LOSS OF AN ACADEMIC GENERATION

The preceding review of some of the shortages and imbalances in the supply of Canadian doctoral graduates, and the examination in the next chapter of problems arising from the age-structure of the current professoriate, point to the conclusion that Canada may find itself, because of lack of planning and organization, unable in the short-term to make full and proper use of the talents of many capable and highly qualified graduates. In particular, many of those who aspire to an academic career in university teaching and research may be denied the opportunities that, with more foresight, could well be theirs. Ironically, in the longer term the country's needs for doctoral graduates in many fields, including university teaching, may not be met.

The reasons for this situation are many and complex, differing in their causes and in their effects from discipline to discipline. Moreover, the patterns that emerge are not precisely the same in all sections of the country. Nevertheless, some general conclusions can be drawn from an examination of the available evidence and from the experience to date. If appropriate and well-concerted action is undertaken without further delay, it is still not too late to prevent the wastage of an academic generation, with the loss this implies for many gifted individuals and for society as a whole.

In most of the social sciences and humanities, there are large numbers of well-qualified Canadians interested in university teaching and research who are now excluded from university teaching. This is not the result of any plot against them; it is the consequence of demographic factors which were not generally foreseen and over most of which postsecondary institutions have little or no control.

The first of these is the fact that recent and current doctoral graduates in the social sciences and humanities are coming on to the academic job market at a time when enrolments in the arts generally are levelling off after a period of decline (Table 15) and when at least some projections anticipate the possibility of further decline in these areas. Secondly, these graduates are following, in a chronological sense, a large number of academics who were hired by the

universities when expansion was the norm. The current professoriate is large and it is made up primarily of persons in their middle years. Given current economic and enrolment conditions there is little likelihood of extensive new hirings in these academic areas.

On the other hand, in the sciences and in disciplines such as mathematics and computer science, as well as in some professional areas such as business, management and administrative studies, the situation is the reverse. There are too few qualified Canadians available for the university positions that are open. Given the strong student demand in some professional areas, the human resources required for teaching in these areas are spread desperately thin. The difficulties of this situation are increased by the fact that, at the same time, there is a pressing need in the sciences and in many of the professions for highly qualified personnel to meet the wider needs of society, including the attainment of the national goals set for research and development, a topic dealt with in a subsequent chapter.

The Ph.D. graduation patterns have contributed to the shortages and imbalances in the supply of highly qualified personnel. As Table 25 illustrates, there has been a decline in the number of doctorates in some of the very fields in which Ph.D.s are now in high demand. Conversely, and paradoxically, there has been an increase in the production of doctorates in those fields in which there is an apparent oversupply of graduates, at least in relation to the academic job market. The lack of equilibrium is clear.

As far as the social sciences and the humanities are concerned, there are only two long-term solutions to this dilemma. Canadian universities can severely reduce the numbers enrolled in doctoral programmes in these fields, or new job opportunities must be found for doctoral graduates both in the academic world and, by radically changing attitudes and employment patterns, in the non-university labour market.

If Canada decides that the best way to alleviate the problem of a supposed over-production of doctorates in the social sciences and humanities is to limit admissions in order to bring supply and demand into better balance, it must realize that there are a number of dangers inherent in such a plan. For example, as shown in the next chapter dealing with the age-structure of the present professoriate, the replacement requirements for university professors in Canada will increase very substantially in the 1990s. The present levels of limited production of doctorates, even if maintained, will not be sufficient to meet this longer term need. A cut in the production of highly qualified graduates, because of the current short-term situation, would virtually guarantee that Canada would again in the 1990s, as in the 1960s and 1970s, have to import from other countries large numbers of university teachers and of highly qualified graduates to meet a great many needs, including those of research and the educational system. Canada would once more be in the position of having to recruit highly qualified personnel from other, often less-developed, countries having denied to

its own capable young people an opportunity to obtain the qualifications and experience required.

Moreover, cuts made now in our doctoral programmes might damage or destroy the capacity of our post-graduate educational system to prepare highly qualified manpower, just at the point when the country is beginning to benefit from its huge national investment in the creation of this system. The health and quality of the broader educational system would also be damaged by cuts in the graduate programmes. Post-graduate education is important to the intellectual vitality of Canadian scholarship and to the development of academic disciplines. At a time when the professoriate could stagnate due to lack of mobility, few infusions of younger talent, and lack of fresh opportunities, post-graduate programmes provide a much needed source of intellectual stimulation which cannot readily be found in any other kind of teaching.

There are many other considerations, of course, and one of the more obvious of these is that if the universities fail to deal with the current problems of imbalance in the production of their graduate schools then governments, in the name of society, may intervene even more sharply to direct the use of the limited financial resources available for the development of specialized manpower. Such state intervention might appear, for a while, to work to the advantage of the sciences and engineering, given their importance to the attainment of government goals for R and D and the present undersupply of doctorates in those fields. Conversely, government intervention to this end would probably have adverse effects for the humanities and social sciences. The larger truth, however, is that such state intervention could well be disastrous for the health and freedom of post-graduate education, whatever the field. Some short-term problems might be solved, but at the expense of academic freedom and the long-term well-being of the university system. If governments attempt to adjust the policies and priorities of Canadian universities the consequences could be grave. It would be infinitely preferable for Canada's postsecondary institutions, recognizing that the dollars available to support the expensive educational establishments created over the past thirty years are limited, to work with one another and with government to remedy the current short-term labour market imbalances and to meet the long-term need for highly qualified personnel and for a strong Canadian postsecondary educational system.

Events are moving at such a pace that the universities and colleges may find that there is little time left to make their case with political decision-makers or with the public. In some provinces, preliminary consideration is being given to the possibility of more direct government control of university finances and programmes. The federal government, too, in reviewing its programmes of support for higher education is being urged by some to consider a more direct use of its financial power as a means of shifting and shaping university priorities in order to address various manpower problems. The very policies and instruments that helped to create the higher education boom of the 1960s, including formula financing, provincial and national student awards

programmes, government contracts, and the operations of the granting councils, as well as massive new direct financial grants, could all be used in such a way as to entice students into some fields or to discourage them from entering others, whether or not this best related to their own interests and capabilities. The chief victims of such *dirigisme*, in addition to the students themselves, are likely to be the humanities and social sciences, and the spirit of free inquiry.

The present apparent imbalance in the production of doctoral graduates, resulting in an apparent oversupply of Ph.D.s in the humanities and social sciences, poses a serious threat to graduate work in these academic fields and to those who work in them. With this threat in mind, the Commission would like to make three points. First, the importance of maintaining the post-graduate training capacities of our universities cannot be overstressed, even in those areas in which there are at present apparent imbalances of supply over demand. It would be a monumental mistake to shrink the system to such an extent that during the next ten years graduate programmes in those fields will languish or disappear. If that happens we shall not be able to meet the increased demand for Canadian professors which will become acute in the 1990s. Nor will our universities be able to meet the broader needs of society for graduates and for research in these areas. Graduate programmes need a certain critical mass of faculty and of students to thrive intellectually. The notion of a community of scholars is more than a platitude. The term is an expression of the need to have a community that can provide the opportunities for the critical discussion, intellectual challenge, and co-operative endeavour that are necessary for the communication and advancement of knowledge.

Second, the importance of the humanities and social sciences to society generally, as well as to the universities, needs a fresh emphasis. The development of graduate programmes and the preparation of highly qualified manpower in these fields is a contribution to the well-being of the whole of society. This will be even more evident as society comes to recognize that graduates in these fields can make and are making contributions to society not only in academe but in government, business, and industry and, indeed, in almost every area of the community's life. The value of their contribution cannot be readily quantified by cost-benefit analysis, nor can it be measured neatly as a social investment. It should be self-evident that the development of such a pool of talent benefits the whole of society. Governments, businesses, industries, and Canadian endeavours in every field need to be encouraged to use the talent our universities generate, not as failed academics or cast-offs, but as valued contributing members of society. In short, we need to educate Canadians about the value of education, not only in an economic sense but in social, cultural, and intellectual terms.

The third point that the Commission must make is that, while much can be done to avoid the loss of an academic generation, it is important for those who pursue graduate studies in some fields to look soberly, at the academic job

market and in doing so to tailor their expectations to existing realities. As a knowledgeable observer has noted:

> Seeking jobs outside the academy can be a devastating experience as the unemployed student flounders in an environment foreign to his background and interests. The first priority, therefore, should perhaps be a concerted effort to make all students admitted to humanities graduate departments aware that they may not find academic employment. Without extolling excessively the virtues of non-academic work or advocating it as the new norm, we need nevertheless to instil an awareness of the real employment prospects in our students from the start and to find ways to prepare them psychologically for their permanent departure from academia. For as long as academics and students refuse to admit that the outside world exists in a meaningful way rather than as a *pis aller* until academic work turns up, then our future students will constitute an "overeducated" and underemployed intellectual proletariat.[6]

This must lead, of course, to a rethinking of the value and importance of a Ph.D. and of an M.A., and to a review of the curricula in both undergraduate and graduate programmes. Given the realities of the academic job market, it may be appropriate to adjust and develop the curriculum and programmes in some of the humanities and social sciences. Among the kinds of changes that could be considered are the development of joint programmes with schools of business, increased emphasis on applied skills such as editing and translating, and the possibility of including basic courses in management and administration in undergraduate programmes. Such changes will have to be introduced in a manner that will preserve the disciplinary base of a student's education while at the same time providing wider career options and the development of additional "marketable" skills.

Two basic challenges must be met in the current situation. First, ways must be found to avoid the potential weakening and even destruction of graduate studies that the present job crisis could occasion. As the academic job market tightens, it is entirely possible either that students will begin to turn away from graduate studies in the humanities and social sciences, or that the state will intervene to halt what it sees as the overproduction from these graduate departments and to channel funds into other areas where the demands for highly qualified graduates are more apparent at present.

Second, ways must be found to ensure that the young scholars interested in university teaching and research who are the current "oversupply" are not entirely lost to academe. Statistics indicate that graduates require an average of about five years following the completion of their undergraduate degree to complete the requirements for a Ph.D. degree. Students in the humanities and fine and applied arts, showing a median of six years of registration, require still longer.[7] Thus, a large number of students are already "in the doctoral pipeline"

in addition to the many who have been awarded their Ph.D. over the past few years in these humane subjects. We need to develop plans which will ensure that the knowledge and abilities of graduates who are now being trained in these fields will not be squandered.

But, beyond this, we need, despite present discouragements, to be preparing now the increasing numbers of highly qualified graduates who will be needed to meet the requirements of our society in the not-too-distant future. To take but one example, it requires a decade normally, including post-doctoral work, to train a university faculty member.[8] Consequently, the time to start that process to meet the projected acute needs for such personnel in the 1990s is now. Surveying the consequences for higher education of the threat of declining enrolments combined with mounting economic problems, the Science Council concluded at the end of the 1970s that the stage was set "for a series of events which, taken together, could very well cause irreparable damage to the quality and effectiveness of university research in science and engineering".[9] It in no way takes away from the seriousness of the threat to science and engineering to suggest that the dangers in the present situation are even greater for the humanities, social sciences, and related fields.

There are no easy answers to these problems. No matter what is done, there will be casualties in the academic skirmishes that will have to be endured over the next few years given the conditions in which we find ourselves. The following chapter explores possible ways and means of alleviating the problems arising from the age-structure of the professoriate, a question that bears directly upon the problem of finding opportunities for current doctoral students and recent doctoral graduates. Obviously, arrangements to facilitate voluntary early retirement, to encourage mid-career changes, and to create fresh opportunities for members of the current professoriate can have an effect on the job situation for younger scholars by opening up positions otherwise closed. However, consideration should also be given to initiating new programmes that will provide opportunities to make use of the education and talent of young graduates, as well as of scholars in their middle and senior years.

C. THE NEED FOR A NATIONAL STRATEGY AND SOME PROPOSALS

A review of the imbalances and roller-coaster data in Canadian post-graduate education points to the absence of long-term and orderly planning in the whole field of highly qualified manpower and to the urgent need for more and better planning in future. It also underlines the fact that Canadians are still a long way from realizing the fundamental importance of highly qualified manpower to the well-being and progress of almost every aspect of their society. The development of a wider public understanding of the vital role played in society by higher education should now be the first priority of the universities and colleges of Canada. With such a wider understanding would come a

recognition that, far from permitting any reductions and cut-backs in this area, the country should be pursuing a policy of steady and well-planned expansion in post-graduate work and, indeed, in the entire range of postsecondary education. More graduates and more balance in the production of graduates are needed if the country is to meet its requirements in teaching and research and in a great many other areas of activity. The case must be made for the value to society as a whole, as well as for the individuals concerned, of a better educated citizenry. Within this broader argument, the point must also be made that there is much to be done in teaching and research about Canada itself in order that the country can manage its affairs to better advantage and contribute more fully to the international community of knowledge.

To this end, the Commission calls for a national strategy for higher education and research in which the universities and colleges and the federal and provincial governments and their agencies must each play their appropriate, co-operative role. The O.E.C.D. Commissioners in their perceptive report on Canadian education have commented upon the remarkable absence of such a strategy and the even more remarkable absence of any informed public discussion of the situation.[10] It is time for this extraordinary situation to be remedied.

The proposed national strategy for postsecondary education and research should have three principal objectives: first, to foster a better and more widespread understanding of the value of higher education; second, to seek a fuller participation in postsecondary education by Canadians, in particular by those age groups and parts of society that have hitherto been under-represented; third, to develop a nation-wide support system for post-graduate education that will meet the future requirements of an increasingly complex society.

The first two objectives go closely together. Increased public awareness of the value and significance of higher education has become, in the present economic and political circumstances, a pre-condition for fuller participation in university and college education and for further development of the postsecondary system. Such a development would be in the general public interest. It would also be in the interest of individual citizens by opening up the opportunity for them to pursue their own development, through education, to the full extent of their interests and capabilities. The resulting expansion and re-energizing of the educational system would, in turn, open up many opportunities for those well-qualified graduates who, under present conditions, face the prospect that their education and talents will be largely unused. Canadian postsecondary education can and must be put in motion again. But in order for this to happen, the case for higher education must be made by the universities and colleges and by those who should speak for them to the public and in government.

A master plan is needed to improve postsecondary enrolment levels and to provide greater service through higher education to many different groups in society. The defeatism engendered by such newspaper headlines as "66% will

discover university degree useless, report says" must be dispelled.[11] The discouragements and uncertainties reflected in the wavering participation rate of the traditional 18 to 24 year old clientele must be countered. But, beyond this, it is time for a wider conception of the clientele for universities and colleges — not just the well-scrubbed (or elaborately unscrubbed) 18 to 24 year old progeny of the well-to-do and middle-classes. To a much greater extent than is now the case, higher education can and should be opened up to the disadvantaged, to the less well-to-do, to women, to all age groups, to the Native peoples, to the cultural minorities, and to the many other groups and elements in society that are under-represented in our postsecondary institutions. There is need for continuing education, adult education, and professional and vocational re-education programmes on a scale as yet unimagined by our postsecondary system. In order to meet these needs, the universities and colleges will require the services of many of their graduates who are at present unable to find employment opportunities in teaching and research.

It is surely no longer possible to ignore the evidence that the present patchwork of student aid plans is not adequate, that proportionately far fewer children from low-income backgrounds are receiving the benefits of higher education. A recent study at the University of Toronto, for example, demonstrated that fewer than 8 per cent of the University's students come from families in the lowest-earning quarter of the population. More than one-half the students from the metropolitan Toronto area are from families in the top income-earning quarter of the population. There is now a plethora of studies to confirm this phenomenon at many universities and in all regions of the country.[12]

In the face of this fact, the Commission calls for a comprehensive, nation-wide postsecondary student assistance programme. The programme should make it possible for all those with the requisite ability to pursue their studies in their field of interest wherever in Canada these studies are offered. Such a programme should recognize the basic educational rights of Canadians to equity and to reasonable access to postsecondary education, regardless of their place of residence or socio-economic background. It is time, the Commission believes, for a genuine national effort to remove the social and psychological barriers, as well as the economic barriers, to higher education. To this end, the Commission recommends a National Postsecondary Educational Opportunities Programme, initiated and funded by the federal government following appropriate consultations with the provinces and with the universities and colleges of Canada. Initially, the Programme should bring under one umbrella the various student loan and grant programmes of the federal government, increase the present loan limits under the Canada Student Loan Plan, and add to this Plan a provision for federal grants. The Programme could be planned and administered in association with the several provincial student aid plans.

Despite jurisdictional sensitivities, the National Postsecondary Educational Opportunities Programme should not be unwelcome to the provinces since it

would respond to the needs of their students, help them to reduce some of their student aid costs, and bring a badly needed measure of equity and rationalization to the crazy-quilt pattern of student aid across the country. The introduction of such a Programme would mean that the provisions to facilitate the national mobility of students recommended by the Commission in Volume I, in its comments on the desirability of a more national approach to cross-registration, would be supported by a national student assistance scheme operating equitably from coast to coast. The financial provisions of the Programme should be accompanied by provisions to ensure adequate counselling and information services to meet the social and psychological problems that are now operating as deterrents for many of those who have the capacity to benefit from higher education.

As part of National Postsecondary Educational Opportunities Programme, or as an alternative to it, there may be proposals for the federal government to make special loans or grants to students in certain academic fields, effectively creating a differential fee level in order to attract students into those faculties and departments where there is a perceived national need for highly qualified manpower. The Commission wishes to sound a note of caution about this approach to the problems of student aid and manpower planning. Such proposals, if pressed very far, could distort the balance and development of Canadian higher education and would treat students simply as a human capital commodity to be shunted around as short-term needs, professional fashions, or political expediency might dictate. The notion of monitoring and signalling areas of need for highly qualified manpower is a good one. But it should not then be tied to a system of economic incentives and disincentives which would interfere with the basic educational rights of the students or compromise the academic freedom of the universities.

The third major component in the national strategy for higher education should be the development of a nation-wide support system for post-graduate education and research that can meet the future requirements of an increasingly complex society. One of the objectives of this component in the national strategy should be the opening up of employment opportunities for the many highly qualified graduates who at present face the prospect of being unable to apply their knowledge and skills in a useful way, to the best advantage both of themselves and of society. At a time when the loss of a significant portion of an academic generation is being so widely predicted, and feared, a well-planned nation-wide support system for post-graduate education and research would need to call upon the talent of the country to achieve its objectives.

Again, as with the first two components in the national strategy, the goal of developing a more comprehensive and rational Canadian support system for graduate education and research would call for a more real and continuing consultation and co-operation between the universities and colleges and the federal and provincial governments and their agencies than is now the case. A consultative forum is required for this purpose. The Commission would

therefore propose the establishment of a Consultative Committee on Postsecondary Education in which representatives of the federal and provincial governments and of the postsecondary institutions meet at regular intervals to discuss problems and to explore the possibility of plans and programmes that can meet the growing needs of Canadians in the fields of higher education and research.

In making this proposal the Commission is aware, of course, of the existence of a variety of interprovincial, federal-provincial, and academic organizations that work to this end, including, for example, the Council of Ministers of Education of Canada and bits and pieces of federal-provincial consultative apparatus, as well as national voluntary associations such as the Association of Universities and Colleges of Canada and the Association of Canadian Community Colleges. The plain truth, however, is that these bodies have not yet developed procedures and mechanisms remotely adequate to meet the needs of the country for serious and continuing consultation and co-operation in the field of higher education. It is time for this fact to be faced and for a fresh start to be made with a new mechanism that allows the common concerns of Canadians in this vital area to be discussed in a sensible way with all the relevant players at the table.

Many of the ingredients of a national support system for post-graduate education and research are already in place. This is perhaps particularly the case in the sciences, thanks to the foresight and tenacity of the National Research Council and, more recently, of the Natural Sciences and Engineering Research Council.[13] Despite the achievements to date, however, there is room to review, to reassess, to expand, and to supplement the programmes now in place for the support of postgraduate education and research in the sciences. N.S.E.R.C.'s excellent university research fellowship programme, for example, was able to make awards to only 62 candidates out of nearly 300 applicants for 1982-1983. Some of the universities are showing increasing reluctance to participate in the programme because of their own financial constraints. The financial value of the fellowships has not been sufficient in many instances to compete with salaries paid to graduates in the private sector in such fields as engineering. It may be necessary to consider ways and means to make the programme more attractive both to individual scholars and to the universities. Similarly, N.S.E.R.C.'s imaginative programme of industrial research fellowships, designed to expand industrial R and D facilities and capacities, may need more support to make it more serviceable both to researchers and to corporations. So, too, it may be necessary to review the level of financial support for N.S.E.R.C.'s programme of Visiting Fellowships in Government Laboratories.[14]

The Research Associates Programme of the National Research Council, established in 1975 to replace an N.R.C. postdoctoral programme dating back to 1948, provides welcome opportunities for recent graduates to gain experience in N.R.C. laboratories for periods lasting from two to five years. For 1982-83, there

were nearly 1,000 applicants for 50 awards. There may be a case for broadening the programme to include other appropriate government laboratories, in addition to those of the N.R.C.

Extensive and elaborate though it is, the programme of grants and awards available from the Medical Research Council of Canada to support graduate education and research is still far from adequate in many fields.[15] The comparative absence of health sciences research relating to the North, for example, has been noted in Volume I of the Commission's report and elsewhere.[16] The growing vigour and resources of a number of provincial health sciences research agencies point also to the importance of co-operative arrangements in this field.

In the humanities and social sciences much less has been done than in the sciences to support graduate studies and research. The need for a nation-wide support system for graduate education and research in these fields is correspondingly greater and even more urgent. The dimensions of the imbalance in the support given to the human sciences as opposed to the natural sciences have been noted by André Fortier, former President of the Social Sciences and Humanities Research Council of Canada.[17] In the universities 2.5 times more is spent on the natural sciences than on the human sciences. At the same time, the natural sciences receive about six times more outside funding than the human sciences. Yet a much larger proportion of the social sciences and humanities research is done in the universities than is the case in the sciences.

Such discrepancies in the support given to the humanities and social sciences as opposed to the natural sciences are noted not in any carping spirit or to take anything away from the importance and clear need for more support of the natural sciences, but simply to underline the particular need for a major catch-up in the support given to the humanities and social sciences. Although the fact may be sometimes less obvious to government and the public, our society is fully as much in need of research in these fields as in the sciences. Indeed, our ability to cope with developments in science, technology, and the material world will depend upon the knowledge, understanding, and skills developed in the humanities and social sciences.

There are a number of programmes that urgently need more support than the S.S.H.R.C. is at present able to give to them, as well as a range of desirable new programmes, which would do much to serve the public interest by opening up opportunities for highly qualified graduates. First amongst these is the need for more support for independent research, for free inquiry to enable competent scholars to pursue research interests which in their own professional judgement and the judgement of their peers meet valid academic criteria. But there is need, also, for more support for post-graduate education itself and for the further development of programmes that will foster the skilled and qualified human resources the country so badly needs.

The post-doctoral and doctoral programmes of the Council merit enlargement. It is not merely that some who deserve such fellowships do not

always receive them. There are many more who would benefit from the opportunity if encouraged to apply. The Special M.A. Scholarship Programme for the human sciences is presently limited to one hundred awards annually. Yet over 60,000 students completed their Bachelor's degree in the human sciences (education, fine and applied arts, humanities and social sciences) at Canadian universities in 1980, representing 70 per cent of the total of Bachelor's and first professional degrees awarded.

Among possible new programmes, consideration should be given to the creation of a Research Associates Programme that would place highly qualified graduates in support positions in postsecondary and kindred institutions.[18] It would also be timely to establish a programme in the humanities and social sciences parallel to the Industrial Research Fellowship Programme of N.S.E.R.C. to foster the development of research activity and research infrastructure outside the universities. Such a Private Sector Research Fellowship Programme would support both research and the good use of highly qualified graduates in corporations, organizations, and areas of activity where there has been as yet little understanding of the role and value of research in the humanities and social sciences. It would also be a useful step towards broadening among university graduates the conception of appropriate fields, beyond academe, in which to apply their knowledge and skills.

Consideration should be given, as well, to the creation of a programme of Prestige Fellowships for more senior scholars in the humanities and social sciences, analogous to some of the opportunities that exist at this level for outstanding scholars in the scientific fields.

Consciously or unconsciously, programmes to support research and the fostering of highly qualified manpower at the post-graduate level have been limited in most instances to those who hold a university appointment. It is time to broaden this concept, and to broaden the clientele, by opening appropriate programmes to qualified independent or private scholars who may have no current association with a university. Indeed, some of those who might contribute to research and to society through such opportunities may never have attended university or had anything directly to do with postsecondary institutions since their student days. Unfortunately, academic snobbery and academic self-interest work against the allocation of support to those who are not university-based, no matter how considerable their promise and talent.

A number of new initiatives should be considered that would bring support to both the natural and the human sciences. The possibility of establishing a National Research Pool for Canada on the Norwegian model deserves exploration. Under this plan, a number of doctoral students identified by the universities would be selected and posted each year to carry on research in academic institutions, government, and the private sector. The National Research Pool would be financed by a variable mix of public funds and funds from the organizations, institutions or corporations directly benefitting from this service.

It is time, also, to give serious consideration to the Centres of Excellence idea, drawing for example on the current Australian experience with this concept.[19] National support for a limited number of carefully selected centres in various fields of research would make possible a concentration of effort to achieve the highest levels of excellence and foster the development of additional research teams to meet the challenge of the highest international standards. The creation of such centres would provide new openings for some of the brightest minds in Canada while enabling the country to contribute more both to its own benefit and to the international pool of knowledge.

There may be room for some wider application, with the co-operation of government and the private sector, of the concept of five-year term appointments that has recently been initiated in the humanities at the University of Toronto through the assistance of a $720,000 grant from the Andrew J. Mellon Foundation. A programme of this sort would make it possible to bring some new faculty into the universities at a time when there are otherwise few openings.

More, better, and more current information about research needs, research interests, and research activities is badly needed. The more ready availability of such information would be of assistance to those now engaged in research and would help many highly qualified graduates who want to find opportunities to apply their skills and to pursue their research interests. It would be in society's interests, as well as being in the interests of the research community, to develop a programme to support the preparation and publication of a series of guides to researchers, research interests, and current research activity in a broad range of research fields.

Finally, it may be suggested that in all such programmes as may be advanced through a national strategy to foster higher education and research, an adequate share of the resources should go towards the study of Canadian subject matter and the Canadian dimensions of research questions. There is no need to become jingoistic or to wave the flag over research activities. But it is surely not unreasonable to endeavour to see that appropriate attention is directed, *inter alia*, to questions of some particular concern to the society that is funding the research.

A national strategy for higher education and research is desirable in itself on many counts. The current prospect of the wastage of the knowledge, skills, and capabilities of a large part of an academic generation underlines the urgency for co-operative action by governments and by educational institutions to put such a strategy in place.

The Commission therefore recommends:

1. the establishment of a national strategy for higher education and research in which the federal and provincial governments and the representatives of the universities and colleges each play their appropriate role;

2. that the national strategy for higher education and research have three principal objectives: first, to foster a better and more wide-spread understanding of the value of higher education and research; second, to bring about a fuller participation by Canadians in the opportunities for post-secondary education; third, to develop a nation-wide support system for postgraduate education that can meet the current and future requirements of an increasingly complex society;
3. that the national strategy include the preparation of a master plan to improve postsecondary enrolment levels by opening up the opportunities of higher education to a much greater extent than is now the case to the many groups and elements in society that are under-represented in the universities and colleges of Canada;
4. that the national strategy recognize the need for continuing education, adult education, and professional and vocational re-training on a scale not yet envisaged by our postsecondary system;
5. that a comprehensive, nation-wide postsecondary student assistance programme be established to make it possible for all those having the requisite ability to pursue their studies in higher education; that this programme recognize the basic educational rights of Canadians to equality of opportunity and to reasonable access to postsecondary education, regardless of their place of residence or socio-economic background; that the programme embody a genuine national effort to remove the social and psychological barriers, as well as the economic barriers, to higher education;
6. that the proposed comprehensive, nation-wide postsecondary student assistance programme be in the form of a National Postsecondary Educational Opportunities Programme, initiated and funded by the government of Canada following appropriate consultations with the provinces and with the universities and colleges; that, initially, the Programme bring under one umbrella the various student loan and grant programmes of the federal government, increase the present loan limits under the Canada Student Loan Plan, and add to this Plan a provision for federal grants to students; that the Programme be planned and administered in association with the several provincial student aid plans; that the financial provisions of the Programme be accompanied by measures to ensure adequate counselling and information services to meet the social and psychological problems that are now operating as deterrents for many of those who have the capacity to benefit from higher education; that the Programme include a provision for grants to disabled students and allowances for students with dependent children;
7. the establishment of a Consultative Committee on Postsecondary Education to provide a continuing forum for representatives of the federal and provincial governments and of the postsecondary institutions to meet at regular intervals to discuss problems and to explore the possibility of

plans and programmes that can meet the growing needs of Canadians in the fields of higher education and research;

8. a review and re-assessment of the programmes now in place for the support of post-graduate education and research in the sciences, including consideration of: an increase in the number and in the financial value of the university research fellowships offered by N.S.E.R.C.; more support for N.S.E.R.C.'s programme of industrial research fellowships; a higher level of financial support for N.S.E.R.C.'s programme of Visiting Fellowships in Government Laboratories; the possibility of broadening the Research Associates Programme of the National Research Council;
9. a review of the programme of grants and awards available to support graduate education and research in the medical sciences and allied fields;
10. a review of the needs in the humanities and social sciences for more support for graduate education and research, including: support for independent research to enable competent scholars to pursue research interests that in their own professional judgement and the judgement of their peers meet valid academic criteria; support for research in selected areas of national interest; possible enlargement of the post-doctoral, doctoral, and Special M.A. Scholarship programmes of the S.S.H.R.C.C.; the creation of a Research Associates Programme and of a Private Sector Research Fellowships Programme by the S.S.H.R.C.C., consideration of a programme of Prestige Fellowships by the S.S.H.R.C.C.;
11. consideration of a number of new initiatives to support the role of highly qualified manpower in Canada, including: the possibility of establishing a National Research Pool for Canada, on the Norwegian model; the possibility of establishing a number of Centres of Excellence, drawing upon the current Australian experience with this concept; the possibility of some wider application, with the co-operation of government and the private sector, of the concept of limited-term academic appointments;
12. development of a programme to make information more readily available about research needs, research interests, and research activities in Canada, including the preparation and publication, at regular intervals, of a series of guides to researchers, to research interests, and to current research activity in a broad range of research fields;
13. that, in all programmes advanced through a national strategy to foster higher education and research, appropriate attention and an appropriate share of the resources go towards the study of Canadian subject matter and to the Canadian dimensions of research questions, when applicable.

Full bibliographical information for citations may be found in the bibliography.

1. The term "Ph.D. dilemma" was applied to the supply/demand situation facing doctoral graduates in Canada by Dr. Max von Zur-Muehlen in "The Ph.D. dilemma in Canada" and in "The Ph.D. dilemma in Canada revisited," and a number of subsequent papers in which further reference is made to this subject by Dr. von Zur-Muehlen.

2. Canadian Association of Graduate Schools. *Statistical report, 1982.* Table 6, p. 41.
3. Canada. Statistics Canada. *Postgraduation plans, 1981,* 28-29 (1982).
4. CAGS. *Statistical report 1982,* Table 10, p. 58.
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7. Canada. Statistics Canada. *Postgraduation plans, 1981,* 42-43. (1982).
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10. OECD. *Reviews:* Canada.
11. *The Globe & Mail,* 26 January, 1982. Headline: "66% will discover university degree useless".
12. In perhaps surprising contrast, figures from the Universities Central Council on Admissions indicate that nearly 20 per cent of those accepted through the Council for entry into a United Kingdom university were from families where the parents were in skilled manual, partly skilled, or unskilled occupations.
13. See, for example, Natural Sciences and Engineering Research Council of Canada. *Scholarships and fellowships guide, 1982/83.* Ottawa, 1982.
14. NSERC. *1982 visiting fellowships.* (1983).
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16. Symons, T.H.B. *To know ourselves,* 179-228.
    — . *Some thoughts on the current state of teaching and research about Northern Canada.*
17. *Agenda,* Autumn 1980.
18. cf. *National Research Council laboratories research associateships, 1984.*
19. Commonwealth Research Centres of Excellence Committee. *Report.*

VII

THE AGE STRUCTURE OF THE PROFESSORIATE AND THE LACK OF JOBS FOR YOUNG SCHOLARS IN CANADA

The most serious problem facing Canadian higher education is the prospective aging of university faculty; its greatest challenge, to avoid the loss of an academic generation.

A. THE AGE DISTRIBUTION OF THE CANADIAN PROFESSORIATE

It is not an exaggeration to say that it will be a disaster for Canada, and for many of its ablest young people, if this country fails to take action to avoid the loss of a significant part of an academic generation. Yet, the data clearly indicate that this is the prospect confronting Canadians, unless well-planned steps are taken to avert it. At the present time and for years to come there will be few university teaching and research appointments available. This situation is unfavourable both for the quality of teaching and for the quality and scope of research. Our universities and colleges will remain intellectually healthy only if they are refreshed and challenged by the jostling of new colleagues and new ideas.

Current economic conditions at many universities have created a climate that often discourages a strong faculty commitment to academic and related public service responsibilities. Cutbacks and the threat of more cutbacks have produced a situation in which the faculty are suffering from a kind of seige mentality, focussed on job security and deteriorating working conditions, that is not conducive to effective performance. Moreover, the increasing stagnation associated with the lack of growth in our universities and colleges is not only unhelpful and demoralizing for the faculty in place, it is also a disheartening denial of opportunity to capable graduate students. Beyond this, an atmosphere is being created in which many promising undergraduates no longer wish to go on to graduate studies or aspire to careers in teaching and research.

In the sciences, as noted in the preceding chapter, the problem is a double one: there is a shortage of young scientists in many fields but there are few university jobs available for those of them who wish to pursue academic careers. There are many employment opportunities of other sorts available, however, as the projected shortfall in Canadian research manpower over the next fifteen years demonstrates.

In the social sciences and humanities the picture is somewhat different. As with the sciences, there are few jobs in the university for young scholars in these fields. But, far from there being a shortage of young Ph.D.s in the social sciences and humanities for employment outside the university, there are large numbers who face the prospect of thwarted ambition and of underemployment despite their advanced educational qualifications and their original hopes to engage in research and higher education.

Recent Ph.D.s and students currently enrolled in graduate work are being caught between two demographic trends. On the one hand, they are part of a generation currently following behind a huge population bulge that has substantially strained the resources of Canadian society. On the other hand, they

are in the vanguard of a population cohort which is much smaller than the one that preceded it. In terms of opportunities within the educational system, the demands for their services will be less than for the preceding generation of university graduates unless there is a change in the circumstances of our teaching and research institutions which will increase the demand for their skills. Those who now occupy university positions are growing older and a higher percentage of the professoriate is tenured. Because these tenured faculty are concentrated in their middle years, there will be limited attrition of university faculty members in the years immediately ahead and, therefore, limited possibilities for the appointment of new professors.

In response to the unparalleled increases in university enrolment arising from the baby boom, the number of full-time equivalent university teachers increased from just under 10,000 in 1962-63 to over 40,000 in 1977-78. As Table 26 shows, Statistics Canada estimates that the number of full-time equivalent teachers reached 41,222 in the 1981-82 academic year. The number of full-time teachers alone increased from 8,000 in 1962-63 (Table 3) to about 32,500 in 1979-80 (Table 9). A good part of this growth is attributable to the expansion of professional and graduate education during this period. Despite the large increase in the number of students, there was a substantial decline in the student-teacher ratio from 15.6 down to 10.8 in the years between 1962-63 and 1978-79. The estimated student/teacher ratio for 1981-82 was 11.8 (Table 26).

As a consequence of this dramatic increase in the number of university professors, the age structure of the full-time Canadian professoriate has assumed pronounced and unusual characteristics. In 1979-80, the majority (58.7%) were between 35 and 49 years of age, and nearly 90 per cent (88.2%) were younger than 55 (Table 27). Only 4.1 per cent were between 61 and 65. The preliminary figures for 1982-83 simply show this age-structure moving on, in step with the passage of time: only 3.1 per cent were younger than 30; only 13.2 per cent were younger than 35; only 5.6 per cent were older than 60; and only 14.8 per cent were 55 or older. In 1974-75, 60.8 per cent were in the middle bracket of the age structure, between 35 and 55; by 1982-83, 72 per cent were in that bracket. Thus, nearly three-quarters of Canada's full-time university teachers are bunched together between the ages of 35 and 54. In 1973-74, by way of comparison, 32.5 per cent of American faculty were older than 50, compared with 14.1 per cent in Canada.[2]

The implications of this bunching in the age structure of the Canadian professoriate are even more striking when the situation is examined in specific fields and disciplines. Table 28 provides information on the age distribution by teaching fields at Canadian universities in 1979-80. Fewer than 2 per cent of the full-time faculty members in the humanities were less than 30 years of age. The figures for education (3.7%), agriculture and biological sciences (4.0%), engineering and applied sciences (2.9%), health sciences (3.7%), and mathematics and physical sciences (3.4%) tell a similar tale. At the other end of the age scale, less than 10 per cent of full-time faculty were 55 or older in the

TABLE 26

STUDENT/TEACHER RATIO AT CANADIAN UNIVERSITIES 1962-1963 TO 1981-1982

Year	Full-time Equivalent Enrolment (in study)	Full-time Equivalent University Teachers (in study)	Student/ Teacher Ratio
1962-63	155,781	9,983	15.6
1963-64	176,935	11,406	15.5
1964-65	198,849	13,256	15.0
1965-66	228,585	15,106	15.1
1966-67	258,600	17,992	14.4
1967-68	286,107	20,878	13.7
1968-69	299,732	23,580	12.7
1969-70	334,815	27,299	12.3
1970-71	361,661	30,755	11.8
1971-72	374,823	33,654	11.1
1972-73	372,673	34,669	10.7
1973-74	385,844	35,512	10.9
1974-75	403,589	37,428	10.8
1975-76	431,400	38,125	11.3
1976-77	440,158	39,560	11.1
1977-78	444,749	40,209	11.1
1978-79	440,087	40,806	10.8
1979-80	447,981	41,004	10.9
1980-81	464,241	41,188	11.3
1981-82*	486,491	41,222	11.8

* Preliminary.

Note: The student-teacher ratio includes part-time teachers converted to full-time equivalent by a ratio of 4 to 1. The number of part-time teachers has been estimated. Full-time equivalent enrolment data for undergraduate and graduate students have been derived by using a 3 to 1 ratio for part-time students.

Source: Table prepared for the Commission by Dr. Max von Zur-Muehlen, based on data provided by Statistics Canada for full- and part-time enrolment and full-time staff. 1983.

TABLE 27

AGE DISTRIBUTION OF FULL-TIME UNIVERSITY TEACHERS, FOR SELECTED YEARS, 1956-1957 TO 1982-1983

Age Group	1956-57	1968-69	1971-72	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83
					(In percent)							
20 - 24	1.4	1.6	0.9	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2
25 - 29	10.5	15.5	13.8	7.7	6.9	5.8	5.2	4.5	3.9	3.4	3.1	2.9
30 - 34	19.3	22.7	23.6	22.7	21.4	19.9	18.0	15.7	14.1	12.2	11.0	10.1
Sub-Total (20-34)	31.2	39.8	38.3	30.8	28.7	26.1	23.5	20.4	18.2	15.8	14.3	13.2
35 - 39	19.1	20.1	20.2	21.9	22.3	22.6	23.4	23.7	23.3	21.5	20.2	18.6
40 - 44	16.2	14.9	15.6	17.3	17.5	18.1	18.3	19.2	19.9	21.0	21.5	22.0
45 - 49	12.1	10.8	11.2	12.6	13.2	13.8	14.4	14.9	15.5	16.2	16.8	17.6
Sub-Total (35-49)	47.4	45.8	47.0	51.8	53.0	54.5	56.1	57.8	58.7	58.7	58.5	58.2
50 - 54	9.4	6.8	7.3	9.0	9.3	9.7	10.0	10.7	11.3	12.1	12.7	13.8
55 - 59	6.7	4.6	4.6	5.2	5.7	6.2	6.6	7.1	7.7	8.7	9.2	9.2
60 - 64	5.3	3.0	2.8	3.2	3.3	3.5	3.8	4.0	4.1	4.7	5.3	5.6
Sub-Total (50-64)	21.4	14.4	14.7	17.4	18.3	19.4	20.4	21.8	23.1	25.5	27.2	28.6
Total (Percent)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Number Reported	3,870	18,556	26,675	29,672	30,498	31,280	31,895	32,357	32,500	25,513	25,713	18,196
Not Reported		113	99	75	61	138	37	48	58	—	—	—
Older than 64	84	196	200	212	225	230	235	240	245	171	177	114
Grand Total	3,954	18,865	26,973	29,959	30,784	31,648	32,167	32,645	32,803	25,684*	25,890*	18,310*
Median Age	N/A	38	38	39	39	40	40	41	42	42	43	44

* Information not available for Quebec institutions, and for 1982-83, some other universities as well.

Source: Max von Zur-Muehlen. *The changing profile of full-time faculty at Canadian universities*. Ottawa, Statistics Canada, 1983, Table 2, p. 7.

social sciences. About 15 per cent were 55 or older in the humanities, and about 11 per cent in mathematics and the physical sciences.

Table 29 provides information about the age structure of full-time university teachers in 1979-80 by selected disciplines. Only 2.6 per cent of those teaching modern languages were under 30 years of age, 1.8 per cent in philosophy, 1.6 per cent in religious studies, 1.1 per cent in history, 2.6 per cent in classics, 1.2 per cent in social work, and 1.7 per cent in physics. There were no full-time university teachers under 30 in library sciences. Table 30 indicates the total number of full-time university teachers by selected disciplines in 1980 in each year of age from 56 to 70.

From information provided by Statistics Canada it is also possible to determine the actual and projected age distribution of full-time university teachers by academic rank.[3] The median age of full professors was 49, of associate professors 42, and of assistant professors 36, in 1980-81. Close to 50 per cent of the associate professors and over 75 per cent of the assistant professors are younger than forty. In 1979-80, 30.2 per cent of the teachers at Canadian universities were full professors, 39.7 per cent were associate professors, only 24.7 per cent were assistant professors, and only 5.4 per cent held rank below that of assistant professor. The two senior ranks accounted for about 70 per cent of the Canadian professoriate. It is projected that by 1990 more than 4 out of every 5 full-time university teachers (80.7%) will be at the two senior academic ranks. Nearly 40 per cent of all full-time faculty members will hold the rank of full professor. Less than 20 per cent will be in the junior ranks of assistant professor, lecturer, and instructor. The proportion of full-time faculty in the junior academic ranks has already declined from 56 per cent in 1967-68 to 26 per cent in 1982-83 (Table 32).

This bunching of faculty in the two senior academic ranks for such an extended period of time will have financial as well as scholarly implications for the universities. As the Science Council predicted in 1979, "faculty members will undoubtedly continue to 'progress through the ranks' requiring ever larger proportions of the budget for salaries, and leaving ever smaller amounts to cover the non-salary items needed for good teaching and good research."[4] The financial impact of a continuing trend in this direction, simply because of the age structure and rank distribution of the professoriate, will be severe on a university system that faces the prospect of limited growth for more than a decade, with all the attendant budgetary pressures. Expenditures needed to keep up the physical plant, the libraries, and the research facilities of these institutions will suffer, as will the level of expenditures on the development of new fields and programmes.

The median salary for all ranks of full-time university teachers nearly quadrupled between 1967-68 and 1982-83, rising from $11,403 to $42,622 (Table 33).[5] At the full professor level, the median salary reached $54,354 in 1982-83. The salary increases gained by the Canadian professoriate outstripped the increases of many other educational systems. For example, with 1967-68 as a base of 100, full-time university salaries in Canada reached 298.7 in 1980-81,

TABLE 28

AGE STRUCTURE OF FULL-TIME UNIVERSITY TEACHERS BY TEACHING FIELD AND AGE GROUP, 1979-1980

Teaching Field	Younger than 30	30-34	35-39	40-44	45-49	50-54	55-59	60 and older	Sub-total	Not reported	Total number (in study)
Education	115	377	686	605	553	402	250	141	3,129	8	3,137
	(3.7)	(12.0)	(21.9)	(19.3)	(17.7)	(12.9)	(8.0)	(4.5)	(100.0)		
Fine and Applied Arts	71	247	315	282	246	182	111	72	1,526	5	1,531
	(4.7)	(16.2)	(20.6)	(18.5)	(16.1)	(11.9)	(7.3)	(4.7)	(100.0)		
Humanities	106	524	1,256	1,174	966	702	489	359	5,576	8	5,584
	(1.9)	(9.4)	(22.5)	(21.1)	(17.3)	(12.6)	(8.8)	(6.4)	(100.0)		
Social Sciences	502	1,566	2,129	1,385	966	669	491	299	8,007	14	8,021
	(6.3)	(19.6)	(26.6)	(17.3)	(12.1)	(8.3)	(6.1)	(3.7)	(100.0)		
Agriculture and Biological Sciences	93	344	500	407	357	282	212	111	2,306	0	2,306
	(4.0)	(14.9)	(21.7)	(17.7)	(15.5)	(12.2)	(9.2)	(4.8)	(100.0)		
Engineering and Applied Sciences	72	234	482	583	419	322	214	112	2,438	2	2,440
	(2.9)	(9.6)	(19.8)	(23.9)	(17.2)	(13.2)	(8.8)	(4.6)	(100.0)		
Health Sciences	176	613	1,020	932	763	601	409	261	4,775	9	4,784
	(3.7)	(12.8)	(21.4)	(19.5)	(16.0)	(12.6)	(8.5)	(5.5)	(100.0)		
Mathematics and Physical Sciences	145	521	1,042	982	674	439	286	171	4,260	5	4,265
	(3.4)	(12.2)	(24.5)	(23.1)	(15.8)	(10.3)	(6.7)	(4.0)	(100.0)		
Others	67	151	156	108	86	71	49	40	728	7	735
	(9.2)	(20.8)	(21.4)	(14.8)	(11.8)	(9.8)	(6.7)	(5.5)	(100.0)		
Total	1,347	4,577	7,586	6,458	5,030	3,670	2,511	1,566	32,745	58	32,803
	(4.1)	(14.0)	(23.2)	(19.7)	(15.3)	(11.2)	(7.7)	(4.8)	(100.0)		

Note: Percentage in brackets shows the age distribution.

Source: Max von Zur-Muehlen, *A profile of full-time teachers at Canadian universities: a statistical review for the eighties*. Ottawa, Statistics Canada, 1982, Table 4, p. 15; revised 1983.

TABLE 29

AGE DISTRIBUTION OF FULL-TIME UNIVERSITY TEACHERS BY TEACHING FIELD AND SELECTED DISCIPLINES, 1979-1980

Teaching Field and Selected Disciplines	Younger than 30	30-34	35-39	40-44	45-49	50-54	55-59	60 and more	Total	Number reported
Education	3.9	12.2	21.9	19.2	17.5	12.8	7.9	4.6	100.0	3,168
Music	5.0	16.6	18.1	16.4	16.4	13.3	8.0	6.2	100.0	548
Fine and Applied Arts	4.9	16.0	21.9	19.6	15.7	11.1	6.9	3.9	100.0	992
Sub-total Fine and Applied Arts	4.9	16.2	20.5	18.4	16.0	12.0	7.3	4.7	100.0	1,540
Classics	2.6	8.6	26.0	21.2	17.3	6.1	9.1	9.1	100.0	231
History	1.1	10.5	27.1	21.5	15.6	10.5	8.4	5.3	100.0	1,017
Library Science	—	8.3	11.5	15.6	11.5	27.1	13.5	12.5	100.0	96
Mass Media Studies	4.5	22.2	19.0	12.0	13.9	12.0	6.3	10.1	100.0	158
Modern Languages	2.6	9.2	22.0	21.0	17.5	12.7	8.8	6.2	100.0	2,807
Philosophy	1.8	9.1	24.7	21.9	16.0	13.0	8.2	5.3	100.0	624
Religious Studies	1.6	5.2	15.0	22.8	22.2	15.5	9.8	7.9	100.0	554
Sub-total Humanities	2.1	9.5	22.6	21.0	17.2	12.5	8.7	6.4	100.0	5,641
Anthropology & Archaeology	1.6	19.4	27.7	16.0	13.2	11.3	7.0	2.9	100.0	372
Commerce and Business Administration	10.5	21.5	26.1	15.0	10.3	7.1	5.8	3.7	100.0	1,585
Economics	8.7	19.6	22.6	18.3	12.8	6.7	7.2	4.1	100.0	996
Geography	4.5	17.4	29.1	19.3	10.8	8.5	6.6	3.8	100.0	649
Law	12.6	24.8	26.1	12.7	11.2	6.2	3.5	2.9	100.0	625
Political Science	3.4	19.8	29.1	17.9	12.0	7.0	6.5	4.3	100.0	714
Psychology	5.5	20.8	27.7	18.2	11.8	8.8	4.7	2.5	100.0	1,370
Social Work	1.2	9.0	25.4	18.4	16.0	12.2	9.6	7.3	100.0	343
Sociology	4.7	20.2	27.2	17.9	12.2	8.7	5.5	3.6	100.0	889
Sub-total Social Sciences	6.6	19.7	26.5	17.2	12.0	8.2	6.0	3.8	100.0	8,133

TABLE 29
(cont'd)

Teaching Field and Selected Disciplines	Younger than 30	30-34	35-39	40-44	45-49	50-54	55-59	60 and More	Total	Number Reported
Agriculture	3.2	12.3	17.9	15.5	17.4	12.0	15.0	6.7	100.0	374
Biology	3.5	13.2	23.1	20.5	16.2	11.6	7.8	4.1	100.0	683
Botany	4.0	13.3	17.3	24.9	11.6	13.9	8.1	6.9	100.0	173
Household Sciences	8.0	20.9	15.5	14.7	12.9	13.8	11.1	3.1	100.0	225
Veterinary Medicine	8.6	23.7	19.7	9.6	15.6	9.6	7.1	6.1	100.0	198
Zoology	2.2	13.4	24.4	18.2	14.5	16.0	8.0	3.3	100.0	275
Sub-total Agriculture & Biological Sciences	4.1	15.1	21.6	17.7	15.4	12.2	9.1	4.8	100.0	2,315
Architecture	1.9	11.4	19.0	23.8	12.9	15.2	11.0	4.8	100.0	210
Engineering	2.9	9.2	20.0	23.8	17.9	13.2	8.4	4.6	100.0	2,075
Engineering Science	5.5	14.5	14.5	38.2	12.7	5.5	5.5	3.6	100.0	55
Forestry	6.4	8.5	19.1	16.0	17.0	13.8	15.0	4.2	100.0	94
Sub-total Engineering and Applied Science	3.1	9.7	19.9	23.8	17.1	13.2	8.7	4.5	100.0	2,462
Dentistry	7.0	12.0	18.0	18.7	14.9	10.4	11.1	7.0	100.0	316
Medicine	0.9	11.4	18.6	24.7	19.1	13.1	8.8	3.4	100.0	559
Nursing	12.0	16.2	22.1	17.3	12.7	9.1	5.0	5.6	100.0	606
Pharmacy	11.8	11.8	22.9	15.0	10.4	11.8	7.8	8.5	100.0	153
Sub-total Health Sciences	3.9	12.8	21.3	19.5	15.9	12.6	8.6	5.4	100.0	4,791
Mathematics	4.0	13.5	27.9	21.4	14.7	9.6	5.3	3.9	100.0	1,243
Chemistry	2.4	9.4	22.7	24.2	17.4	11.8	7.3	4.8	100.0	898
Geology and Related	4.8	12.4	18.6	23.1	18.4	11.4	6.0	5.3	100.0	419
Physics	1.7	6.9	20.9	25.9	19.1	10.9	10.0	4.6	100.0	933
Sub-total Mathematics & Physical Sciences	3.6	12.4	24.4	23.0	15.7	10.2	6.2	4.0	100.0	4,306
Total	4.3	14.3	23.5	19.4	15.2	11.0	7.5	4.8	100.0	29,894

Note: Sub-totals and totals include other disciplines which are not identified.

Source: Table prepared for the Commission by Statistics Canada, 1983.

TABLE 30

AGE OF FULL-TIME UNIVERSITY TEACHERS BY TEACHING FIELD AND BY SELECTED DISCIPLINES IN 1980 IN EACH YEAR OF AGE FROM 56 TO 70

	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71 and older
Physical Education	5	4	9	8	7	2	3	5	5	1	0	0	0	0	0	0
Education	51	39	47	43	33	28	20	12	22	17	11	3	2	0	0	0
Sub-total Education	56	43	56	51	40	30	23	17	27	18	11	3	2	0	0	0
Music	6	11	8	6	5	8	8	9	5	2	2	1	1	0	0	1
Other fine and applied arts	11	8	11	13	7	11	5	2	4	6	1	0	1	0	0	1
Sub-total Fine and applied arts	17	19	19	19	12	19	13	11	9	8	3	1	2	0	0	2
Classics	6	4	5	4	4	5	3	4	0	2	5	0	0	0	0	0
Modern languages	64	59	43	50	55	38	36	35	30	24	8	4	6	1	1	1
History	16	19	15	17	18	15	11	12	7	6	1	3	1	0	0	1
Library and records science	6	2	2	2	4	3	2	3	0	0	1	1	0	1	1	0
Linguistics	2	1	3	1	1	1	0	0	1	2	0	0	0	0	0	0
Media	1	4	1	2	1	2	4	0	3	1	1	0	0	0	1	1
Philosophy	17	13	12	9	11	5	5	5	3	5	4	4	0	0	0	2
Religious studies	12	7	8	9	10	13	8	4	7	3	5	3	2	1	0	1
Other humanities	3	3	2	2	0	2	0	1	1	0	1	1	0	0	0	0
Sub-total Humanities	127	112	91	96	104	84	69	64	53	48	26	17	12	3	3	6
Anthropology and archaeology	7	8	5	3	3	2	2	4	1	1	2	0	0	0	0	0
Commerce and business administration	20	19	16	26	15	16	15	7	11	2	3	3	2	2	1	1
Economics	17	17	14	8	9	18	7	7	9	7	2	1	0	1	0	0
Geography	11	6	9	8	11	7	5	4	6	3	3	0	0	0	0	1
Law	3	8	5	4	4	1	1	2	5	5	1	0	2	0	0	0
Political science	9	13	4	10	11	4	12	7	5	4	3	1	0	0	0	0
Psychology	22	13	13	11	15	6	3	7	4	5	1	4	1	0	0	0
Social work	12	8	6	8	7	5	5	4	4	4	2	3	0	0	0	0
Sociology	13	15	10	8	8	9	5	8	7	2	3	1	1	2	0	0
Other social sciences	6	4	7	6	9	6	4	2	2	4	2	0	0	0	0	2
Sub-total Social sciences	120	111	89	92	92	74	59	52	54	37	22	13	6	5	1	4
Agriculture	6	6	9	11	13	11	2	7	3	1	1	1	0	0	1	0
Biology	19	11	7	11	9	11	9	7	4	2	0	1	0	0	0	0
Botany	1	4	3	2	2	2	7	3	0	2	0	0	0	0	0	0
Household sciences	3	5	7	5	1	3	2	2	1	1	0	0	0	0	0	0
Veterinary medicine	2	3	4	2	6	5	6	3	0	2	1	1	0	0	0	0
Zoology	7	3	4	5	5	3	3	0	0	3	1	1	0	0	0	0
Other agriculture and biological sciences	6	4	5	3	2	7	2	3	2	3	3	2	0	0	0	0
Sub-total Agriculture and biological sciences	44	36	39	39	32	42	31	25	10	14	6	6	0	0	1	0
Architecture	5	3	8	2	2	3	1	0	3	2	0	0	0	1	0	0
Forestry	4	5	3	2	3	0	3	0	0	0	1	0	0	0	0	0
Engineering	45	38	33	35	32	22	19	18	13	13	7	4	1	1	0	2
Sub-total Engineering & applied science	54	46	44	39	37	25	23	18	16	15	8	4	1	2	0	2
Dentistry	6	7	7	6	7	9	6	8	4	4	0	0	0	0	0	0
Medicine	18	11	11	11	4	10	2	5	2	5	0	0	0	0	1	0
Pharmacy	3	0	4	1	4	2	5	3	3	1	0	0	0	0	0	0
Other health sciences	76	74	64	50	61	56	34	29	36	32	14	13	6	4	1	3
Sub-total health sciences	103	92	86	68	76	77	47	45	45	42	14	13	6	4	2	3
Mathematics	15	21	13	14	12	6	8	10	8	6	6	1	1	0	0	0
Chemistry	18	18	15	8	7	10	12	7	6	5	3	1	0	0	0	0
Geology and related	6	8	7	7	1	2	7	0	3	3	4	0	0	0	0	0
Physics	13	30	12	21	14	10	7	7	8	8	4	3	1	0	0	0
Other mathematics and physical sciences	9	8	8	5	8	2	4	4	1	1	1	2	0	0	0	0
Sub-total Mathematics & physical sciences	61	85	55	55	42	30	38	28	26	23	18	7	2	0	0	0
Total	582	544	479	459	435	381	303	260	240	205	108	64	31	14	7	17
Not specified	15	11	14	15	10	7	6	5	3	5	1	0	1	0	0	0
Grand Total	597	555	493	474	445	388	309	265	243	210	109	64	32	14	7	17

Source: unpublished data provided by Statistics Canada, 1983.

TABLE 31

PERCENTAGE OF FULL-TIME UNIVERSITY TEACHERS UNDER THE AGE OF 40 BY ACADEMIC RANK, TOTAL CANADA: 1978, 1979, 1980

	1978		1979		1980	
	% under Age 40	% in Rank	% under Age 40	% in Rank	% under Age 40	% in Rank
Full Professor	7.5	27.0	7.5	28.1	7.2	29.4
Associate Professor	41.7	37.0	39.1	37.1	36.2	37.7
Assistant Professor	74.2	24.6	71.9	23.3	70.5	22.1
Rank Below Assistant Professor	83.1	5.5	81.4	5.3	80.1	5.1
Others*	59.0	5.9	57.9	6.2	53.7	5.7

* "Other" refers to ungraded staff.

Source: Data and tabulation provided by Statistics Canada, 1983.

TABLE 32

ACTUAL AND PROJECTED ACADEMIC RANK DISTRIBUTION OF UNIVERSITY TEACHERS: 1956-1957, 1967-1968 TO 1989-1990 (PERCENTAGES)

Academic year	Full Professor	Associate Professor	Sub-total 2 Senior Ranks	Assistant Professor	Rank below Assistant Professor	Sub-total 2 Junior Ranks
Actual						
1956-57	28.1	24.1	52.2	28.6	19.2	47.8
1967-68	18.5	25.2	43.7	37.0	19.3	56.3
1968-69	18.5	26.3	44.8	37.9	17.3	55.2
1969-70	18.6	26.8	45.4	38.0	16.6	54.6
1970-71	18.8	27.2	46.0	37.7	16.3	54.0
1971-72	21.3	29.1	50.4	37.4	12.2	49.6
1972-73	21.7	29.9	51.6	37.2	11.1	48.3
1973-74	23.2	32.5	55.7	34.7	9.8	44.5
1974-75	24.5	34.2	58.7	33.2	8.1	41.3
1975-76	25.7	35.6	61.3	31.3	7.4	38.7
1976-77	26.7	37.1	63.8	29.9	6.5	36.4
1977-78	27.8	37.8	65.6	28.1	6.3	34.4
1978-79	28.7	39.3	68.0	26.2	5.8	32.0
1979-80	30.2	39.7	69.9	24.7	5.4	30.1
1980-81*	32.3	39.4	71.7	23.0	5.3	28.3
1981-82*	33.5	39.2	72.7	22.2	5.1	27.3
Projected						
1982-83	34.2	39.5	73.7	21.5	4.8	26.3
1983-84	34.9	39.8	74.7	20.6	4.7	25.3
1984-85	35.6	40.1	75.7	19.7	4.6	24.3
1984-86	36.3	40.4	76.7	18.8	4.5	23.3
1986-87	37.0	40.7	77.7	17.9	4.4	22.3
1987-88	37.7	41.0	78.7	17.0	4.3	21.3
1988-89	38.4	41.3	79.7	16.1	4.2	20.3
1989-90	39.1	41.6	80.7	15.2	4.1	19.3

* Preliminary

Note: It has been estimated that 0.7 percent of the university cohort will be promoted from associate to full professor, and 0.3 percent from assistant to associate professor. Under these assumptions, the two junior ranks decline proportionately.

Source: Max von Zur-Muehlen. *The changing profile of full-time faculty at Canadian universities.* Ottawa, Statistics Canada, 1983, Table 3, p. 8.

whereas on the Higher Education Price Index for the United States salaries reached only 238.3 (Table 33).[6] In Canada, full-time university teachers were, on average, somewhat better off in real income in 1982-83 than in 1967-68. Working from a base of 100 in 1967-68, the consumer price index rose to 303.6 in 1982-83, whereas the salary index for full-time university teachers during the same period rose from a base of 100 in 1967-68 to 374.2 in 1982-83 (Table 33).

This information provided by Statistics Canada does not, however, compare academic salaries to salaries paid in other sectors of Canadian society. There is considerable recent literature published in Canada on the topic of academic salaries some of which deals with that comparative aspect.[7] Such comparison with other vocations and professions does indicate that somehow, even in these difficult times of retrenchment, the means must be found to better compensate university faculty, in working conditions and in opportunities for professional growth as well as in financial terms. The faculty represent, collectively, a large past investment in human capital and an immense intellectual and social resource. It is only common sense that this resource should be used to maximum advantage by making it possible for faculty members to use their abilities to the fullest.

The point made by the data provided by Statistics Canada remains clear, none the less. As the age structure and the rank distribution of the Canadian professoriate shifts to the senior ranks with the higher salaries that these command, the costs of university education will increase substantially, and the financial flexibility that universities require will be lessened. It will not be surprising if tensions develop as the members of the academic generation unable to find jobs in university teaching watch the present professoriate growing older and richer at what they may well perceive to be their expense. Such feelings will be further coloured by the perception that many of those growing older and richer within the tenured system are from other countries. There are the conditions here for a social, as well as for an academic, problem of considerable proportions.

The present age structure of the full-time professoriate in Canadian universities, thus, contains within it the seeds of both social and academic crises. At the root of these potential crises is the limited availability of replacement positions. The number of replacement positions depends on three main factors: retirement, mortality, and mobility. Because of the current age structure of the faculty, the potential retirement rate at Canadian universities over the coming decade will be exceedingly low. Indeed, it is estimated that in the five years from 1983 to 1987, only 5.7 per cent of the full-time teachers will reach the normal retirement age of 65. This means that during this half decade only 1,881 full-time university positions will open as the result of senior scholars reaching retirement age (Table 34).

This, of course, assumes that professors will retire at age 65. In practice, many do not; they continue their duties on a part-time or special contract basis for a number of years. In 1980, there were 453 full-time university teachers aged

TABLE 33

MEDIAN SALARY OF FULL-TIME UNIVERSITY TEACHERS, BY ACADEMIC RANK, 1967-1968 TO 1982-1983

Academic Rank	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82*	1982-83*
							(Current dollars)									
Full Professor	17,081	18,516	19,870	21,504	22,579	23,950	25,200	27,400	31,500	34,100	36,500	39,100	41,500	44,494	49,565	54,354
Associate Professor	12,998	14,058	14,012	16,057	16,848	17,550	18,550	20,000	23,100	25,500	27,700	29,550	31,650	33,425	37,566	41,324
Assistant Professor	10,228	11,030	11,837	12,701	13,121	13,900	14,700	16,000	18,550	20,450	22,000	23,300	25,000	26,270	29,248	31,858
Rank Below Assistant Professor	7,990	8,649	9,441	10,002	10,521	11,050	11,800	12,850	14,850	16,300	17,750	18,725	20,225	20,904	23,540	26,052
Other	10,425	11,581	14,050	12,545	13,017	11,900	13,000	15,450	17,550	19,750	22,350	24,000	26,375	26,544	33,152	N/A
Total	11,403	12,224	13,265	14,248	15,084	16,000	17,150	18,950	22,350	24,900	27,250	29,400	31,800	34,062	33,661	42,622
Salary Index (Total)	100.0	107.2	116.3	124.9	132.3	140.3	150.4	166.2	196.0	218.4	239.0	257.8	278.9	298.7	339.0	374.2
Consumer Price Index (Calendar year 1967)	100.0	104.0	108.8	112.4	115.6	121.2	130.2	144.5	160.1	172.1	185.9	202.5	221.0	243.5	274.0	303.6
Higher Education Price Index for the U.S.	100.0	106.0	113.2	121.0	128.6	135.0	143.0	153.1	166.1	177.2	188.7	201.3	216.9	238.3	N/A	N/A

(Kent Halstead, U.S. Government)

* Information not available for Quebec institutions, and for 1982-83 some other universities as well.

Source: Statistics Canada. *Teachers in universities, 1979-1980*. Ottawa, 1982, Table 17, p. 60-61. (Catalogue 81-241); Statistics Canada. *Teachers in universities, 1980-81*. Ottawa, 1982, Table 4D, p. 40-41 (Cat 81-241); and additional information provided to the Commission by Statistics Canada, 1983.

65 or older (Table 30). There are, moreover, increasing signs of a movement away from compulsory retirement at age 65 to a more flexible approach towards retirement arrangements. A recent series of decisions in the courts and by human rights boards of inquiry point in this direction in Canada, as do similar trends in the United States and elsewhere. Recently, for example, the Manitoba Court of Appeal upheld the decision of a lower Court that a collective agreement clause requiring faculty at the University of Manitoba to retire at 65 is invalid and violates the province's Human Rights Act. In doing so, it sustained the decision that a professor of educational psychology, who had been at the university since 1968 and who had reached the age of 65, could not be forced to retire because "no employer may refuse to employ a person solely on the basis of age, no matter what the age may be." Mandatory retirement at age 65 is also considered discriminatory under human rights legislation in New Brunswick. In Quebec, Bill 15, which came into effect on 1 April, 1982, specifically prohibits mandatory retirement at any age. As the result of this movement to bar discrimination on the basis of age, the number of replacement positions available at Canadian universities during the next decade could be even fewer than they are now projected to be.

In addition to the 1,881 replacement positions projected from 1983 to 1987 resulting from faculty retirements at age 65, it is forecast that approximately 825 more positions will be available over this five year period on account of mortality (Table 34). Consequently, retirement and mortality together will open up an estimated 2,700 replacement positions between 1983 and 1987, or an average of about 540 openings per year.

Given the expected circumstance of decline or limited growth in full-time enrolments in the period after 1983 or 1984, and the increasingly higher costs associated with the age structure of the tenured professoriate, many universities are, as a matter of policy, filling any replacement openings with temporary, part-time, or short-term appointments rather than with tenure-track appointees. While such a policy may be understandable under current conditions, it should also be understood that it is contributing to the frustration and uncertainty among promising young scholars and causing many of them to turn away from research and graduate work. It should be remembered too, that about one-quarter of university appointments are still going to non-Canadian academics, so that while the number of replacement positions projected averages about 540 per year, the actual number of university openings for highly qualified young Canadians may be in the order of only 405 to 435 positions a year, unless government and the universities are able to work together to increase both the total number of appointments at Canadian universities and the proportion of these appointments going to Canadian graduates.

The third variable affecting the number of replacement positions available is mobility. Although no systematic attempt has ever been made in Canada to find out what happens to university teachers who resign, evidence suggests that, due to strained labour market conditions, mobility between universities and

TABLE 34

PROJECTED REPLACEMENT POSITIONS AVAILABLE FOR FULL-TIME UNIVERSITY TEACHERS, 1983-1991

Year	Retirements (No.)	Retirement Rate (%)	Mortality	Mortality rate (%)	Total Replacement (No.)	Replacement Rate (%)
1983	265	0.8	165	0.5	430	1.3
1984	309	0.9	165	0.5	474	1.4
1985	388	1.2	165	0.5	553	1.7
1986	445	1.4	165	0.5	610	1.9
1987	474	1.4	165	0.5	639	1.9
1988	493	1.5	165	0.5	658	2.0
1989	555	1.7	165	0.5	720	2.2
1990	597	1.8	165	0.5	762	2.3
1991	650	1.9	165	0.5	815	2.4

Note: This projection is based on a stock figure of 32,950 full-time university teachers in 1980-81 and assumes zero net mobility. The mortality rate is an approximation, based on the median age of full-time faculty in 1980 and mortality rates for that age group in actuarial tables. The stock figure is held constant for the projection period, an assumption which needs to be qualified if the universities, for financial, demographic and other reasons, reduce the total number of full-time faculty over the next 9 years.

Source: Max von Zur-Muehlen. *The changing profile of full-time faculty at Canadian universities.* Ottawa, Statistics Canada, 1983, Table 7, p. 15.

other employment sectors may be declining.[8] No sustained attempt has been made, however, to trace and assess the mobility of full-time university teachers following voluntary separation and termination of employment.

An examination of previous employment data (that is, information on what university teachers were doing before they took up their present positions) indicates that for new hirings and replacement hirings in 1977-78 those who came directly from graduate schools, including post-doctorals, accounted for about 20 per cent of the total (Table 35).

During the ten academic years reviewed in Table 35, from 1972-73 to 1981-82, on the average well over 2,000 new faculty were appointed each year, for an annual turnover rate of about 7 per cent. The projections for the five year period, from 1983 to 1987, are for only 540 replacement positions per year, or an average approximate annual turnover rate of only 1.8 per cent. The implications of these comparisons both for those young academics seeking first-time employment and for the health of the university community are immense. The comparison may be even more striking if replacements are not in fact appointed to the replacement positions identified in this data. There is already a good deal of evidence of a

total freeze on hiring at many universities or in specific faculties and departments.

In addition, it is important to realize that over the ten year period noted in Table 35 the number of new appointments that were the result of inter-university mobility (that is, movement of a professor from one institution to another) increased to over 50 per cent of hirings. The number hired directly out of graduate schools with a completed or nearly completed Ph.D. averaged 21 per cent. New graduates obtained only one in five of the new or replacement positions opened during the decade from 1972-73 to 1981-82. Despite the fact that those were years of still some expansion, Ph.D. graduates were already experiencing difficulty in obtaining full-time positions. Data for the previous employment of all full-time university staff for the years 1978-1981 shows a similar picture (Table 36).

Statistics Canada reports that at the discipline level close to two-thirds of the new or replacement positions in many of the social sciences and humanities were filled by faculty moving from one university to another during the decade from 1972-73 to 1981-82 (Table 37). Thus, in many of the social sciences and humanities the job prospects for graduates seeking employment in the university were fewer than the gross statistics in Table 35 would indicate. By contrast, of the teachers appointed during this period only 36 per cent in architecture, 44 per cent in management and administrative studies, 39 per cent in law, 28 per cent in nursing, 33 per cent in pharmacy, and 46 per cent in social work, had previously been university teachers.

All of this indicates that the job placement prospects for university graduates interested in university teaching are bleak indeed. The number of Canadian Ph.D.s projected to graduate between 1983 and 1987 approximates 1,170 per year, excluding foreign students, for a total of about 5,900 new Canadian Ph.D.s over the five year period.[9] As Table 34 indicates, there will be about 2,700 replacement positions to be filled, due to mortality and retirements, over the same five year period. The historical experience suggests that only about one in five of these replacement appointments, or about 550 appointments in university teaching, will go to doctoral or post-doctoral students completing their studies. To put it simply, Canada will be producing about ten new Ph.D.s for each replacement position likely to be open to the new academic generation from 1983 to 1987. The picture brightens somewhat for the years from 1988 to 1991 when a total of about 2,955 openings are forecast, averaging about 740 vacancies per year. But at the present rates of production and of placement of newly graduates Ph.D.s, there will still be more than seven doctorates being produced for every faculty replacement position likely to be open to them in the years from 1988 to 1991.

While debates may be waged about the accuracy of such projections, the anticipated imbalance between supply and demand for Ph.D.s, at least in the field of university teaching, is so apparent that one cannot dispute the overall conclusion. The cumulative surplus of Ph.D.s available for and aspiring to

TABLE 35

PREVIOUS EMPLOYMENT SECTOR OF NEWLY APPOINTED FULL-TIME UNIVERSITY TEACHERS 1972-1973 TO 1981-1982 COMPARED WITH ALL UNIVERSITY TEACHERS

EMPLOYMENT SECTOR	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	Ten Year Total (in study)
University	820	863	987	959	991	979	1,144	1,029	798	807	9,377
	47.1	49.5	51.1	52.9	54.0	52.2	52.4	53.2	52.7	54.3	51.9
Other Education	86	75	93	61	54	53	111	102	62	86	783
	4.9	4.3	4.8	3.4	2.9	2.8	5.1	5.3	4.1	5.8	4.3
Student	508	442	430	415	378	383	409	345	262	215	3,787
	29.2	25.3	22.3	22.9	20.6	20.4	18.7	17.8	17.3	14.5	21.0
Health Sciences	101	143	115	124	116	134	114	125	101	122	1,195
	5.8	8.2	6.0	6.8	6.3	7.1	5.2	6.5	6.6	8.2	6.6
Government and Military	76	76	117	97	129	118	164	144	83	75	1,079
	4.4	4.4	6.0	5.4	7.0	6.3	7.5	7.4	5.5	5.0	6.0
Industry and Self Employed	89	101	148	115	120	145	172	145	150	122	1,307
	5.1	5.8	7.7	6.3	6.5	7.7	7.9	7.5	9.9	8.2	7.2
Other	60	44	41	42	48	63	70	45	59	60	532
	3.4	2.5	2.1	2.3	2.6	3.4	3.2	2.3	3.9	4.0	3.0
Sub-total	1,740	1,744	1,931	1,813	1,836	1,875	2,184	1,935	1,515	1,487	18,060
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Not Reported	566	193	323	335	326	231	216	225	348	404	3,167
TOTAL	2,306	1,937	2,254	2,148	2,162	2,106	2,400	2,160	1,863	1,891	21,227

Source: Max von Zur-Muehlen and Jo-Anne Belliveau. *Three decades of full-time Canadian university teachers: a statistical portrait*. Ottawa, Statistics Canada, 1980. Table C-3, p. 123, and tabulations prepared by Statistics Canada for the Commission, 1983.

TABLE 36

PREVIOUS EMPLOYMENT SECTOR OF FULL-TIME UNIVERSITY TEACHERS: 1978-1979, 1979-1980, 1980-1981

Previous Employment	1978-79		1979-80		1980-81*	
	Number	%	Number	%	Number	%
University	13,278	46.8	13,389	46.7	11,158	48.2
Other Education	2,162	7.6	2,126	7.5	1,538	6.6
Student	6,693	23.6	6,722	23.5	5,431	23.5
Health Services	1,269	4.5	1,337	4.7	1,104	4.8
Government	1,986	7.0	2,000	7.0	1,567	6.8
Industry & Self-Employ.	2,200	7.7	2,229	7.8	1,744	7.5
Other	784	2.8	743	2.6	612	2.6
Sub Total	28,372	100.0	28,546	100.0	23,154	100.0
Not Reported	4,273		4,257		2,556	
Total	32,645		32,803		25,710	

* Excluding universities in Quebec, for which data not available.

Source: Data provided to the Commission by Statistics Canada, 1983.

university teaching in the humanities and social sciences alone, between 1977-78 and 1981-82, has been estimated to be 1,250.[10] At present, and for the next ten to fifteen years, many in a generation of young scholars will not be able to find employment in the university sector unless deliberate measures are taken, in the interests of society, to open up such opportunities for them. This is not a happy prospect for a growing number of doctoral graduates and for many promising undergraduate and post-graduate students who may turn away from the career which they have been considering in teaching and research. The loss will be ours as well as theirs.

The social and economic costs resulting from this situation could be enormous. For the universities, the potential loss of a significant portion of an academic generation has far-reaching consequences for the health and vitality of the institutions themselves, and for the development of Canadian scholarship for the rest of the century. For the individuals, the costs are staggering, both for those who decide not to pursue their education further in the face of such

TABLE 37

TWO PREVIOUS EMPLOYMENT SECTORS OF NEWLY APPOINTED FULL-TIME UNIVERSITY TEACHERS IN SELECTED DISCIPLINES, 1972-1973 TO 1981-1982

Discipline or Academic Field	Previously employed in University Teaching 1972-73 to 1981-82		Previously Registered as University Students 1972-73 to 1981-82	
	Total (in study)	Percent	Total (in study)	Percent
Architecture	45	(36.0)	9	(7.2)
Anthropology and Archaeology	185	(60.9)	76	(25.0)
Chemistry	194	(56.6)	74	(21.6)
Classics	63	(61.8)	16	(15.7)
Management and Administrative Studies	778	(44.0)	382	(21.6)
Dentistry	88	(40.7)	39	(18.1)
Economics	526	(60.3)	179	(20.5)
Geography	254	(63.7)	88	(22.1)
Geology	109	(45.6)	55	(23.0)
History	319	(61.0)	103	(19.7)
Law	240	(39.0)	157	(25.5)
Nursing	243	(28.4)	114	(13.3)
Pharmacy	29	(33.3)	18	(20.7)
Philosophy	184	(68.7)	73	(27.2)
Physics	155	(54.2)	68	(23.8)
Political Science	300	(59.1)	133	(26.2)
Psychology	505	(50.6)	268	(26.9)
Social Work	138	(46.3)	32	(10.7)
Sociology	456	(61.1)	190	(25.5)

Source: Max von Zur-Muehlen and Jo-Anne Belliveau. *Three decades of full-time Canadian university teachers: a statistical portrait.* Ottawa, Statistics Canada, 1980, and further tabulations provided by Statistics Canada to the Commission, 1983.

Note: Table 36 identifies the other employment sectors.

discouragements and for those who, having persevered, find little opportunity to engage in an academic career despite the personal and financial sacrifices that they have made during their years of preparation. For society in general, too, the costs are enormous: the Ph.D. is the most expensive educational investment that our society makes. To make these kinds of investments and then to be unable to realize the dividends, is a situation that will not be tolerated for long — either by society as a whole or by the individuals concerned.

The ramifications arising from the present age structure of the professoriate cut a very broad swath. As Professor Peter Leslie has noted, we are heading toward a situation that can only do far-reaching damage to the university itself:

> a situation of no-growth may mean that few or no younger faculty are hired, that the most able youth no longer go to graduate school, and that the circulation of senior faculty among the universities slows considerably. In these circumstances, demoralization can easily set in, and scholars who under more favourable conditions would be productive researchers and stimulating teachers may lapse into mediocrity.[11]

Professor Leslie suggests that the problem of the lack of replacement positions could be even more acute than the statistics noted so far would indicate. In doing so, he refers to another study, "absurdly given a government security classification and therefore not to be cited."[12] This government classified study anticipates that the number of new entrants into the professoriate will decline from the 1977 level of almost 1,800 to a 1988 figure of 100 or less, in contrast to projections from Statistics Canada which indicate that the replacement demand will be in the range of from 500 to 700 places per year in the mid-to-late 1980s (Table 34). The classified study to which Professor Leslie refers took into account prospective enrolment changes and possible changes in student-teacher ratios, and thus differs from the work done by Statistics Canada by abandoning the assumption of a constant "stock" of faculty. It also takes into account, apparently, the resignations of faculty of pre-retirement age, a variable not included in the Statistics Canada calculations.

Although it is impossible to predict with accuracy the number of replacement positions, it is clear that there will be a minimal number of new hirings in the universities during the next decade. Inevitably, the median age of the professoriate will increase steadily. As Professor Leslie points out, "This may present a particular threat to the quality of research since in some disciplines the most remarkable advances are typically made by younger scholars."[13] In acknowledging the validity of Professor Leslie's point, the Commission underlines that it applies more to some disciplines than others. In many of the humanities and social sciences, for example, scholars have often made their greatest contribution to research in their senior years, and valuable research is done by both younger and older scholars in every field. Nevertheless, a review of historical statistics in regard to research productivity does confirm that in some fields, particularly in some areas of science, there is a relationship between age

and research productivity, that many of the major advances are made by younger scholars, and that both the rate of active participation in research and the level of research productivity decline on average, in the middle and senior years. The age structure of the professoriate thus has implications for the state of research in Canada.

Indeed, the implications of this situation go far beyond the university and cut to the heart of the future of the whole of Canadian education. There are, *inter alia*, significant consequences for Canadian studies. In Volumes I and II of *To Know Ourselves*, the Commission has argued that the previous and present generations of university faculty in many fields have not been as attentive to Canadian issues and concerns as they might have been, and that, as a consequence, teaching and research about Canada are underdeveloped. This has been the result of several factors, including the attitude taken in the past by many Canadian teachers and educational administrators towards Canadian studies, the importation of large numbers of foreign faculty, and the custom that prevailed for generations of sending promising Canadian scholars abroad for their graduate work at the cost, to some extent, of a slower development of graduate studies and research in Canada.

For the first time in our history we have a surplus stock of young Canadian academics trained in this country. Briefs, correspondence, and the Commission's own inquiries indicate that it is often these young scholars who are now especially interested in addressing Canadian studies squarely. Such studies need Canadian scholars willing and able to pursue research, writing, and teaching in this field if it is to have any future. If teachers and researchers with an interest in Canadian studies are not encouraged and supported, the problems outlined in the first two volumes of the Commission's study will not be addressed. The tragedy for Canadian studies in the present situation is that many in the next generation of scholars, upon whom so much must depend for the development of the field, are now unable to find employment in the universities. Moreover, many of those who have found such employment are in the junior ranks, lacking tenure and vulnerable to the pressures and squeezes that lie ahead.

The high proportion of faculty appointments at Canadian universities still going to citizens of other countries also has implications for the development of Canadian studies. On the average, more than 25 per cent of the new and replacement appointments being made by Canadian universities are still going to non-Canadians (Tables 11, 12 and 13). This is at a time when there are many Canadians, including many with doctorates earned in our university system, willing and able to teach in the university. The rejection so often of Canadian scholars in favour of scholars from other countries invites serious questions about the state of Canadian higher education. In the case of those who have earned their doctorates at Canadian universities, this rejection casts aspersions on the Canadian university system and on those who teach in it. If our doctorates do not measure up to those earned in other countries, should they have been granted? In particular, it is both puzzling and ironic that so many university

appointments continue to go to citizens of other countries in some of those disciplines that were so heavily stocked by presumably highly qualified teachers imported from abroad in order to assist in the development of programmes of a good standard that would produce our own stock of Ph.D.s.

If our universities continue to hire abroad as heavily as they are now doing, with more than one in four positions going to non-Canadians, they run the risk of discouraging many in the next generation of promising Canadians from pursuing graduate studies, including — and perhaps in particular — Canadian studies. The decline or limited growth in graduate enrolments is not only a reflection of a tight job market, it is also the result of a sense of hopelessness and loss occasioned by what appears to be a lack of confidence on the part of Canadian universities in their own post-graduate degrees. Indeed, in some instances there appears to have been, whether consciously or unconsciously, an almost systematic under valuing of Canadian degrees by Canadian universities.

There will be considerable pressures on universities to continue to import university teachers from other countries in large numbers. These pressures will come from those within the university system who consider it important, for international scholarly reasons, to have a high proportion of faculty from other nations. The pressures will also come externally from academics in other countries that face similar problems of declining enrolments and aging professoriates, although none may face the exact mixture of ingredients that are producing the crisis in Canada. It has been estimated, for example, that between 1978 and 1990 universities in the United States will turn out 60,000 Ph.D.s who will not be able to find employment in American colleges and universities.[14] In addition, it is anticipated that another 60,000 will have completed all of the requirements for the doctorate except for the thesis. Despite the moves being made to reduce drastically the number of doctorates being granted in the United States, there will clearly be in the immediate future a huge surplus of doctoral graduates in that neighbouring country seeking university employment. It will not be difficult for our universities to find elsewhere prospective candidates for academic appointments if they choose to continue to import university teachers in the 1980s at the rates adopted in the late 1970s and early 1980s.

The Commission has already noted that the production of Ph.D.s in Canada seems to follow a pattern of surplus and shortage. Currently, in relation to university employment opportunities, we have a surplus of doctorates in many fields, especially in the humanities and social sciences. There are more people qualified and wishing to teach in the university system than the system can absorb. That picture, however, is projected to change dramatically in the mid and late 1990s.

Looking ahead to the 1990s, it is possible to envisage a very different situation. As we have seen, the 18 to 24 year-old population is projected to expand again in the mid-to-late 1990s. Although we do not know with certainty the magnitude of this increase, it is clear that there will then be a greater demand

for university teachers as a consequence of the expanding of enrolments for the first time in ten or more years.

At the same time, the rate of retirement of university teachers will increase to about 2,000 teachers per year.[15] As can be seen from the age profile of full-time university teachers provided in Table 27, approximately one-third of the present professoriate will reach retirement age between 1990 and 2000, with most of them reaching that point in the last half of the decade. Other estimates place the proportion of the professoriate that will reach retirement between the years 1990 and 2000 as high as one-half.[16]

On the other hand, we know that the number of Ph.D.s being produced in Canada at present has stabilized at around 1,800 per year (Table 21) and that only a portion of these doctoral graduates are available each year for employment in Canada. Indications are that, given the expected job scarcity through the 1980s, and unless well-planned programmes are developed, the number of graduates produced in Canada will show little change. If this is the case, we shall again find ourselves facing an acute shortage of Ph.D.s in the late 1990s. This raises the spectre of a repetition in the 1990s of the situation that Canada faced in the 1960s, when teachers were imported from other countries, especially the United States, at an unprecedented rate to staff our universities. Whether or not it would be desirable on academic and national grounds to turn again then to other countries on such a massive scale for university staff, however, "we are likely to find that well much drier since the same demographic patterns exist in other countries, particularly the United States."[17]

Governments and the universities should consider these future problems now in order to design appropriate policies in advance to meet the country's needs for highly qualified personnel when they occur. It takes time to build up a supply of skilled graduates. No magic tap can be turned on to produce such persons at the last moment when society is clamouring for their services. It takes, on average, five years for graduates to complete their doctorate,[18] and about a decade is "required normally to train a university faculty member."[19] Post-graduate enrolment and our graduate system of education should be developing now to meet the challenge of the 1990s.

The history of educational planning is disappointing in most countries. This is perhaps particularly true of Canada where, as the OECD study of 1976 showed, a striking characteristic of the development of higher education has been the absence of long-term planning and research relating to higher education itself.[20] Little has been done to analyse the impact of the age structure on the supply and demand of highly qualified manpower generally in this society, even though we know that Canada is officially an "old" country. More than 8 per cent of Canadians are now over 65. By the year 2001 there will be more than 3.4 million "senior citizens", or 12 per cent of the population.[21] The number of people over 65 will increase even more rapidly in the second and third decades of the 21st century. These trends will mean serious strains on Canada's health

care facilities and welfare programmes. There are going also to be significant implications for housing, for transportation, and, of course, for education.

The study of the age structure of university teachers and its implications, which is the focus of attention here, should be extended to other sectors of Canadian society. Such studies are in themselves an important field for Canadian studies. It is evident, for example, that the same crisis that will face university manpower in the late 1990s will affect professional, scientific, and managerial personnel in both government and the private sector. The scramble for highly qualified manpower will be incredibly intense in Canada when the age structure of the current professoriate and increasing enrolments combine to create the next crisis for the Canadian university community.

B. SOME QUESTIONS AND RECOMMENDATIONS ARISING FROM THE AGE STRUCTURE OF THE PROFESSORIATE

Each of the issues involved in the consideration of Canada's future needs for highly qualified manpower is linked to the others. The questions arising from the age structure of the professoriate, for example, have short-term implications for the current apparent surplus of doctorates in many of the social sciences and humanities, as well as long-term implications for academic hiring policies, especially in the mid-to-late 1990s and beyond. The issues associated with the age structure of the professoriate also have relevance for the funding of higher education, for the curriculum, and for a number of research and development questions.

Because of the vast expansion of Canadian universities during the 1960s and early 1970s, and the mass hiring of faculty at that time, including a high proportion of foreign citizens, a disproportionately large percentage of teachers at Canadian universities are now in the middle years of their careers. The average age of university teachers shows some variation by field and discipline, but the group is, on the whole, in early middle-age. In 1982-83 the median age was 44 years, a reflection of the large number of young teachers hired in the late 1960s and early 1970s (Table 27). The youngest group of university teachers continued to be in the social sciences, which had a median age of 40 years in 1980-81. In other fields, the median age of university faculty varied from 41 to 46 years.[22]

This age structure of the professoriate means that there will be very few new academic openings due to retirements, mobility, or mortality over the next ten to fifteen years. Other factors, such as stable or declining enrolments in many academic areas, contribute as well to the growing scarcity of academic posts. It has been estimated that, over the five years from 1983 to 1987, retirement and mortality will account, on the average, for about 540 replacement positions per year (Table 34).

This situation has a number of serious implications. To put it bluntly, the incumbent teaching staff has, the system locked up as far as employment

opportunities and promotions are concerned. Moreover, the rank structure will become increasingly top heavy as pressures for promotion within the system mount. With a growing proportion of faculty in senior positions, the average costs per university teacher will be steadily higher than would be the case if there were a more balanced and normal age and rank distribution.

A study prepared for the Ministry of Colleges and Universities of Ontario presents a bleak picture for new Ph.D.s who want a career in university teaching. Increasingly, the only academic jobs available in Ontario universities are short-term, non-tenure-stream appointments. Moreover, recent graduates who succeed in obtaining such appointments may find that their academic careers are over after holding a series of these short-term positions, no matter how well they discharge their duties. The author of the study warns that "the disappearance of permanent career opportunities for young Ph.D. researchers will soon jeopardize the gains in educational and technological self-sufficiency we have made over the last decade."[23]

While there are few new full-time positions to attract new blood into the system, the study found that there was little job mobility either. Job mobility to enhance careers occurs less frequently in the universities than in other parts of the highly qualified labour force. The study suggests a number of reasons for this: "Prestige distinctions are based on research and productivity rather than on the administrative experience and span of organizational control of the professor. Thus the occupational hierarchy in academia is governed by political rather than bureaucratic principles and the person who changes university or department stands to gain little and lose much in the career system."[24]

The low rate of career-enhancing mobility has been reduced further because of the freeze on graduate studies in Ontario. "Ontario deans are no longer willing to provide salaries for new 'stars' to bolster graduate programs. Replacement hiring for faculty who retire or move to other departments or into administration has also become 'lowest rank' hiring in most cases."[25] This means that full and associate rank professors who wish to move are often forced to consider either moving to administrative positions or leaving the university.

Low academic job mobility combined with the existence of few replacement positions, it has been argued, will cause the universities to stagnate:

> the universities will be deprived of the normal inflows of new talent — inflows that are considered essential for the creation of new ideas, challenging approaches, and the health of scientific progress. There is a perceived risk that potential researchers will be discouraged from enrolling in post-graduate studies, resulting in the loss of valuable talents. There could also be repercussions on the amount of scientific work carried out through thesis research.[26]

These comments, although addressed to the sciences in particular, apply with equal force to many other fields as well. The evidence is overwhelming that the university system has become clogged with aging and tenured professors, and

that it offers few new openings for the next generation of Canadian academics.

This potential loss of so large a part of an academic generation is bad enough, but the situation is made more difficult because demographic trends combined with student preferences are producing an imbalance in the supply and composition of university faculty. Demand for the services of teachers is limited in some disciplines, while in others there is a continuing potential for growth. The anticipated 21% decline in the 18 to 24 year old population from a high of almost 3.4 million in 1982-83 to a low of about 2.6 million in 1996,[27] and the shifting composition of the student body, point to an increasingly difficult situation, particularly in the arts and sciences. In all of Canada, a total of only 2,700 academic openings, approximately, will be created over the five year period, from 1983 to 1987, as the result of mortality and retirements (Table 34). A report of the Ontario Council on University Affairs speculated that if enrolment declines by 25 per cent this could mean that, of the 12,000 full-time university teachers in Ontario alone, 2,500 might become redundant within the same five-year period. While this may be an extreme and unlikely development, it is nonetheless clear that should university enrolments decline after 1983 or 1984, as many projections anticipate, attrition of the professorial ranks through retirement and mortality will not be enough to adjust the number of faculty to the projected smaller student population.

The present and projected limitations and uncertainties about university growth point to the need for action. First, there is a need to minimize the impact of low mobility, few new hirings, and few career advancement opportunities, all of which could lead to a stagnation of the university system. Second, there is a need to encourage and to assist those already in the system who may become redundant in the next few years either to leave the system early, or to re-train to help meet the shortages of qualified teaching staff in the few growth areas that exist or that are projected. Third, ways must be found to bring younger academics into the academic system so that the new generation of Canadian scholars is not excluded from participation in the life of the university. In the balance of this chapter, the Commission explores a number of proposals intended to address these three related problems.

Inter-university faculty and administrative visits and exchanges

The present and potential problems confronting the universities, arising from the age structure of the professoriate and the possibility of an unchanging faculty growing stale and inward-looking, could be lessened to some degree by the establishment of programmes to encourage inter-university faculty and administrative visits and exchanges. These would provide opportunities to refresh and stimulate academic departments by the introduction of new faces and different points of view, and by providing new opportunities for co-operative teaching and research. At the same time, participants in such visits and exchanges would benefit from the opportunity to work in another milieu.

Operating in a different environment, even for a short time, could provide new academic insights to faculty members and administrators who might not otherwise have the chance to gain the fresh perspectives that can result from such movement.

Given the probability that senior scholars and administrators will have fewer and fewer opportunities to move because of financial restrictions, and the growing practice of interim hiring in the lower ranks, visit and exchange programmes could be of particular value during this next decade. The value of academic visits and exchanges with other countries has long been understood, although little enough has been done about it. The Commission would now emphasize the acute need for such visits and exchanges between postsecondary institutions within Canada. Such visits and exchanges are needed in every academic field. But they could often have an extra dimension of utility for those engaged in Canadian studies, whose teaching, research or administration might benefit from gaining access, as a result of such movement, to materials, individuals, or situations directly relevant to their work. Such visits and exchanges would also be of special value to small universities where there are often limited opportunities for intellectual exchange simply because of the limited number of faculty.

Inter-university visits and exchanges on the international level also take on a heightened importance in the present circumstances. Unfortunately, far from expanding, there has been some reduction in the international movement of scholars. Yet, it is precisely when the academic community is squeezed and embattled, as it is today, that its members most need to reach out to one another, to work together, to gain from one another's knowledge and experience, and to make common cause.

The Commonwealth University Interchange Scheme, for example, which for years played a vital role in linking the universities and scholars of the Commonwealth has recently been discontinued. Some three thousand members of faculty were given the opportunity to visit sister institutions during the three decades in which the Scheme operated, including more than six hundred visits to or from Canadian universities. The moneys saved by the discontinuance of such schemes for international university interchange bear no relationships to the losses their closure inflicts on the research and intellectual opportunities available to university teachers. The Commission, therefore, recommends that the Canadian government provide financial support to enable the Association of Universities and Colleges of Canada to participate with the Association of Commonwealth Universities and with other appropriate national associations of universities to establish a new programme of academic visits and exchanges for university faculty and administrative staff within the Commonwealth. The Commission also recommends, more broadly, that the Canadian government support the Association of Universities and Colleges of Canada in the development of a network of international programmes of university interchange. In doing so, the Commission draws attention to the many

particular advantages to be derived from developing such a programme of academic visits and exchanges with the community of francophone countries, as well as with the Commonwealth.

To promote and facilitate academic visits and exchanges within Canada, the Commission recommends that the Association of Universities and Colleges of Canada establish a Canadian University Interchange Programme and that the Department of the Secretary of State provide the funding required to meet the costs of the Programme's establishment and operation. To this end, the Commission recommends the early establishment by the A.U.C.C. and the Department of the Secretary of State of a working group to make specific proposals for the Programme's initiation.

Provincial Research Chairs

Both the provinces and the universities could benefit from the establishment of provincial research chairs. Such chairs might appropriately be created in areas of provincial concern such as education, natural resources, energy, transportation, culture and recreation, and human rights. While this proposal was advanced with cogent arguments by the Science Council some years ago, it has not yet received the serious attention it deserves.[28]

Spreading the Acquisition of New Faculty over a Number of Years

As noted, there will be limited room for new faculty appointments until the mid-1990s, when there will be a sharply increased demand for university teachers because of the age structure of the current professoriate. In preparation for this situation, and to avoid again having to hire large numbers of faculty from other countries in the 1990s as in the 1960s, the provinces should now explore with the universities arrangements that will make it possible for the universities to spread the acquisition of new faculty over a number of years, commencing well before the heavy demands for new university teachers that can be expected in the 1990s.

Voluntary Early Retirement and Mid-Career Change Options

Universities and governments in the United Kingdom, the United States, and a number of other countries have devoted considerable attention to the possible role of voluntary early retirement as one means of alleviating the problems arising from faculty redundancy and the age structure of the professoriate, and the attendant problems of the denial of university teaching opportunity to young scholars. As has been noted, the prospects for the maintenance of existing mandatory retirement regulations are increasingly uncertain in the light of legal decisions and possible legislative changes in the field of human rights. The prospects for mandatory early retirement are correspondingly less. There is, however, growing evidence that a significant

number of faculty members at Canadian universities would be interested in voluntary early retirement, provided that equitable arrangements could be made and that the terms of any voluntary early retirement plan were clear.

Unfortunately, the literature about and the experience with early retirement plans for academics is very limited in Canada. However, some things can be learned from the current United Kingdom experience with such plans and from recent work done on this subject in the United States. At least at one university in the United Kingdom more members of the teaching staff have applied for voluntary redundancy, or early retirement, than the number required because of cuts in the government's operating grant. By the end of 1982, some 1,800 academic and senior administrative staff were reported to have left British universities under the voluntary redundancy scheme; 90 per cent of those leaving by this method have been over the age of 50.[29] The compensation guidelines and compensation arrangements for redundant academic and related staff that have been developed in the United Kingdom may not suit the Canadian situation, but they should be examined carefully.

The study on mid career change or early retirement in the United States prepared by Carl V. Patton also deserves careful study.[30] Patton stresses the need for financial incentives to create an environment for early retirement and he describes experiments with various schemes. One approach he thinks has promise is severance payment to encourage teachers to leave the university for other employment. A one-payment severance could, under some circumstances, be mutually advantageous to university staff members and to their universities. One-payment severance schemes could be attractive to the universities because no long-term commitments are involved and the costs of such schemes are known in advance. These schemes would, however, be still more attractive to the universities if funds were made available to them by government to reimburse them for compensation or incentive payments made to redundant staff, as is now being done in a number of other countries.

Patton also suggests that those who retire from full-time positions early might be given opportunities for part-time employment and some of the benefits associated with faculty appointment at the university.

Patton suggests, however, that early retirement has limited impact on the age structure of academia, and that it has only a short-term effect. Those who retire early are not around to contribute to the retirement rate later on. Nonetheless, given the faculty age structure problems faced by Canadian universities, voluntary early retirement programmes would probably prove, on balance, to be helpful. Our universities may well be confronted with faculty redundancy situations in some fields. Moreover, we need to open places for young academics now. It is important to do so in order to bring intellectual refreshment and change to our universities. Doing so might also encourage graduate enrolments. A strengthening of graduate enrolments will, in turn, help to meet the future need for highly qualified manpower. Thus, it may be argued that facilitating early retirements will stimulate the demand for highly qualified

personnel sooner than would otherwise be the case, and that the difficult problems destined to arise in the 1990s because of projected enrolment increases combined with bunched faculty retirements at that time could be somewhat anticipated and mitigated.

In view of the significance and urgency of these problems, and the lack of Canadian literature, data, and experience about this subject, the Commission recommends that the Canadian government sponsor a study of the possible merits, problems, and options involved in voluntary early retirement plans for university faculty and staff. The study should be commissioned by the Department of Employment and Immigration, in consultation and co-operation with the Association of Universities and Colleges of Canada, the Canadian Association of University Teachers, the Department of the Secretary of State, and the Council of Ministers of Education. The results of that study should be made public and should help to provide the basis for a co-operative approach to the problems of faculty redundancy, an aging professoriate, and the current denial of opportunity to well-qualified young graduates.

As with voluntary early retirement, there is still comparatively little Canadian experience or literature concerning the subject of mid-career change in the academic context. What, for example, would be the possible merits, problems, and options involved in a programme of financial incentives to foster mid-career change? Should university funds be used to assure a faculty member that university pension contributions would be continued, if need be, until his or her retirement even though he or she leaves the university to pursue another career? Should governments reimburse universities for such expenditures? And, if so, under what conditions? How would such programmes be administered, if thought desirable? Should it be a requirement that the vacated position be made available to a younger academic? And, if so, how could this be ensured? If an incentives programme for mid-career change were to be open to all, what would stop the departure of the most valuable person or persons in a department? But if the plan were selective, how could it be equitable?

The possibilities for incentives and other arrangements to facilitate mid-career change should be vigorously explored. Comparatively little work has yet been done on this subject in the Canadian academic context. For this reason, the Commission recommends that an examination of the possible merits, problems, and options involved in the development of mid-career change programmes be included in the terms of reference of the proposed study of voluntary early retirement plans for university faculty and staff.

In this context, the Commission again draws attention to its proposals, put forward in the preceding chapter, for the development of a nation-wide support system for post-graduate education and research, as part of a national strategy for higher education.

Reduced Appointments

There are many reasons why faculty members might not wish to take early retirement. Most will have to retire on fixed incomes and when they are faced with the uncertainties of inflation, as is now the case, that is in itself an incentive not to retire. Beyond these and other financial considerations, however, lies the fact that most university faculty view their work as a lifelong vocation, and not as just a job. It is understandable that they would be reluctant to abandon the activities to which they have been committed. For this reason, many faculty members who would not welcome even a generous voluntary early retirement scheme might respond to a proposal for reduced workloads under a policy that provided for what might be termed reduced appointments. Under such a policy, a faculty member could choose to apply for a reduction in some portion of his or her workload, accepting a commensurate reduction in salary. Such an arrangement might, in fact, be helpful for a variety of reasons to many faculty members and it would, in turn, allow some greater measure of flexibility to the university in its staffing arrangements.

Faculty Re-Training

In management and administrative studies there are considerable pressures for growth, and a number of special reasons why that field ought to be supported in the next few years, which are related to Canada's economic performance and position in the world. At the same time, there are insufficient human and financial resources available for the adequate development of faculties of business and administrative studies. There are also shortages of skilled manpower in many other vocational and professional areas. Interested members of the arts and science faculty might be assisted, through secondment and other means, to prepare to teach in professional and other programmes where there is a heavy present and/or future demand for qualified university teachers.

It may be argued that those who have been educated in one discipline are unsuited or unable to make the transition to teaching in another. Studies from Statistics Canada indicate, however, that many who are now teaching in career-oriented disciplines had their graduate education in the humanities, social sciences, and natural sciences.[31] It is in the social sciences and humanities especially that there are surpluses of young Ph.D.s in the current academic job market. Re-training programmes designed to accommodate both current faculty who, for mobility reasons, might wish to change teaching fields and recent graduates who are unable to find teaching positions in their chosen discipline but who still wish to pursue careers in university teaching, would be of assistance to many in these areas. For faculty members, such programmes would need to include appropriate provisions for leave and for re-training opportunities. For recent graduates, a special re-training bursary programme would have to be established.

It is clear that more could and should be done to make possible the re-training of doctoral graduates and current faculty interested in changing their

teaching field in order to increase their career options. Re-training programmes would provide a useful way to meet some of the current staff deployment problems that exist in the university between the expanding career-oriented and professional areas and other academic fields. In addition, such programmes would help at least some of those young graduates, eager to teach in the university but whose disciplines are not currently in demand, to make adjustments that would allow them to pursue research and teaching careers in higher education.

Some Questions about Tenure

In this time of economic constraints and university retrenchment, with the possibility of faculty redundancies in prospect, it is both difficult and unpopular to raise questions about tenure. Indeed, those who do so run the risk of being misunderstood and resented by the academic community. None the less, it is impossible in a discussion of the age structure of the professoriate and of the current lack of opportunity for so many well-qualified graduates not to raise a number of questions relating to tenure. At least two of these questions require consideration in the context of the present discussion. First, are there problems in the public perception of tenure? Second, is the practice of tenure fair and in the best interests of the academic community and, more broadly, of the general community that supports the academic community?

The answer to the first question is clear: there are indeed serious problems in the public perception or misperception of tenure, and it is important for the academic community to recognize this fact. The observations of a highly respected journalist, and of a distinguished rabbi and leader in the field of human rights, underline the point. The journalist, John Fraser, has expressed the widespread public perception of tenure only too well:

> So many aspects of university life have become diseased in such a short period of time, it is impossible to put your finger on one thing and say, "If you fix this, things will get better." Tenure for professors, for example, which was once a guarantee of academic freedom, has now dwindled into little more than job security for the lucky ones who got it before the economic crunch began and is now a depressingly successful barrier to the new blood and fresh ideas which are constantly needed to revitalize university life.[32]

Rabbi Gunther Plaut's observations were even more pointed, suggesting that, if tenure were abolished tomorrow, half the university professors in the country would be fired for incompetence and that "tenure is so comfortable for those who have it, it will ultimately destroy the system."[33]

One need not agree altogether with Dr. Plaut to acknowledge that a good many lazy, dull, and incompetent university teachers are sheltered psychologically and in terms of administrative practice by the mystique of tenure, if not by its proclaimed intent and legal status. Whatever their reputation for integrity, forthrightness, and even irascibility, there are, it would appear, few

academics or academic committees able to bring themselves to tell a colleague that most difficult of truths: 'you just are not good enough, there are others who would do the job better.' That is, indeed, an unpleasant thing to say — but presumably that is what merit, promotion, tenure, competitive hiring, and academic standards are all about. The result of this disinclination to make tough decisions has been the inclusion and retention in the academic ranks of people who, in many instances, are not as able to contribute as others would be in their place, or who, in plain fact, should not be there.

It is too easy to say yes to someone you know, and awkward to say no, particularly if reasons have to be given and disagreements may ensue. Something akin to the log-rolling process that occurs in politics also often occurs in universities when decisions are made about hirings, promotion, merit, and tenure. The notion that 'if you scratch my back I'll scratch yours' is no more alien to the university than to any other community. The notion might, in fact, be expressed more defensively in the academic community, with its capacity to wound with wit and pen: if you don't scratch my eyes out, I won't scratch yours out when your time comes. The result is that the principles of academic merit and academic excellence often take second place to the development of comfortable, mutually accommodating groups and departments. The losers are not only those who might more ably have filled such positions or deserved promotion or tenure, as the case may be, but also the students and the community of scholarship, and the society that funds them both.

A more genuine and rigorous procedure for the decisions leading to appointment, promotion, and tenure is needed at many institutions. More honest and effective ways for reaching such decisions must be found, ways which are less susceptible to the pressures of acquaintanceship and self-interest and less vulnerable to the realities of human nature. The concept of tenure, as a component of academic freedom, is essentially sound. But there are clearly problems in regard to its application and practice. In particular, the questions must be asked: are decisions to grant tenure being made with adequate regard to due process and to real scholarly criteria? and should tenure be conferred upon an individual forever, or should it be subject to a periodic review based on actual performance? These questions take on additional significance and urgency at a time when many well-qualified graduates are excluded from participation in an academic community which is steadily aging.

In the light of these considerations, the Commission recommends that the Canadian Association of University Teachers and the Association of Universities and Colleges of Canada establish a joint committee to examine and report upon questions surrounding the current status and practice of tenure.

Even if all the options discussed in this and the preceding chapter were to be implemented, they would not solve the problems of employment for recent Ph.D.s and for those who will graduate in the next few years. Taken together, however, such measures could go a long way towards mitigating these problems, while providing a number of opportunities for the university to benefit from

some change and intellectual stimulation in the face of what is otherwise going to be an increasingly static faculty situation.

The problem of the age structure of the teaching profession is not confined to universities in Canada. Community colleges and schools face similar problems. The schools have a particularly pressing need for various refresher options. In many school systems there has been a decimation of the younger personnel due to declining enrolments and the seniority provisions in teachers' union contracts. Similarly, there are fewer and fewer young people being hired into the systems due to low attrition rates and declining enrolments. The group involved in education has aged and the system is effectively closed, with those inside clinging to their posts and those outside denied entry no matter how talented or well-qualified. This, of course, has serious implications for the current graduates of universities. It has been estimated that 30,000 university graduates were hired directly from their studies into teaching in 1969. In 1976, the figure was only 10,000 and the trend is downward.[34] Statistics Canada estimates that only 6,800 teachers were hired directly out of educational institutions in 1979-80.

The Commission is concerned that these demographic problems, affecting all levels of education in Canada, be addressed. Much more needs to be known about how various options to refresh teachers, or to create mobility for them, and to open up new opportunities, will work. We need to examine, as well, the implications of these alternatives for education generally and, more broadly, for society. There is a major job for the universities in promoting knowledge and understanding of such questions and in designing programmes to help to meet the problems involved.

The Commission recommends:

1. that the Association of Universities and Colleges of Canada establish a Canadian University Interchange Programme to promote and facilitate inter-university faculty and administrative visits and exchanges within Canada;
2. that the Department of the Secretary of State provide the funding required to meet the costs of the Programme's establishment and operation;
3. that the A.U.C.C. and the Department of the Secretary of State establish as soon as possible a working group to make specific proposals for the Programme's initiation;
4. that the Canadian government, through the Department of External Affairs and the Department of the Secretary of State, support the A.U.C.C. in the development of a network of international programmes for university visits and exchanges;
5. that the provinces explore with universities the possibility of establishing provincial research chairs in areas relevant to provincial responsibilities;

6. that the provinces explore now with the universities arrangements to make it possible for the universities to spread the acquisition of new faculty over a number of years, commencing well before the heavy demands for new university teachers that can be expected in the 1990s;
7. that the Canadian government sponsor a study of the possible merits, problems, and options involved in voluntary early retirement plans and mid-career change programmes for university faculty and staff; that the study be commissioned by the Department of Employment and Immigration, in consultation and co-operation with the Association of Universities and Colleges of Canada, the Canadian Association of University Teachers, the Department of the Secretary of State, and the Council of Ministers of Education Canada; that the results of the study be made public in order to provide the basis for a co-operative approach to the problems of faculty redundancy, an aging professoriate, and the current denial of opportunity to well qualified young Canadian graduates;
8. that universities examine, in close consultation with their faculty associations, the possible advantages of a reduced appointments policy;
9. that the A.U.C.C. develop proposals for faculty and graduate re-training programmes in consultation with the C.A.U.T. and the Department of Employment and Immigration; that the Department of Employment and Immigration assist with the costs of the faculty and graduate re-training programme; that the programme include provisions for faculty leave and re-training opportunities, and a re-training bursary programme for recent graduates;
10. that the Canadian Association of University Teachers and the Association of Universities and Colleges of Canada establish a joint committee to examine and report upon questions relating to the current status and practice of academic tenure in Canada.

Full bibliographical information for citations may be found in the bibliography.

1. Leslie, 49.
2. von Zur-Muehlen and Belliveau, 4.
3. Canada. Statistics Canada. *Teachers in universities, 1980/81*, 16-22, (1982) and additional data provided to the Commission by Statistics Canada, 1983.
4. Science Council. *University research in jeopardy*, 23.
5. While it is true that these median salary statistics include faculty who hold senior administrative positions within the university, their inclusion does not inflate the overall median salary figures appreciably. For example, for the academic year 1980-81 Statistics Canada notes that the median salary for the approximately 2,350 faculty with senior administrative duties was $42,581 while the median salary for the approximately 22,500 faculty without such duties was $33,405. The overall median for all ranks, including administrators, was $34,062, or only about $600 higher as a result of the inclusion of faculty members holding senior administrative responsibilities. Source: Statistics Canada. *Teachers in universities, 1980/81*, Table 4D, 40-41, (1982).
6. Direct comparison of university salaries in Canada and the United States can be misleading for many reasons, including fluctuations in the exchange rate and the different values of the dollar. For example, in the United States many academic salaries are paid for a nine month year,

whereas such salaries are paid on a twelve [illegible] basis in Canada. In addition, research grants in that country often contain a [illegible]ent, which is seldom the case in Canada. Moreover, university salaries in the Unit[illegible] more frequently augmented by additional payments for research, administration, [illegible] cases than is the case in Canada. Nevertheless, these differences in salary arrange[illegible] not mean the university salaries are higher in the United States. As noted by Frideres and Goldenberg, at the university on which they based their study, "Americans chose a Canadian university on the basis of increased status and income." p. 7.

7. Material reviewed by the Commission includes: Balzarini "The economic state of the academic professon"; Balzarini "Is the academic rewarded in this lifetime?"; Richard B. Bird's arbitration report concerning faculty salaries at the University of British Columbia for 1981/82; Kevin M. Burkett's arbitration report concerning faculty salaries for 1982 at the University of Toronto; and William Jones "Relative salaries of faculty in Ontario and Canada in the 1960s and 1970s: why do we want to do so badly", unpublished. Axelrod. *Scholars and dollars.*
8. von Zur-Muehlen and Belliveau, 7.
9. von Zur-Muehlen. *Past and present graduation trends,* 39.
10. von Zur-Muehlen. *The Ph.D. dilemma in Canada revisited,* 83. See also Wolfe. *Two years after graduation.*
11. Leslie, 49.
12. The extent, propriety, and consequences of such concealment of information are discussed in Volume I of *To know ourselves*; the report of the Commission on Canadian Studies, p. 92, 118-119, and 149, and are the subject in that volume of Recommendation 13, p. 131 and Recommendation 7, p. 171.
13. Leslie, 50.
14. Steedman, 1.
15. von Zur-Muehlen and Belliveau, 17.
16. Watt, L.K., 69.
17. Ibid, 69.
18. Canada. Statistics Canada. *Postgraduation plans of 1981 Ph.D. graduates,* 40-41. (1982).
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22. _____. *Teachers in universities,* 180-81, 22-23. (1982).
23. Moffat, 22.
24. Ibid, 21.
25. Ibid, 22.
26. MOSST. *The aging of the Canadian professoriate,* 2.
27. Clark, Devereaux and Zsigmond, 59.
28. Science Council. *University research in jeopardy,* 29-30, 47.
29. *The Times Higher Education Supplement,* 23 Nov. 1982, 3.
30. Patton. *Academia in transition.*
31. For example, von Zur-Muehlen. *Doctoral business programs,* 25.
32. Fraser. "Parsimony imperils academe".
33. Plaut. "University tenure protects incompetents".
34. *Out of school — into the labour force.*

VIII

HUMAN RESOURCE QUESTIONS ARISING FROM THE NATIONAL GOALS SET FOR RESEARCH AND DEVELOPMENT

In the section on "Science, Technology, and Canadian Studies" in the first volume of its *Report*, the Commission underlined the importance of the Canadian scientific and technological community for our ability to know ourselves. Canada needs a strong and growing scientific research capacity to help us to comprehend, and to live in harmony with, the vast and particular physical space that we occupy on this planet and to enable us, also, to play our part in the wider international community of scientific activity. In addition, Canadians need a better understanding of the fundamental role of science and technology in our lives, and we need to know more about the substantial and often distinctive Canadian contributions to science and technology. While scientific principles may be international and universal, the development and application of scientific knowledge in a given community is frequently the result of the articulation of specific objectives or needs relating to conditions in that community.

If the Canadian community is to be able to employ science and technology in the pursuit of national goals, the country must have both the human and the material resources required for the task. Yet, it is evident that Canada does not have, and is not yet preparing, the highly qualified personnel and other resources necessary to implement announced public policy decisions establishing essential national goals for research and development.

Research and Development (R and D) is defined by Statistics Canada and the Department of National Revenue as:

> systematic investigation carried out in the natural and engineering sciences by means of experiment or analysis to achieve a scientific or commercial advance. Research is original investigation undertaken on a systematic basis to gain new knowledge; development is the application of research findings, or other scientific knowledge, for the creation of new or significantly improved products or processes.

For good or ill, a great deal of a country's progress and prosperity in the modern era depends upon the extent and efficacy of R and D activity. Research and Development depend, in turn, upon the availability of highly qualified personnel. There is, unfortunately, abundant evidence that these simple truths are not yet fully grasped either by government or by industry in Canada.

Statistics indicate that there was a pronounced and prolonged decline in the number of doctoral students enrolled in Canadian universities in the R and D-related sciences throughout the 1970s. The statistical reports of the Canadian Association of Graduate Schools show a drop in the doctoral enrolment in the natural and applied sciences in every year from 1970-71 to 1979-80 (Table 22). Over this decade, enrolment in this area declined by 30 per cent falling from 4,182 doctoral students in 1970-71 to 2,931 in 1979-80. In general, despite some differences, data from Statistics Canada support this conclusion, showing a drop in doctoral enrolment in mathematics and physical sciences from 2,743 in

1970-71 to 1,905 in 1980-81, and a drop in the engineering doctoral enrolment for the same period from 1,462 to 1,178 (Table 23). Moreover, as shown in Table 24, more than a third of the doctoral enrolment in these two areas in 1980-81 consisted of students from other countries, attending Canadian universities on foreign student visas, whose numbers should be subtracted from these totals in calculating future additions of highly qualified graduates to the Canadian workforce. Given these figures, it was not surprising that a statement on engineering manpower by the Canadian Engineering Manpower Council concluded that "real shortages of professional engineers now exist in certain regions and disciplines, and that the available evidence points to a possible worsening of the situation".[1] Despite short-term problems in job placement, the long-term probability of an acute shortage of highly qualified professional engineers remains in many areas.

Fortunately, data for 1981-82 and preliminary data for 1982-83 show, at last, some reversal of the downward trend in doctoral enrolment in the sciences, perhaps largely in response to initiatives taken by the Natural Sciences and Engineering Research Council with additional funds belatedly made available to it by the federal government. It remains to be seen, however, whether this upturn is a short-term phenomenon or the beginning of a new trend. Either way, it has come "too late to produce a major improvement in the supply of graduate students, especially at the Ph.D. level, in the first half of this decade."[2] Forecasts by Statistics Canada indicate that the number of doctoral degrees awarded in mathematics and physical sciences will total 350 in 1983 as compared to 557 in 1973, and 110 in engineering in 1983 as compared to 299 a decade earlier (Table 25). It should be unmistakably clear that Canada faces a shortage of highly qualified personnel in many areas of the natural sciences and engineering. The shortage is occasioned not only by the decline in doctoral production but also by the increasing need for people with such knowledge and skills.

The ultimate dependence of research and development upon the availability of highly qualified personnel has been stressed in a multitude of reports and analyses, in Canada and elsewhere.[3] However, government and industry, alike, have been slow to recognize that suitable personnel are the foundation of R and D. During recent years, the country has added little to its stock of persons engaged in R and D in the natural sciences and engineering, and there has in fact been a decline in the number engaged in R and D in the social sciences and humanities.[4] In 1977 (the most recent year for which comparative international figures are available), as a percentage of population, Canada had about one-third fewer people working on R and D than Sweden, West Germany, and Japan, and about one-half or less than the Netherlands, France, and the United States.

Indeed, the significance of R and D itself for the country's economy and for the quality of life of its citizens is still only dimly perceived by Canadians. Yet there have been strong advocates calling attention to its importance. The president of the National Research Council, for example, has argued that the

comparatively low level of Canadian R and D has "handicapped us badly in a world trading scene which is more and more characterized by high technology products."[5] The Canadian Council of Professional Engineers has urged that "To meet the challenges and opportunities, Canada must engage in more R and D to ensure our technological competitiveness."[6] The Minister of Finance has stated bluntly that "It is imperative for Canada to achieve a greater and more broadly based R and D effort."[7]

The particular importance of R and D for national economic and industrial development has also been underlined by studies of the Research and Policy Committee of the Council on Economic Development in the United States which found that companies that invest heavily in developing new products and technologies have twice the productivity, three times the growth, nine times the employment, and one-sixth the price increases of those businesses that make small expenditures on R and D. A survey of all United States companies with sales of over thirty-five million dollars and R and D of at least one million dollars or of one per cent of sales, showed an average expense of about 16 per cent of profits before taxes. Canadian industry, by contrast, spends about 3 per cent of pre-tax profits on R and D.

Although expenditures on R and D performed within the business sector are increasing, and although about twice as much was spent in that sector as in the government sector in 1982, R and D is, on the whole, a minor activity of Canadian industry. The vast majority of Canadian firms do no R and D at all; in 1980 only ten companies accounted for 35 per cent and twenty-five accounted for 53 per cent of the R and D performed in the business sector. While R and D in all countries is performed by only a small proportion of corporations, comparisons with other industrialized countries indicate that the level of industrial R and D activity in Canada is unusually low.[8] Data compiled by the Organization for Economic Cooperation and Development also indicates that the level of support provided to industrial R and D by government in Canada is much lower than in many other industrialized countries. (Table 38).

O.E.C.D. data confirm that throughout the 1970s and into the 1980s Canadian expenditures on R and D as a percentage of the Gross Domestic Product (GDP) ranked well below those of most other industrialized countries. The percentage that R and D constituted of the respective GDP of eighteen countries at the end of the 1970s and the beginning of the 1980s is indicated in Table 39. Canada ranked thirteenth on the list, following Yugoslavia and Finland. The level of Canadian support for R and D was less than half of that given to R and D in the United States, Switzerland, West Germany, and the United Kingdom, and less than two-thirds the support given to it in Japan, the Netherlands, Sweden, and France. O.E.C.D. figures also indicate that Canada ranked low on a list tabulating the average annual change in gross expenditures on research and development during the 1970s.[9]

Given such data, it should not be surprising that the Ministry of State for Science and Technology has concluded that "Canada's productivity

TABLE 38

GOVERNMENT SUPPORT OF INDUSTRIAL R AND D: INTERNATIONAL COMPARISONS (1979)

	Percentage of Industrial R and D Supported by Government	Ranking
United States	32.8	1
United Kingdom	29.2	2
Norway	23.8	3
France	21.6	4
Germany	18.2	5
Sweden	12.8	6
Denmark	11.2	7
Ireland	9.0	8
Canada	8.5*	9
Italy	6.3	10
Finland	3.2	11
Japan	1.4	12

Source: "International Statistical Year 1979: Main Results 1979", Group of National Experts on R & D Statistics, Directorate for Science, Technology and Industry, OECD. 3 March 1982.

* Note: In 1981, the federal government funded 9 per cent of industrial R and D. Statistics Canada. "Industrial research and development expenditures, 1974 to 1983. *Science Statistics*, Ottawa, 1983, Vol. 7, No. 4, p. 4. (Cat. 13-003).

TABLE 39

O.E.C.D. DATA ON R AND D EXPENDITURES FOR EIGHTEEN COUNTRIES: GROSS EXPENDITURES ON RESEARCH AND DEVELOPMENT AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT

Country	Year of GDP	GERD as Percentage
United States	1980	2.49
Switzerland	1979	2.45
Germany	1979	2.27
United Kingdom	1979	2.20
Japan	1980	2.04
Netherlands	1978	1.97
Sweden	1977	1.90
France	1979	1.79
Belgium	1979	1.40
Norway	1979	1.37
Yugoslavia	1977	1.20
Finland	1979	1.08
CANADA	1980	1.07*
Denmark	1979	0.97
Italy	1979	0.82
Turkey	1978	0.59
Portugal	1978	0.32
Greece	1980	0.18

* Note: 1980 percentage for Canada is from S[illegible]s Canada, *Annual review of science statistics, 1982.* Otta[illegible]. 62.

Source: National Research Council of Canada, *The urgent investment: year two*, Ottawa, 1982, p. 19.

performance, compared with that of other countries in the O.E.C.D., has been steadily weakened over the past decade" and that "our poor productivity growth in recent years, especially since 1973, has severely eroded our competitiveness."[10] The trade deficit of this country in manufactured goods rose to seven and one-half billion dollars in 1981, a seven-fold increase over the preceding decade and one of the largest per capita deficits on manufactured goods of any industrialized country.[11]

The statistics show a large and growing Canadian trade deficit in high technology commodities in every year since 1968.[12] In 1981, the negative balance of trade in high technology commodities alone exceeded nine billion dollars, thus accounting for more than the country's total overall deficit in the trade of manufactured goods. But there were also negative balances of trade in medium technology commodities (five and one-half billion dollars) and in low technology commodities (two and one-half billion dollars).[13] The general message appears to be: the greater the amount of technology required, the greater our relative dependence on goods produced abroad. It is a message that should underline the urgent need for Canada to develop its scientific and technological capabilities and to devote more attention, and financial support, to the preparation of the highly qualified personnel upon whom these capabilities must rest. The present situation is all the more regrettable in that this country has the natural and human resources, if properly fostered and deployed, to become one of the world leaders in research and development and, more broadly, in science and technology.

The technological balance of payments (that is, all the operations relating to the purchase and sale of technological information and know-how which are recorded in a country's balance of payments) also shows a continuing and growing deficit that conveys the same message. Canada's negative technological balance of payments has grown steadily from 27 million dollars in 1965 to 255 million dollars in 1980.[14] Transactions in royalties and fees between Canadian and United States companies, in particular, show a steady growth in Canadian net payments from 261 million U.S. dollars in 1967 to 767 million U.S. dollars in 1981.[15] Payments abroad by companies in Canada for science and technology information and rights (often paid to a parent company) amount to more than 25 per cent of their expenditures on R and D in Canada.[16] Only 7 per cent of the patent applications filed in Canada are for inventions by Canadians.[17]

The extent of foreign ownership of Canadian industry and resources is a major factor in the weak Canadian performance in R and D. It is not an exercise in jingoism or nationalistic flag-waving to point this out. It is simply a statement of fact. It is a fact that foreign-controlled firms perform significantly less R and D relative to sales than those that are Canadian-controlled.[18] It is also a fact that Canada has consistently recorded a trade deficit in technology-intensive commodities. If foreign-owned companies performed R and D at the same level as Canadian-owned companies, the overall Canadian gross expenditures on research and development (GERD) to GNP ratio in 1977 would, for example,

have been 1.3 per cent instead of less than one per cent. Moreover, R and D in foreign-controlled firms is not only quantitatively less than in Canadian-controlled firms, it is also qualitatively different, being primarily directed towards adapting foreign technology to domestic needs.

No country in these times is technologically independent. However, there are serious and legitimate questions to be asked about the balance between a country's reliance on foreign technology and the development of its own capabilities and highly qualified personnel in this field. In Canada's case, these questions require urgent attention.

The importance of R and D is not, of course, limited to the contribution it makes to the industrial, trading, and economic life of a country. Research and development in science and technology have a large role to play in resolving the enormous and complex social problems that challenge Canadian society. Many of these problems are becoming more acute as a result of man's own activities that may, for example, pollute the environment, disturb the ecology of a region, or have adverse social or political or cultural consequences. The social impact of the R and D that promotes industry and technology may often add to the need for R and D aimed at environmental, health, legal, and sociological questions. Considerations about human needs, the community interest, and the social consequences of the development of new technologies should be an integral part of all R and D.

Even the location of R and D may contribute to socio-economic problems. Over one-half of all the R and D done in Canada (51%) takes place in one province, Ontario. Only 5 per cent is performed in the Atlantic region. Twenty-one per cent is performed in Quebec, and about 23 per cent in the Western provinces.[19] For industrial R and D, more than 75 per cent of expenditures are made in Ontario and Quebec, and less than one per cent in the four provinces of Atlantic Canada.[20] Such imbalances in the regional distribution of R and D can reinforce existing disparities in employment opportunities, levels of income, capital investment, education, and research.

There is, of course, a risk that more significance will be attributed to R and D or to its absence, than the facts may warrant. The dangers of focussing exclusively or too heavily on R and D as the creator of industrial strength and of social and economic improvement have been well-documented in two recent studies prepared for the Economic Council of Canada.[21] There is a good deal of evidence that the rate of diffusion of 'best practice' technology originating in other countries may be as, or more, significant a factor than innovation-oriented R and D in the growth of industry, science, and technology. Studies of the Economic Council have found that the lag-time between the first world-use of an innovation and its eventual adoption by a Canadian company is often surprisingly long — sometimes as long as ten years. "Even for technical advances within Canada, the rate of adoption is slow compared with that in other developed countries."[22] A capacity for social innovation in terms of structures,

procedures, and value systems is surely at least as important to the progress of a community as its capacity for technological innovation.

Care must also be taken in prescribing nostrums meant to promote the amount of R and D done in Canada. A study prepared for the Canadian Tax Foundation takes issue, for example, with those who argue that the Canadian tax system does not at present offer enough incentive to engage in R and D. While acknowledging that "Canadian expenditures on research and development as a percentage of gross national product have been substantially below those of most developed countries in recent years," the study concludes that "insofar as the corporate tax system is concerned, the R and D incentives Canada offers are superior to those in all but one of the twenty countries examined (the exception is Singapore)," and that "when subsidies and R and D contracts are taken into account, the incentives in place in Canada are among the most generous, if not the most generous," the authors have been able to find.[23]

Clearly, comparisons with other countries must be handled with caution and any simplistic notion that increased R and D always and everywhere leads to significant improvements in economic growth should be rejected. R and D is one of the major factors contributing to such growth, but there are many others. In the field of public policy, there is need for an approach that co-ordinates policies in many areas to achieve the objective of technological development and the economic and social improvements that it can make possible. To acknowledge these points is not to deny the assessment of the National Research Council that "Canadians have been underinvesting in R and D."[24] Nor does it contradict the judgement of the Science Council and of the Natural Sciences and Engineering Research Council that we are failing to prepare in adequate numbers the highly qualified personnel upon whom a high level of R and D must depend.

The "grave and urgent warning" about the state of R and D, which the universities of Canada conveyed to government and to the public in 1979 has gone unheeded.[25] Such response as there has been from government still falls far short of meeting national needs. As the universities then noted, "The impoverishment of the Canadian scientific community during the past decade is extremely well documented and is widely known and acknowledged." Between 1969 and 1977, for example, federal support to universities for scientific research declined by nearly one-third, in 1969 dollars.[26] This deterioration occurred despite the recommendations of the Senate Special Committee on Science Policy, the Lamontagne Committee, that total spending on research and development increase from 1.1 per cent of Gross National Product (GNP), the level in 1972, to 2.5 per cent of GNP by 1980.

It is an understatement to say, as our politicians sometimes do, that the Lamontagne target has not yet been met. In fact, far from moving towards this 2.5 per cent target, Canadian spending on R and D dropped from 1.1 per cent to 0.95 per cent of GNP in the years immediately following the appearance of the Lamontagne report. Canada was spending nearly one-third less, in terms of a

percentage of the GNP, on R and D in 1977 than it was in 1967 when our R and D peaked at 1.3 per cent of GNP.[27]

In fairness, successive Canadian governments have tried to address at least some of the questions involved in the weak Canadian R and D performance. Until very recently, however, there has been little effective linkage between the political talk of national R and D targets and the reality of a feeble and often deteriorating R and D performance. When Canadian R and D was at a peak in 1967 as 1.3 per cent of GNP, the federal government set 2 per cent of GNP as the R and D national goal. R and D then declined to 1.1 per cent of GNP in 1972. The Lamontagne Committee then recommended an increase in Canadian R and D to 2.5 per cent of GNP by 1980. Five years later R and D had fallen to 0.95 per cent of GNP. In 1978, the federal government announced its intention of raising expenditure on R and D from 1 per cent to 1.5 per cent of GNP by the early 1980s. A year later, another federal government raised this target to 2.5 per cent of GNP. In the meantime, the actual level of Canadian R and D, unaware of all these good intentions on its behalf, stayed down at about the 1 per cent mark.[28]

Such a consistent record, for more than a decade, of adverse response to government pronouncements must make Canadian R and D well-wishers thoroughly apprehensive about the declaration of any further national R and D goals! None the less, the announcement in 1981 by the Minister of State for Science and Technology[29] of a planning framework to raise the national level of research and development in the natural sciences to 1.5 per cent of GNP by 1985 was followed by a rise in R and D to an all-time record of 1.34 per cent of the GNP in 1982.[30] Preliminary figures from Statistics Canada suggest that there may be a further increase in R and D in 1983 to at least 1.4 per cent of GNP.[31] Thus, the goal of 1.5 per cent of GNP for R and D by 1985 is not unreasonable and it could well be attained, provided there is a major and sustained push towards this objective, in which government elicits the full participation of universities and the private sector. Even the achievement of the 1.5 per cent goal by 1985 will leave Canada well below the level of many other technologically advanced countries. The French government has set a target of 2.5 per cent for the same year. The target of 1.5 per cent must be regarded simply as an interim goal for Canada.

To achieve a better national performance in R and D, a greater measure of government support will be needed for such work in both industry and the post-secondary institutions. The announcement of "A Technology Policy for Canada" by the Minister of State for Science and Technology in the House of Commons on 3 May, 1983, suggests that such support may at last be forthcoming, at least in more adequate terms than heretofore. The policy proposes, *inter alia*, increased funding for a number of the programmes of both the National Research Council and the Natural Sciences and Engineering Research Council, a strengthening of cooperative university-industry efforts in research and technology, the implementation of a National Biotechnological Strategy, the development of a National Microelectronics Design Network, and

the establishment of an annual fund of $1.5 million to promote public awareness of science and technology. A special Sub-Committee of the Cabinet on Technology Development has been established with the responsibility of advancing technology developments in all sectors and integrating the various policy elements to this end. This policy, combined with related government proposals in such fields as communications, employment, and taxation, could constitute a major break-through in the level of national support for R and D. It will be some time, however, before the policy's value can be properly assessed. Many of the important specifics to the general policy thrust have yet to be worked out and much will depend on the manner of their actual implementation.

One must note, too, that a large and increasing proportion of the government funding for R and D is earmarked for special projects or for areas that are thought to be of strategic importance to the national interest. Such earmarking of funds, no matter how well intended, may upset the balance of activities that should be maintained in a research community and may militate against equally valuable research in the non-prescribed areas. Core funding that is not earmarked is needed for the basic research that underlies all technological advance. The erosion of such core support is already evident.[32] If the situation is not remedied, this erosion could jeopardize the balance and intellectual vitality of Canadian efforts in science and technology.

Over the past decade, university research in Canada has been progressively weakened by both uncertainties and inadequacies in government funding. It is a time when this country should be increasing its support for research and for development. But in many recent years, the level of funding has not even kept up to the rate of inflation. The level of direct federal support for R and D performed in the universities in 1983-1984, for example, that was announced by the Minister of State for Science and Technology on 1 March, 1983, although an apparent dollar increase, was less than the rate of inflation. Similarly, the large apparent increase in R and D performed in the universities, from $432 million in 1975 to $919 million in 1982, was in reality an increase to only $498 million in 1975 dollars.[33] The amount of R and D funded by institutions of higher education, in 1975 constant dollars, actually dropped from $235 million in 1975 to $224 million in 1981 and $228 million in 1982.[34] This deterioration has been only partially offset by some belated additions made by the federal government to the budgets of the major research granting councils.

The weakness in real dollar support for R and D has been aggravated by the particularly high rate of inflation in the scientific sphere. As a result, a very large portion of university scientific equipment is old, often out-of-date, very costly to repair, and expensive due to down-time. Indeed, studies conducted by NSERC have indicated that, by 1985, almost 90 per cent of the laboratory scientific equipment in use in 1979 would be either obsolete or inoperable.[35] Further studies by NSERC suggest that a piece of scientific equipment is, on average, made to last twelve years in Canadian universities; double the period normally planned for in industry. "While this speaks well for the technical competence of

the researchers to repair and maintain the facilities, it suggests a less than optimum use of research talents. It also suggests that postgraduates are being trained for a research career on equipment which is already obsolete."[36] In the view of the Canadian Federation of Biological Societies, much of the equipment on which university biomedical researchers must rely is not only obsolete, but even hazardous.[37]

With lower enrolments now than a decade ago in the science disciplines at the doctoral level, and with increases in enrolments in other sectors, the universities often have to choose to favour the numerically expanding departments at the expense of those that are contracting. This can have the result of bringing on further reductions in enrolments in the natural and applied sciences and reductions, too, in the quality of the research opportunities that our universities can offer to graduate students. Another result of the decline in financial and technical resources is that fewer and fewer university scientists can be accommodated on research projects, and research teams have been disintegrating. The austerity of the 1970s and early 1980s and the lower levels of financial support provided to the universities have also, of course, impeded the recruitment of new faculty members in these fields. Some recent improvements should not be allowed to obscure the fact that Canada's scientific and technological capacity continues to be grossly underdeveloped and that it has been damaged and weakened by serious underfunding in the past decade.

The consequences of this underfunding of R and D can be seen in the medical sciences and in the social sciences and humanities, as well as in the natural sciences and engineering. The Canadian Federation of Biological Societies, representing 3,500 professional biomedical researchers across Canada, argues that "Persistent underfunding of the Medical Research Council for more than a decade has seriously impaired the nation's capacity to conduct biomedical research of the highest quality." It notes with concern the remarkably high rate of rejection of peer-approved grant applications because of lack of funding, the substantial reduction in the number of young Canadians seeking advanced training to undertake research, the termination of research projects and the loss of jobs that this entails for highly skilled technologists, and the premature ending of the research careers of many worthy investigators. The Federation concludes that "the most damaging effect of the present extreme underfunding of the Medical Research Council will be upon the recruitment of young Canadians into the research community," and that the "resulting damage to the nation's future research potential is incalculable."[38] The addition to the Council's budget, announced by the government in June, 1983, goes some way towards meeting these concerns. But there is still much to be done.

When corrections are made to discount inflation, less funding from all sources was made available in 1982 than in 1975 for R and D in the social sciences and humanities.[39] From 1971 to 1981, the programme budget of the Social Sciences and Humanities Research Council declined by nearly 20 per cent in real terms, dropping in 1971 dollars from $18.1 million to $14.5 million. Over

the same period, GNP increased by 26 per cent and the number of full-time faculty in the social sciences and humanities in Canadian universities increased by about 18 per cent. The amount allocated to graduate training in the universities by the Council has decreased by nearly 50 per cent, in real terms, between 1979 and 1982. In 1983, the Council is able to assist less than one in five of full-time Ph.D. students in Canada and less than one in a hundred full-time M.A. students.

The attainment of the announced national goals in R and D depends upon the availability of highly qualified personnel. There are few signs, however, that the government fully realizes the personnel implications of its public R and D target, despite the data which have been made available to it. Projections of highly qualified personnel requirements in the sciences, prepared by the Natural Sciences and Engineering Research Council in 1979, demonstrated that there would be a serious shortage of highly trained research personnel in the natural sciences and engineering within Canada, of the magnitude of some 500 Ph.D.s per year, unless dramatic steps were taken to remedy the situation. As the Council concluded, "any major move to improve the national R and D effort is dependent in the last instance on having the qualified personnel to do the work . . . it is clear that critical shortages of research talent in the 1980s will prevent the attainment of the announced goals."[40] Such change as there has been in this situation since 1979 has not been enough to change the more recent assessment of the President of the Council that there continues to be "a high probability of critical shortages of research talent in this country."[41]

A further study of research manpower training needs by NSERC in 1982 confirmed that there would be a 10 to 15 per cent shortfall in the annual supply of new graduates at master and doctoral levels in the natural sciences and engineering over the ensuing five years. It found, however, that in the physical sciences and engineering the shortfall per year is approximately 1,000 graduates, or 50 per cent of supply.[42]

In addition to their quantitative consequences in causing an increasing shortage of highly qualified personnel, the current financial constraints may also be undermining the quality of scientific and technological education. As the Canadian Engineering Manpower Council has argued,

> If the best possible use is to be made of our national engineering manpower, our engineers must receive the best possible academic preparation . . . It would be paradoxical if we were to articulate ambitious national development goals, then strangle the vitality and leadership out of the very institutions — such as our engineering schools — which can help to meet those goals.[43]

Industry, as well as government, has much to do towards strengthening Canadian R and D through the education of many more highly trained researchers. As a well-informed observer has noted, "the lack of a clear signal from industry that masters and doctoral graduates are, and will be required,

certainly does nothing to help prompt the undergraduate to accept the economic sacrifice associated with graduate study."[44] Yet when the supply has been available, industry has shown its preference for those with advanced degrees. Industrialists have not hesitated to drain research and teaching talent away from Canadian universities when it suited their needs, without regard to the adverse consequences of their action for the preparation of the future supply of highly qualified personnel. Indeed, industry has so far shown little concern about the quantity and quality of the future national supply of research talent. Such improvidence is all the more puzzling when one notes that in a survey of ninety-one of the country's leading industrial spenders on R and D, 23 reported R and D staff hard to find for management, 35 had difficulty finding scientists, 55 in finding engineers, 15 in finding technicians, and 19 in finding technologists.[45]

The need for much closer co-operation between universities and industry is underlined in a *Brief on Research and Development in Canada* by the Canadian Council of Professional Engineers which concludes, correctly, that in the present relationship "we have almost a 'two solitudes' situation."[46] The Brief argues that "our industries, regardless of size, must become more involved in research and development activities."[47] Without disputing this, one may also argue that our industries must become more involved in supporting the preparation, through education and training, of the highly qualified personnel upon whom R and D must depend.

The weak state of Canadian R and D and the shortage of highly trained researchers are intimately related to the short-term and long-term imbalances in the supply and demand for university teachers. The combination of financial constraints and inadequate enrolments means that there will be little demand for new university teachers, other than the occasional filling of dead men's shoes, until the post-1996 period unless steps are taken to break out of the present impasse. Problems arising from the age structure of the present professoriate have been explored in a previous chapter. It may be useful, however, to note here some of the consequences of the situation for research and development:

> On the basis of a set of estimated withdrawal rates of the current stock of teachers (for reasons of death, retirement, migration, etc.) in the various age groups, the number of job openings for new teachers will decrease from the current level of about 400 per year to 250 per year by 1981-82. For a ten to fifteen year period after 1982-83, the number of new appointments will be very low, approaching zero after 1985-86; the normal attrition or withdrawal rate will barely be able to achieve the required reduction in the number of teachers in the second half of the eighties and early nineties. The most critical squeeze will come in the mid-eighties, when the natural attrition rate appears to be insufficient to remove the surplus number of teachers from the system.[48]

Unless remedial action is taken, there will be an almost complete absence of job openings for young faculty in the natural sciences and engineering for a

period of from five to ten years from the mid-eighties to the mid-nineties. Essentially, the faculty now in place will remain in place, apart from retirements, with its average age rising steadily, year by year. Studies indicate that, despite many welcome exceptions, active involvement in research in the natural sciences and engineering drops off dramatically as age increases, from an 80 per cent participation rate at age 35 or under, to a 50 per cent to 60 per cent participation rate between the ages of 35 to 50, to only 25 per cent to 30 per cent participation in research by those over 50.[49] Thus, the prospect is that the research productivity of the aging Canadian professoriate will decline considerably in these key areas:

> Deprived of an entire generation of young scientists and engineers, the quality of teaching, research training and research itself will suffer through the prolonged reduction in new ideas, competent creativity, enthusiasm and scientific entrepreneurship. Deprivation of new blood for such a long period of time is likely to cause irreparable damage to the health of the university research enterprise.[50]

This combination of little university growth and an aging professoriate means that there will be fewer opportunities for graduate students to conduct first line research in a highly-honed and challenging research milieu. In this situation, it is going to be very difficult indeed to meet national goals and to provide this country with a community of young scholars sensitive to Canadian conditions and needs. Many of the concerns expressed by the Commission, in its first volume, about Science, Technology and Canadian Studies are with us yet, and in some instances these concerns have become more pronounced.

Because of our comparative neglect of R and D, and because also of our failure to prepare the highly trained researchers upon whom R and D must depend, the technological capacity of Canadian industry has declined relative to that of our international competitors. Canada's economy is perilously vulnerable in a world increasingly dominated by high technology. Excessive reliance on the importation of the products of research and development done elsewhere threatens what has been termed our "technological sovereignty" and could limit our freedom of action as a nation.[51] It also denies opportunities to a great many capable young Canadians and, if left long uncorrected, could affect our standard of living. The need for concerted Canadian action to promote R and D is made all the greater by the fact that in several parts of the world groups of countries, such as the European Community, have strengthened their own R and D endeavours by entering into full or close co-operation for this purpose with their neighbours.[52]

To a greater extent than may be recognized, Canada's prosperity during the 1960s was less a function of innovations, technologies, native entrepreneurship, and export initiative, than it was a reflection of rapid increases in the labour force, good absorptive capacity, and the good fortune to have at hand a

seemingly endless supply of natural resources to harvest. But that easy era has come to an end. While we may wish to escape the old image of being little more than "hewers of wood and drawers of water", our inattention to the development of a balanced research capacity, and to the highly qualified manpower required to make it possible, may doom us to that role.

The Commission concurs with the numerous reports that have urged the Canadian government and Canadian industry to address our research and development questions squarely. That cannot be done, however, without due attention to the health and well-being of the university training and research community, and without concern for the development of the human resources that are the foundation of R and D.

There may be a temptation to think that Canada can resolve its pressing scientific manpower problems by resorting again to the massive importation of highly trained researchers from other countries when and as our needs require. But there is plenty of evidence that this option may not, in fact, be open to us. The nations of the world are jockeying for position in the high technology stakes and they are all involved in an increasing scramble for the minds and skills that are needed. If anything, there are signs that, in this scramble, Canada has been losing each year some of its own high-calibre human resources because of its failure to give adequate support to research and development activities. One may well question, too, the propriety of ransacking other, often less-developed, countries for their highly qualified graduates, rather than developing our own programmes and institutions in order to open opportunities for capable young Canadians.

There are no easy answers. What is required is, first, a deeper understanding of the crucial importance of R and D to the life of this country and, second, a properly planned and sustained commitment to both public and private sector policies that will move Canada ahead in this field. In particular, more support is needed for the education of the highly trained researchers upon whom both fundamental and applied research depends. Such expenditures must be regarded as a long-term investment in the national interest. "The payoff will not come tomorrow or next week or even next year and in some cases may never come, but unless we make that investment our future as an industrialized nation entering an era of unprecedented technological development will be very bleak indeed."[53]

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IX

THE STATUS OF WOMEN IN CANADIAN ACADEMIC LIFE

During the preparation of this volume the Commission has been asked to explain, on several occasions, why a report on Canadian studies contains a chapter on the status of women in Canadian academic life. The most obvious answer is that the current under-representation and sometimes near-exclusion of women from so many academic and professional fields is an immense negative factor which injects unreality and imbalance into teaching and research about Canada itself. Every aspect of Canadian life and every area of scholarship and teaching in this country stands to gain from the opening up of opportunities for women in higher education.

The validity of this observation is illustrated by the contribution that women have made in those areas in which they have been able to find a place in the scholarly community. A feature of the attention now being given to social history, for example, is the advance made in the writing of the history of women in Canada.[1] While much has yet to be accomplished in that field, it can be argued that what has been done so far has been in large part a result of the increased participation of women in postsecondary education. The participation of more women in research and university teaching is a major factor in the movement to fill in the great gaps in our knowledge about the contribution made by women to historical and contemporary Canadian society.

Discriminatory attitudes and practices towards women deter the participation of about one-half of the citizens of the country in many areas of higher education and research. Such attitudes and practices are, in themselves, a barrier to a better and more complete knowledge and understanding of the Canadian experience. Canadians cannot truly know themselves, or others, while this situation continues.

There is another reason for our concern about the status of women in Canadian universities and colleges. Just as the Commission argues for fair treatment of, and equal opportunities for, the academic generation of the 1970s and 1980s, so too, there must be fair and equitable treatment of women. Women represent a bank of talents that must not be squandered through restrictions on their opportunities in teaching, research, or administration. Women have legal and moral rights to participate fully in this community and to make their mark on Canada. The universities and colleges of Canada have special responsibilities to help them to do so.

In this chapter, then, the Commission reviews the situation that women find themselves in as teachers, students, and staff members in Canadian universities and colleges. We have found that there is still discrimination against women in Canadian higher education and that some scholarly vocations and professions continue to be relatively closed to females. This situation is surely unacceptable. It colours and misinforms the perceptions and understanding that Canadians have of themselves and their country. It is a major obstacle to the development of a full and balanced knowledge of the Canadian experience.

One of the characteristics of university enrolment patterns in the 1970s was the marked increase in the number of women attending university. The registration of female students in both graduate and undergraduate programmes increased dramatically, as Table 40 demonstrates. Undergraduate female enrolment grew from 109,736 in 1972-73 to 165,521 in 1981-82, up by some 56,000 or more than 50 per cent. Female graduate enrolments rose even more dramatically from 9,120 to 17,596, an increase of over 90 per cent in the same period. The increasing participation of women in university studies thus contributed significantly to enrolment growth in the 1970s.

Comparisons with male enrolments during the decade dramatize the steady and substantial nature of the increase in the number of women attending university. Male undergraduate enrolments from 1972-73 to 1981-82 began at 175,161, peaked at 190,410 in 1975-76, dropped to 182,962 in 1980-81, and rose again to 189,231 in 1981-82. The percentage increase at the undergraduate level over the period from 1972-73 to 1981-82 was about 8 per cent for male students, compared to an increase in the female undergraduate enrolment of more than 50 per cent. At the graduate level, the contrast is even more startling. Male enrolment grew only marginally from 28,387 to 29,563, an increase of about 4 per cent, while over the same period female enrolment figures climbed by more than 90 per cent. The percentage of women in the full-time enrolment of Canadian universities has risen in almost every year since 1960-61, increasing from 24.3 per cent in that year to 45.6 per cent in 1981-82.[3] In 1960, 27,600 women were full-time university students; twenty-two years later there were 183,000, almost a sevenfold increase.

An examination of participation rates in full-time university education for the 18-24 age group provides an explanation of the reasons for the change in the composition of the student body of Canadian universities. Between 1970-71 and 1981-82, the male participation rate for the 18-24 age group in university education declined from 15.2 per cent to 13 per cent, while the female participation rate increased from 8.3 per cent to 11 per cent. The total participation rate, both male and female, for this age group has remained relatively constant, at 11.8 per cent in 1970-71 and 12 per cent eleven years later in 1981-82. Thus, the decline in the male participation rate has been virtually offset by the increase in the female participation rate, as Table 41 demonstrates.

The number of women graduating with university degrees increased markedly, as one would expect (Table 42). In 1960-61, women earned 5,108 undergraduate degrees, 25.8 per cent of those awarded. In 1970-71, they earned 25,551 undergraduate degrees, or 38.1 per cent of the total. By 1981, they earned 42,815 undergraduate degrees, 50.3 per cent of the total awarded in that year.

The same held true at the graduate level, as Table 42 also shows. In 1970-71, women earned 2,116 (22%) of the M.A.s and 151 (9.3%) of the Ph.D.s. In 1981, women accounted for 5,055 (39.2%) of the Master's degrees and 439 (24.2%) of the doctorates.

TABLE 40

FULL-TIME UNDERGRADUATE AND GRADUATE ENROLMENT BY SEX, 1972-1973 TO 1981-1982

	UNDERGRADUATE*			GRADUATE*		
YEARS	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
1972-73	175,161	109,736	284,897	28,387	9,120	37,507
1973-74	178,051	116,765	294,976	27,487	9,661	37,148
1974-75	182,211	127,120	309,171	27,481	10,334	37,815
1975-76	190,410	140,127	330,537	28,242	11,637	39,879
1976-77	180,141	146,725	335,866	28,205	12,435	40,640
1977-78	185,437	148,063	333,500	27,713	12,972	40,685
1978-79	179,976	146,842	326,818	27,448	13,707	41,155
1979-80	179,993	149,921	329,914	26,774	14,671	41,445
1980-81	182,362	155,553	337,915	28,582	16,120	44,702
1981-82	189,231	165,521	354,752	29,563	17,596	47,159

Source: Statistics Canada. Tabulations prepared for the Commission, 1983.

* Note: Undergraduate enrolments include interns prior to 1980-81; since 1980-81 interns have been included in graduate enrolment totals by Statistics Canada.

Using 1969-70 as a base of 100, an index can be constructed to show the increase in the number of degrees awarded to women at the undergraduate level. By 1978, the index had reached 186.2 and declined only slightly to 183.9 in 1980. For males, the index had reached only 116.7 in 1980 from a base of 100 in 1969-70. At the Master's level a similar pattern appears. Using 1970-71 as the base year, the male index reached 117.1 by 1980, while the female index soared to 225.6 over the same period. At the Ph.D. level, again using 1970-71 as a base year (100), the index for doctorates awarded to males decreased to 90.8, while the index for female doctoral recipients over the identical period increased to 264.2.

Despite these dramatic increases in the proportion of female university graduates, there has not been a corresponding increase in the proportion of women in academic employment. Women represented only 15.5 per cent of the full-time teaching staff at Canadian universities in 1980-81 (Table 43). As

TABLE 41

FULL-TIME UNIVERSITY PARTICIPATION RATE FOR THE 18 TO 24 AGE GROUP, BY SEX, 1970-1971 TO 1981-1982

YEAR	MALE	FEMALE	TOTAL
1970-71	15.2	8.3	11.8
1971-72	15.4	8.7	12.0
1972-73	14.8	8.7	11.8
1973-74	14.6	9.1	11.9
1974-75	14.4	9.6	12.0
1975-76	14.6	10.2	12.4
1976-77	14.2	10.5	12.4
1977-78	13.6	10.4	12.0
1978-79	12.9	10.1	11.5
1979-80	12.5	10.2	11.4
1980-81	12.6	10.6	11.6
1981-82	13.0*	11.0*	12.0*

* indicates preliminary data

Source: Belliveau, Kealey, and von Zur-Muehlen. *Full-time enrolment trends at Canadian universities and their implications for the eighties.* Ottawa, Statistics Canada, 1981, p. 9; and further tabulations provided by Statistics Canada to the Commission, 1983.

Statistics Canada notes, "In a profession that has a history of a high proportion of males, this represents little gain over the ratio of 11 per cent that was recorded 22 years earlier, 1958-59, an increase of 5 percentage points."[3] At the same time, in 1980, women constituted over 45 per cent of the undergraduate student enrolment and over 35 per cent of the graduate student enrolment. In 1981, women earned more than 50 per cent of the undergraduate degrees, nearly 40 per cent of the Master's degrees, and nearly 25 per cent of the doctorates awarded by the universities of Canada (Table 42). One can only conclude that there is a large pool of well-qualified and highly trained talent in Canada that is not being effectively utilized by the universities. One must also conclude that, even though women have become a significant proportion of the university student population, a much lower proportion of women graduates is being encouraged to enter, or being allowed to participate in, university teaching and research.

TABLE 42

DEGREES BY TYPE AND SEX, 1960-1961 TO 1984

Year	Bachelor's & First Professional			Master's			Doctoral		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1960-61	14,689	5,108	19,797	1,874	354	2,228	279	27	306
	(74.2)	(25.8)	(100.0)	(84.1)	(15.9)	(100.0)	(91.2)	(8.8)	(100.0)
1961-62	16,566	6,270	22,836	2,026	415	2,441	295	26	321
	(72.5)	(27.5)	(100.0)	(83.0)	(17.0)	(100.0)	(91.9)	(8.1)	(100.0)
1962-63	18,017	6,922	24,939	2,256	499	2,755	387	34	421
	(72.2)	(27.8)	(100.0)	(81.9)	(18.1)	(100.0)	(91.9)	(8.1)	(100.0)
1963-64	20,577	8,158	28,735	2,601	564	3,165	443	38	481
	(71.6)	(28.4)	(100.0)	(82.2)	(17.8)	(100.0)	(92.1)	(7.9)	(100.0)
1964-65	23,013	10,042	33,055	2,894	687	3,581	512	54	566
	(69.6)	(30.4)	(100.0)	(80.8)	(19.2)	(100.0)	(90.5)	(9.5)	(100.0)
1965-66	25,501	12,357	37,858	3,660	812	4,472	619	77	696
	(67.4)	(32.6)	(100.0)	(81.8)	(18.2)	(100.0)	(88.9)	(11.1)	(100.0)
1966-67	28,498	14,729	43,227	4,214	1,051	5,265	716	63	779
	(65.9)	(34.1)	(100.0)	(80.0)	(20.0)	(100.0)	(91.9)	(8.1)	(100.0)
1967-68	31,602	17,186	48,788	4,594	1,148	5,742	908	98	1,006
	(64.8)	(35.2)	(100.0)	(80.0)	(20.0)	(100.0)	(90.3)	(9.7)	(100.0)
1968-69	34,494	20,201	54,695	5,486	1,549	7,035	1,021	87	1,108
	(63.1)	(36.9)	(100.0)	(78.0)	(22.0)	(100.0)	(92.1)	(7.9)	(100.0)
1969-70	37,289	23,234	60,523	6,613	1,821	8,434	1,247	128	1,375
	(61.6)	(38.4)	(100.0)	(78.4)	(21.6)	(100.0)	(90.7)	(9.3)	(100.0)
1970-71	41,501	25,551	67,052	7,493	2,116	9,609	1,474	151	1,625
	(61.9)	(38.1)	(100.0)	(78.0)	(22.0)	(100.0)	(90.7)	(9.3)	(100.0)
1971-72	43,873	28,543	72,416	7,725	2,552	10,277	1,564	160	1,724
	(60.6)	(39.4)	(100.0)	(75.2)	(24.8)	(100.0)	(90.7)	(9.3)	(100.0)
1972-73	42,565	28,099	70,664	7,757	2,846	10,603	1,712	217	1,929
	(60.2)	(39.8)	(100.0)	(73.2)	(26.8)	(100.0)	(88.8)	(11.2)	(100.0)
1974	43,784	31,067	74,851	7,426	2,770	10,196	1,662	234	1,896
	(58.5)	(41.5)	(100.0)	(72.8)	(27.2)	(100.0)	(87.7)	(12.3)	(100.0)
1975	44,904	35,850	80,754	7,949	3,118	11,067	1,544	296	1,840
	(55.6)	(44.4)	(100.0)	(71.8)	(28.2)	(100.0)	(83.9)	(16.1)	(100.0)
1976	44,746	38,546	83,292	8,030	3,525	11,555	1,375	318	1,693
	(53.7)	(46.3)	(100.0)	(69.5)	(30.5)	(100.0)	(81.2)	(18.8)	(100.0)
1977	45,721	41,635	87,356	8,498	3,877	12,375	1,396	306	1,702
	(52.3)	(47.7)	(100.0)	(68.7)	(31.3)	(100.0)	(82.0)	(18.0)	(100.0)
1978	46,011	43,271	89,282	8,486	4,151	12,637	1,488	331	1,819
	(51.5)	(48.5)	(100.0)	(67.2)	(32.8)	(100.0)	(81.8)	(18.2)	(100.0)
1979	44,302	42,828	87,130	7,903	4,448	12,351	1,434	369	1,803
	(50.8)	(49.2)	(100.0)	(64.0)	(36.0)	(100.0)	(79.5)	(20.5)	(100.0)
1980	43,590	42,820	86,410	7,778	4,654	12,432	1,339	399	1,738
	(50.4)	(49.6)	(100.0)	(62.6)	(37.4)	(100.0)	(77.0)	(23.0)	(100.0)
1981	42,112	42,815	84,927	7,848	5,055	12,903	1,377	439	1,816
	(49.7)	(50.3)	(100.0)	(60.8)	(39.2)	(100.0)	(75.8)	(24.2)	(100.0)
1982 *	42,185	43,405	85,230	7,810	5,230	13,040	1,370	450	1,820
1983 *	42,940	43,930	86,870	7,865	5,335	13,200	1,370	490	1,860
1984 *	44,840	45,520	90,360	7,900	5,480	13,380	1,360	530	1,890

* indicates preliminary or projected data

Source: Max von Zur-Muehlen. *Past and present graduation trends at Canadian universities and implications for the eighties, with special emphasis on women and on science graduates.* Ottawa, Statistics Canada, 1982, p. 12; Statistics Canada. *Advance statistics of education, 1982-83. Ottawa, 1982, Table 9, p. 21 (Cat. 81-220); Statistics Canada. A statistical portrait of Canadian higher education, 1983.* Ottawa, 1983, Table 18, p. 42.

TABLE 43

FULL-TIME FEMALE UNIVERSITY TEACHERS AS A PERCENTAGE OF THE TOTAL BY TEACHING FIELD FOR SELECTED YEARS, 1960-1961 TO 1980-1981

Teaching Field	1960-61	1965-66	1970-71	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
Education	28.7	25.9	20.1	23.5	23.1	23.3	23.6	24.0	24.0
Fine and Applied Arts	15.2	14.0	14.6	19.3	20.5	20.6	19.0	19.5	21.4
Humanities	10.7	16.0	16.9	16.4	17.1	18.1	18.1	18.1	18.7
Social Sciences	8.4	8.6	9.3	11.9	12.4	13.1	13.3	13.5	14.1
Agriculture and Biological Sciences	19.0	17.0	15.9	15.7	16.2	16.2	15.4	15.6	16.3
Engineering and Applied Sciences	0.9	0.7	0.6	0.9	1.0	1.2	1.3	1.3	1.3
Health Sciences	23.4	27.2	20.9	22.3	22.8	23.3	22.9	22.9	23.4
Mathematics and Physical Sciences	3.9	4.7	4.4	3.6	3.7	3.9	4.2	4.5	4.7
TOTAL	11.4	12.7	12.8	14.0	14.4	14.9	14.9	15.0	15.5

Source: Statistics Canada. *A statistical portrait of Canadian higher education, 1983.* Ottawa, 1983. Table 28, p. 52.

The reasons for the low proportion of women in university teaching are, no doubt, many and varied. But the data point, inescapably, to the conclusion that conscious and unconscious discrimination arising from habit and attitude continues to be a major factor. Women continue to be concentrated in the lower academic ranks, while men move on to become full or associate professors. In 1980, for example, only 5 per cent of full professors were female, whereas nearly 40 per cent of lecturers and instructors were female. This pattern of female under-representation in the senior academic ranks does not show any significant change over the last 20 years.[4] In 1960-61, 4.2 per cent of the full-time professors at Canadian universities were women. Twenty years later, in 1980-81, this figure had risen only to 4.8 per cent. It is sometimes argued that the reason women are concentrated in the lower ranks of the faculty is that they interrupt their careers to have families. This is of course a factor. None the less, the promotion of women is rarer whether or not they have occasion to interrupt their academic work for maternity or other family responsibilities.

Similarly, of university teachers with doctorates, 41 per cent of the men and only 16 per cent of women were full professors in 1980-81. Thirty-three per cent of the women with doctorates were at the assistant professor rank compared to

about 15 per cent of the men.[5] Women faculty members also remain clustered in the traditionally female teaching fields of education, the fine arts, nursing, and some of the humanities. Even in some of these fields, such as education, the percentage of women teachers has, in fact, declined since 1958-59 (from 29% to 24%) although their representation is still high in comparison to other fields.

Women are conspicuously absent from the faculty in engineering and in mathematics and the physical sciences, where they constitute only 1.3 per cent and 4.7 per cent, respectively, of the teaching staff (Table 43).

In a study prepared for the A.U.C.C., Dr. Monica Boyd found that the salary gap between men and women in universities, reported to have been closing in the 1970s, had in fact been widening.[6] In 1972-73, the median salary of male university teachers was $3,250 higher than that of female teachers. By 1977-78, the median salary of male teachers was about $5,000 higher than the median salary for female faculty. In her thoughtful study, Dr. Boyd speculates on the reasons for this pronounced difference in the median salaries of male and female university teachers. Salaries at the junior levels, where women are clustered, are lower than at the higher ranks. Because of the demands of the wife and mother roles, women may not be as likely as men to publish, and this lack of publication may result in lower salaries for some female faculty. Perhaps a more valid comparison than median salaries would be a comparison of the salaries of men and women with similar degrees, academic rank, and fields of study. As Dr. Boyd points out, however, one very quickly runs out of female faculty members to compare with male faculty members in some fields and at the higher ranks. Nevertheless, when comparisons could be made, the report indicated that women continued to earn less than men with the same qualifications. In 1972-73, men who earned their doctorates between five to nine years earlier earned a median salary of $17,050. Women with the same qualifications earned $15,625. Three years later, the salary for men with doctorates earned five to nine years earlier had increased to $22,400, while for women holding the same degrees for the same length of time it had increased only to $20,900. At all ranks, in all fields, whatever the age, highest degree earned or years since the degree was awarded, the Boyd report revealed that women faculty members earned substantially less than men.

The Commission has seen no evidence that would indicate that there has been a change in this situation since the Boyd study was completed. On the contrary, the most recent data available from Statistics Canada on the salaries of university teachers indicates that in 1980-81 and 1981-82 the median salary for women in every academic rank was lower than that for men (Table 44). Moreover, the median salaries paid to women faculty members were lower in total in every academic field and in almost every age group within each academic field (Table 45). This disparity appears also in a university-by-university review of the median salaries paid to male and female faculty (Table 46). In all of the 42 institutions surveyed the median salary for women full-time teachers was lower than that for men. On average, for these 42 universities and colleges, the median

TABLE 44

MEDIAN SALARIES OF UNIVERSITY TEACHERS BY SEX AND ACADEMIC RANK, 1980-1981.

	Male	Female
Full professor	$45,483	$43,294
Associate professor	34,873	33,620
Assistant professor	27,738	26,612
Rank below assistant professor	22,465	21,301
Other	31,801	24,934
Total	36,383	29,377
Full professors with senior administrative duties	50,087	46,319

Source: Statistics Canada, *Teachers in universities, 1980-81*, Ottawa, 1982, Table 4D, p. 40-41 (Cat. 81-241), and unpublished data provided by Statistics Canada, 1983.

MEDIAN SALARIES OF UNIVERSITY TEACHERS BY SEX AND ACADEMIC RANK, 1981-1982*

	Male	Female
Full professor	$49,803	$47,024
Associate professor	37,821	36,400
Assistant professor	29,694	28,568
Rank below assistant professor	24,046	23,000
Other	34,368	27,987
Total	39,973	31,998
Full professors with senior administrative duties	54,216	49,984

* Excluding Quebec for which data not available.

Source: Statistics Canada, *Teachers in universities: 1981-82*, (Ottawa, 1983), Catalogue 81-241, Table 4D, pp. 40-41.

TABLE 45

SALARIES OF TEACHERS IN UNIVERSITIES, BY AGE, SEX, AND FIELDS TOTAL, CANADA, 1980-1981

	Age and Sex		Education		Fine and Applied Arts		Humanities		Social Sciences		Agric. and Biol. Sc.		Engineering and App. Sc.		Health Professions		Math. and Phys. Sc.		Other		Total	
			Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median
1	TOTAL	M.	2,314	$36,271	1,045	$31,648	4,302	$34,466	6,814	$34,949	1,969	$37,144	2,351	$38,468	3,664	$40,657	3,987	$37,208	581	$33,728	27,307	$36,390
2		F.	715	31,008	280	28,416	991	29,576	1,110	29,990	366	30,090	31	29,832	1,132	29,363	180	27,712	102	26,016	4,907	29,379
3		T.	3,029	34,924	1,325	30,912	5,323	33,480	7,924	34,051	2,335	36,448	2,382	38,391	4,996	37,525	4,167	36,868	683	31,284	32,214	35,258
4	Less than 25	M.	3	X		X			16	19,648	1	X	4	X	2	X	3	X	3	X	33	18,272
5		F.	4	X	0	0	4	X	10	18,752	6	X			1	X	3	X	1	X	29	16,028
6		T.	7	X	1	9K	4	X	26	19,232	7	9K	4	X	3	X	6	X	4	X	62	17,664
7	25-29	M.	40	23,189	38	19,136	47	20,320	306	22,412	40	23,392	58	24,704	39	26,656	108	22,560	28	21,888	700	22,498
8		F.	42	20,928	16	18,496	41	19,872	107	22,967	12	18,208	4	X	118	21,968	15	20,896	11	21,728	386	21,152
9		T.	82	21,792	54	18,968	88	20,256	413	22,868	72	21,200	62	24,320	157	22,624	123	22,368	39	21,728	1,086	22,016
10	30-34	M.	198	25,984	134	23,552	323	24,160	1,195	27,523	269	26,912	309	28,320	441	30,304	393	26,248	93	24,968	3,185	26,900
11		F.	109	25,824	50	23,520	127	22,560	246	25,248	56	24,896	4	X	187	25,056	33	24,016	28	24,320	840	24,666
12		T.	307	25,909	184	23,552	450	23,680	1,371	27,151	325	26,568	313	28,272	628	28,640	426	26,112	121	24,944	4,025	26,393
13	35-39	M.	460	31,794	222	28,288	491	29,899	1,755	32,572	412	31,770	429	34,571	804	34,961	667	32,571	131	29,200	5,991	32,019
14		F.	161	29,088	61	28,000	214	27,968	260	29,184	64	27,520	3	X	231	27,808	41	26,592	21	25,872	1,056	28,352
15		T.	641	31,315	283	28,128	1,105	29,472	2,015	32,169	476	31,403	432	34,560	1,035	32,934	908	32,215	152	28,900	7,047	31,534
16	40-44	M.	501	36,144	198	32,269	948	33,808	1,316	36,741	383	37,264	552	38,187	781	40,072	999	37,147	104	37,376	5,782	36,599
17		F.	102	32,224	50	29,760	203	30,240	192	32,661	53	35,136	6	X	193	30,256	31	30,544	13	28,240	843	31,228
18		T.	603	35,573	248	31,936	1,151	33,272	1,508	35,996	436	37,056	558	38,144	974	37,853	1,030	37,018	117	36,208	6,625	35,842
19	45-49	M.	447	38,736	180	35,840	876	36,608	912	40,320	317	41,035	424	[illegible]	646	45,992	682	41,783	76	40,128	4,560	40,008
20		F.	97	33,568	29	30,928	141	31,776	109	35,648	46	34,944	5	X	138	32,576	20	34,304	6	X	591	33,312
21		T.	544	37,808	209	35,248	1,017	35,962	1,021	39,691	363	40,208	429	42,731	784	43,264	702	41,472	82	40,000	5,151	39,212
22	50-54	M.	321	41,715	137	37,824	562	39,381	616	43,429	247	45,659	321	44,309	551	48,416	469	45,453	52	48,192	3,276	43,492
23		F.	109	35,776	40	34,240	109	33,120	84	33,964	53	38,848	2	X	118	35,200	19	37,824	11	36,672	545	34,923
24		T.	430	40,491	177	36,800	671	38,645	700	42,517	300	44,832	323	44,267	669	45,392	488	44,902	63	44,224	3,821	42,215
25	55-59	M.	214	44,160	77	40,384	430	42,496	466	45,525	176	46,272	233	45,120	358	49,877	295	47,253	52	51,520	2,305	45,524
26		F.	55	35,392	15	36,928	93	34,272	58	36,288	35	42,048	4	X	81	37,312	11	29,856	7	X	359	35,904
27		T.	269	43,176	92	39,232	523	40,880	524	44,672	211	45,728	237	45,024	439	47,184	306	46,976	63	49,904	2,664	44,642
28	60-64	M.	95	43,712	51	42,432	252	44,992	252	46,997	113	48,064	103	47,680	212	51,712	141	47,637	27	51,904	1,246	46,904
29		F.	26	40,896	14	36,224	52	33,984	32	37,808	14	39,936	3	X	50	38,208	1	X	2	X	200	38,040
30		T.	121	42,944	65	40,640	304	43,477	284	46,016	131	47,467	106	47,360	262	49,408	142	47,659	29	61,776	1,446	45,789
31	65 and over	M.	10	47,296	4	X	45	46,400	39	46,272	10	48,448	17	43,200	27	50,624	24	48,128	7	X	183	47,040
32		F.	6	X	2	X	5	X	3	X					9	X	2	X			27	35,008
33		T.	16	42,240	6	X	50	44,544	42	45,952	10	48,448	17	43,200	36	48,640	26	47,616	7	X	210	46,464
34	Not reported	M.	5	X	3	X	8	X	11	23,584	1	X	1	X	3	X	6	X	8	X	46	22,752
35		F.	2	X	3	X	2	X	9	X	3	X			6	X	4	X	2	X	31	21,280
36		T.	7	X	6	X	10	21,440	20	21,696	4	X	1	X	9	X	10	20,256	10	24,800	77	22,496

Source: Unpublished data from Statistics Canada.

TABLE 46
MEDIAN SALARY OF FULL-TIME UNIVERSITY TEACHERS BY UNIVERSITY[1] AND BY SEX, 1981-1982

	Male	Female	Median Salary of Females as a Percentage of the Median Salary of Males	Total
* Memorial	34,050	29,200	85.8	33,350
University of Prince Edward Island	33,301	28,966	87.0	32,737
Acadia	31,714	26,853	84.7	31,017
* Dalhousie	36,043	28,521	79.1	34,722
Mount St. Vincent	28,218	24,720	87.6	26,436
College of Art & Design	29,347	24,282	82.7	27,482
St. Francis Xavier	32,430	26,795	82.6	31,418
St. Mary's	33,144	29,601	89.3	32,991
College of Cape Breton	31,707	30,140	95.0	31,700
Technical University of Nova Scotia	41,420	**		41,212
Sainte-Anne	25,059	**		25,050
St. Thomas	30,879	29,722	96.3	30,845
Mount Allison	31,433	26,289	83.6	29,963
University of New Brunswick	38,334	28,809	75.2	37,011
Moncton	33,364	29,795	89.3	32,651
Brock	35,780	29,880	83.5	35,020
Carleton	36,843	29,639	80.4	35,892
Guelph	39,384	31,204	79.2	38,588
Lakehead	34,974	28,386	81.2	34,422
Laurentian	34,754	27,963	80.5	34,243
* McMaster	42,189	31,459	74.6	41,449
* Ottawa	39,920	30,781	77.1	38,383
* Queen's	40,300	30,400	75.4	39,200
* Toronto	41,676	29,900	71.7	39,713
Ryerson	41,845	38,744	92.6	40,291
Trent	35,554	34,092	95.9	35,550
* Waterloo	44,317	31,654	71.4	43,341
* Western	38,759	27,722	71.5	37,348
Windsor	39,168	29,828	76.2	37,665
York	37,775	33,879	87.0	36,759
Wilfrid Laurier	36,157	32,813	90.8	35,708
Brandon	30,816	25,965	84.3	30,686
* Manitoba	39,810	32,752	82.3	38,993
Winnipeg	33,842	26,252	77.6	31,624
* Saskatchewan	42,746	33,982	79.5	42,527
Regina	38,855	32,925	84.7	38,576
* Alberta	43,890	35,579	81.1	42,478
* Calgary	43,384	34,342	79.2	42,959
Lethbridge	40,995	31,363	76.5	40,403
* University of British Columbia	44,281	33,424	75.5	42,482
Simon Fraser	43,607	35,273	80.9	42,175
Victoria	42,046	35,578	84.6	41,156
TOTAL[2]	39,973	31,998	80.0	38,666

Notes:

* Excluding medical/dental faculty.

** Frequency is too small to be statistically significant.

1. Affiliated colleges have been excluded from calculations for parent institutions.
2. Excluding Quebec, for which complete data not available.

Source: *Salaries and salary scales of full-time teaching staff at Canadian universities, 1981/82.* Ottawa, Statistics Canada, (Cat. 81-258P and 81-258S): *Teachers in universities,* Ottawa, Statistics Canada, (Cat. 81-241) and data provided by Statistics Canada, 1983.

salary for women academics was only 80 per cent of the median salary earned by the male professoriate. Preliminary data for 1982-83 indicates little change in this situation.

Differences in the rates of pay, the relatively small number of women in the upper academic ranks, and the fact that women are virtually absent from senior university administration, are all points that drew considerable attention within both the academic and human rights communities during the 1970s. As a consequence, there were a large number of in-house reports commissioned by universities across Canada to assess the status of women at their own institutions. In addition, a number of professional and scholarly organizations directed attention to these issues. The list of such studies is extensive; only a few will be mentioned in this text in order to provide examples of the nature and extent of the work done on these topics in the 1970s and early 1980s.

The Association of Universities and Colleges of Canada, for example, established a Committee on the Status of Women in Universities early in the 1970s. The first report of this group, *Women and the Universities*, appeared in 1975. It concluded that changes in the universities' attitudes towards women were essential and that opportunities for equal participation by women in universities did not exist. The *Second Report of the Committee on the Status of Women in Universities* was published in 1977. It recommended, among other things, the elimination of job stereotyping and of differentials in salary and fringe benefits based on sex. It also called for the elimination of all university employment practices which discriminated on the basis of marital status. It suggested that women should be considered for, and appointed to, high level administrative positions. *Rank and Salary Differentials in the 1970's: A Comparison of Male and Female Full-Time Teachers in Canadian Universities and Colleges*, by Monica Boyd, was published by the A.U.C.C. in 1979. It showed that women still constituted only a small proportion of the full-time university teaching staff. Women were found to be concentrated in the lower ranks and their median salaries were lower than those received by their male colleagues. Professor Boyd concluded that the overall rank and salary status of female faculty relative to male faculty had changed little during the 1970s.

Jill McCalla Vickers examined these issues on behalf of the Canadian Association of University Teachers (CAUT) in *But Can You Type? Canadian Universities and the Status of Women*. Jointly published by CAUT and Clarke-Irwin in 1977, this study found that sexual stereotyping was only one aspect of the problem of limited participation by women in university professional programmes. It was difficult for women academics to pursue their own cause aggressively because they usually lacked security of rank or tenure, or even a full-time job. Dr. Vickers argued that only government intervention would force the universities to take positive steps toward equal opportunity for women in academe.

The Canadian Federation of University Women sponsored an early study, in 1967, of women university graduates in continuing education and

employment. Another study, *The Potential Participation of Women in University Affairs*, which appeared in 1976, urged universities to take seriously the need for female role models to encourage women students to pursue and complete their career preparations.

A report done for the Council of Ontario Universities (COU) by L.C. Payton concluded that women do not have equality of participation with men as students at any level in Ontario universities. Entitled *The Status of Women in Ontario Universities: A Report of the Council of Ontario Universities*, this study also noted that there were not only fewer women than men teaching on a full-time basis in Ontario universities in the mid-seventies, but that their average salaries in most cases were below the average salaries for men. Nor had women on the teaching staff been promoted to higher academic ranks as often as men.

A number of similar studies were completed during the decade. All of them pointed to substantially the same conclusion. Women in academic life were not being treated with fairness and justice. As a result, it may be that university careers appeared less attractive to qualified women or, even more damaging, women students may have decided not to pursue academic careers beyond the bachelor's level because of the lack of a female presence in the professoriate or in graduate studies in many fields. Some of the other organizations sponsoring studies on this subject were the Canadian Teachers' Federation, La Fédération des associations de professeurs des universités du Québec, and Québec's Conseil du statut de la femme.

The in-house reports prepared at many universities provide an additional and very interesting overview of the status of women at Canadian universities in the period from about 1974 to 1982. They are replete with recommendations to ameliorate the situation that women in the university setting faced, both as students and as faculty members. From a review of this literature, it is clear that universities were responding to pressures to examine their structures and procedures with a view to determining the nature and extent of sex discrimination and to eliminating it. What is remarkable to the Commission is that this spate of studies and recommendations appears to have had such little effect on hiring, promotion, tenure, and salary differentials.

A brief review of some of these in-house university studies provides a sense of the extent of the problems faced by women in Canadian universities in the 1980s. At least 32 major university studies, as well as additional supplementary reports, were commissioned in the 1970s and early 1980s. Many of these were prompted by International Women's Year in 1975, as well as by the growth of female enrolments in postsecondary education. It was only natural that, as more and more women enrolled in universities and colleges, questions were raised about the treatment of faculty, staff, and students on the basis of their sex.

Acadia University established a Committee on the Status of Women under the chairmanship of Lorette Towes. The group's report, which appeared in 1978, indicated that only 17 per cent of the full and part-time faculty at Acadia were women, that proportionately more men than women received tenure stream

appointments, and that there was *de facto* discrimination against women in university promotion, tenure, and salary scales.

The University of Alberta Task Force report (1974) concluded that the average salary of a male faculty member was $2,661 more than that of a female faculty member with the same characteristics, i.e., age, highest degree, years of service, discipline. The publication of a later document, *University of Alberta Awards Adjustment to Women (1977-1978),* provided a study of almost 300 cases. It concluded that women were consistently paid less than men and that low salary at hiring seems to have been the major problem in a number of cases. The discrepancies between the salaries of males and females further illustrated the disadvantages experienced by women on staff.

The Presidential Advisory Committee on the Status of Women at the University of Calgary (1977) found that a $2,661 salary differential between men and women existed in 1976. In February of that year there were only two women, out of forty-four members, on the General Faculties Council, and the report concluded that women had not progressed in significant numbers to the highest ranks in the University. A subsequent study, done at the University in 1980, showed little change in the status of women.

At Laval, *Au Féminin: Le rapport du comité d'étude sur la condition féminine à l'université Laval* (1979) compared salary levels for men and women by rank between 1975 and 1979. The report indicated that, on the average, women with comparable scholarly background, experience, and age were paid less in every category. Between 1975 and 1979, however, the salary differential had been reduced at the full professor level from 9.2 per cent to 4.1 per cent; at the associate professor level, from 6.5 per cent to 1.4 per cent; at the assistant professor level, from 5.1 per cent to .1 per cent; and for lecturers from 6 per cent to .7 per cent.

Similar studies were made at many other universities. A review of these studies indicates that the situation described in the few examples given above was typical at most of the universities of Canada, although not many could match the progress made at Laval in reducing the salary differential between male and female faculty members. Reports were completed at the following universities in addition to those already cited: Brandon, Carleton, Dalhousie, Laurentian, Lakehead, Guelph, McGill, McMaster, Memorial, Mount Allison, Ottawa, Queen's, Regina, St. Francis Xavier, Saskatchewan, Simon Fraser, Trent, the University of British Columbia, Université de Montréal, the University of New Brunswick, Université du Québec à Montréal, Université de Sherbrooke, the University of Toronto, the University of Victoria, Waterloo, Western Ontario, Windsor, Winnipeg, and at York University in Toronto. Despite the damning evidence and many constructive recommendations provided by these studies, and some advances which have been made, the information assembled by Statistics Canada and presented in Tables 44, 45, and 46 shows that wage discrimination on the basis of sex is still being practiced at Canadian universities.

Unfortunately, attention to the concerns of women in the university seems now to have abated. Very little current research is being done on the status of women in Canadian academic life. The new programme of support for research on the theme of 'Women and Work', announced in the Spring of 1983 by the Social Sciences and Humanities Research Council, should help to foster some of the research that is so badly needed in this area. Much remains to be written, for example, about "the ways in which accepted ideas and practices systematically discourage women whose abilities are identical to those of their male counterparts from achieving their goals."[7] Default assumptions,[8] attitudes, financial questions, and the impact of public policies all need examination, as does the relationship between equality of opportunity in education and equality of opportunity in the labour force. The Commission urges that more attention and continuing attention to the status of women in Canadian higher education be encouraged and supported. In the Commission's view, the under-utilization of the talents of the educated female population, and the discrimination against women in universities, whether practiced consciously or unconsciously, is a national disgrace.

Studies in other countries with which Canada has close educational links indicate similar patterns of discrimination against women in higher education. The Equal Opportunities Commission (E.O.C.) in the United Kingdom, for example, has collected statistics comparing the position of women and men in a variety of academic and other jobs in Britain's universities.[9] The picture which emerges from their report is one of women clustered in the lowest salary grades, in both the teaching and the non-academic fields of university work. The E.O.C. found that women constitute 10 per cent of academic staff, with an 82 per cent concentration in the lower paid lecturer grade. Similarly, only 26 per cent of university administrative staff are women, and they are under-represented in all grades above the bottom two. Although women make up 44 per cent of senior library staff, only 8 per cent are in the higher grade III and IV posts, compared with 27 per cent of the men. Whereas men working part-time at universities might often be consultants or visiting teachers, women working part-time at universities frequently have no other paid employment. The E.O.C. noted that there were no women in the chief administrative post (Vice-chancellor or equivalent grade) of any university in Great Britain. The American Council on Education has also pointed to the need to combat discrimination against women in many areas of postsecondary education in the United States.

Discrimination against women in Canada is, of course, not confined to the universities. As the Parliamentary Task Force on Employment Opportunities in the 1980's, chaired by Warren Allmand, has noted:

> The last decade showed a remarkable increase of almost 28 per cent in the participation rate of women in the labour market. The 1980's will show a further large increase in women joining the labour force. Women have distinct problems both in joining the labour force and in remaining there. They face a barrier of discrimination in getting

> referred to training programmes for occupations which have not been traditional work for women. Far too often they must endure the problem of job ghettos — low skill and low paying jobs.
>
> There are also indications that women are paid less than men for the same work. Experience seems to account for only a small part of this gap in earnings. Further disruptions in offices due to the increasing use of microelectronic equipment will also affect women and create further imbalances. Furthermore, parents have the added problem of inadequate day care services; and since the care of children has usually been viewed as the role of the mother, women are more unfavourably affected. Without greatly expanded day care services, many married women will be unable to work or if they must, their children will not be properly cared for.[10]

The literature on the subject indicates that there are inequities in the relative situations of men and women throughout our society. Women's earnings, working conditions, benefits, access to advancement, distribution in types of occupations, and rates of employment differ from those of men and are almost consistently found to be inferior.[11] This is the case regardless of educational achievement or qualification in almost every facet of our society, and it is a feature of life even in academe where, one would have assumed, the notion of equality of the sexes would by now be a normal part of a civilized intellectual environment.

A study prepared for the Canadian Advisory Council on the Status of Women sums up the current position of women in the paid work force in blunt terms:

> Women in the paid work force are disproportionately ghettoized into low-paid, low-status jobs with little hope of advancement and a future which for many offers only more machines and more tedium. Teaching and nursing are the only two occupations with higher pay prestige that have been available to women. But most women are clerical workers in offices and banks, salespersons in food and department stores, service workers in hospitals, hotels and restaurants, and production workers in factories. They are paid on average half of what men earn with a work status to match.[12]

The vast expansion in part-time work in our society has been a mixed blessing for women. On the one hand, it has certainly opened up opportunities to gain income for a great many women. On the other, it has often made it easier to sustain outdated stereotypes of their limited capabilities and of the work that it is appropriate for them to do. In 1981, there were 1,477,000 part-time workers in Canada, of whom 72 per cent were women. Studies indicate that the employment conditions for such jobs frequently include lower rates of pay and fewer benefits, proportionately, than full-time work, in addition to inconvenient

hours, overwork on demand, and insecurity.[13] The importance of the trend to part-time work is demonstrated in elementary and secondary teaching where the number of part-time teachers employed by school boards tripled during the decade from 1972-73 to 1981-82. In 1981-82 the 'typical' part-time teacher was female, 36 years of age, and teaching in an elementary school. Ninety per cent of part-time teachers were female (15,193) compared with 56 per cent of full-time teachers.[14]

Discrimination against women in the work force, and in particular in the professions, has deep roots in social attitudes and in the law. In preventing Annie Langstaff from becoming a member of the Quebec Bar in 1915, for example, Mr. Justice Saint-Pierre said that for a woman to be a barrister would be "nothing short of a direct infringement upon public order and a manifest violation of the law of good morals and public decency."[15] Such curious legal views were reinforced by medical texts and bizarre lore about the health needs and nature of women.[16] Judge Rosalie Abella concludes that the laws of property, support, and custody have "created a systemic and generic dependency from which one can hardly expect to see a tradition of equality developing."[17]

The history of Canadian higher education provides many reminders of the strong opposition women have had to overcome in their movement towards equality of opportunity in education. Other universities were slow to follow the pioneering lead of Mount Allison which accepted its first woman student in 1862. "The attempts of women to enter the university were attended by fierce public controversy over the probable deleterious effects study during puberty would have on their health, on their future roles as mothers, and on the male students who would be in close proximity to them."[18] Women have had to struggle long and hard for admission to our universities and, then, for admission on an equal footing to some of the bastions of professional education within the universities. This struggle has clearly some way yet to go.

Ironically, the achievement of equal educational opportunity (to the still-limited extent that it has been achieved) has not resulted in equal labour force opportunity for women. Today, it is not clear how much more opportunity there is, despite all the changes which have taken place in the educational system. It is still true that the higher the level of educational attainment, the lower the proportion of females. "No matter which male domain they have entered, female graduates earn significantly less than males. The opportunity as measured by salary is unequal."[19] Although education has helped women to gain job status, it has not brought them commensurate income. "Women earn far less than men for every year of education they complete, and the ratio of male to female earnings has not improved over time."[20] Moreover, unemployment rates for women graduates have run twice as high as those for men and a far higher proportion of female than male graduates hold part-time jobs. A survey of 1981 doctoral graduates found that the proportion of women (14%) still seeking work at the time of graduation was almost double that of the men (8%).[21]

The fact that even higher education does not provide women with much respite from inequality or discrimination in the workplace was documented in a study prepared for Statistics Canada in 1980. Entitled *Higher Education-Hired?*, the report begins:

> A college diploma or university degree is no guarantee that a woman will achieve equality in the labour force. Women are not earning their credentials in "elite" fields such as medicine, engineering, law or business. They are clustered in traditional, female-dominated areas that lead to low-paying jobs with few chances for advancement and little prestige.[22]

In *An Endangered Species: Women in Management in the 1980's*, Professor Olga Crocker provides a provocative review of the circumstances that professional women face in Canada, including academe.[23] Professor Crocker examines three main issues in her paper: the extent and forms of discrimination, on the basis of sex, in both the public and private sectors in Canada; the alternatives available to organizations, including universities, if they are serious about eliminating discrimination on the basis of sex; and the benefits of non-discriminatory practice for both the organization concerned and the society at large. She concludes that, even though the percentage of women in the labour force has risen, the percentage of women at higher levels has actually declined. In business, the majority of women are concentrated in entry-level jobs, a few are found in first-line supervision. At the top are those who have inherited the family business. "In the middle ranks, women are almost extinct."[24] In her view this situation is the result of a tradition of employment and promotion discrimination against women. She challenges universities to help to change these practices but observes that, to date, "In most Canadian universities little or nothing is being done to end discrimination."[25]

Universities, both as places of education and as important social and cultural institutions in our society, have responsibilities that go beyond those of business organizations or government departments. As institutions of higher learning they ought to set an example and to provide at least some measure of leadership to other institutions, both through their research on matters affecting women and by their treatment of women. There can be no question that women ought to have social, economic, political, and cultural equality with men in our society. But they do not. Universities ought to be in the forefront of change in respect to the status of women in our society. But they are not. Even in terms of their own treatment of women, universities have sustained and perpetuated the *status quo*, as their many in-house reports on the status of women make abundantly clear.

One of the greatest failings of the universities, and one of the ways in which they are helping to perpetuate the *status quo*, is that they are not preparing women for all sorts of vocations beyond those traditionally considered "feminine". The fact that women in management in the 1980s could be written

about as an "endangered species" is as much an indictment of the university as it is of government and of the business community.

Despite the increases in the number of women attending universities, there is still a 'ghettoizing' of females into certain academic areas. For the most part, these are areas in which there is at present little job opportunity or mobility in university teaching. They are also, in general, areas that are not as high paying as those dominated by men (Table 47). Males outnumber females in the sciences, commerce and business administration, engineering, dentistry, medicine, and law. Most of these areas are accorded more money and/or prestige than those areas in which women outnumber men: fine and applied arts, humanities, education (for teaching largely at the junior levels), miscellaneous health professions, nursing, pharmacy, library science, and household science. These latter tend to be, on the average, lower paying professions with lower social status and less influence. The differences in salaries between professions, and the fact that even within the higher status areas women are lower paid than men, on the average, are illustrated in Table 48.

The difference in the degrees of participation of men and women in the scientific professions in Canada is enormous.[26] In a statement of concern about the science education of women in Canada, the Science and Education Committee of the Science Council has noted that few girls study sciences and mathematics in Canadian schools and that there is little evidence that enough is being done to correct this situation.[27] The Science Council is concerned not only about the effects on the lives and careers of women themselves, but also about the consequences for the scientific and economic health of the country in this age of high technology. The number of girls studying physics and mathematics in Canadian high schools is less than half the number of boys. As the Council notes, the absence of girls from science classes today will lead to a corresponding absence of women from professional science tomorrow. The products of science and technology invade and shape our lives. If women are to help mould our society they must be well represented in the professional scientific and technological community. The absence of women from science education now is, therefore, of central importance to the status and role of women in Canada in the future. For these reasons, educators, researchers, and policy makers must ensure that there are no barriers to girls receiving a first-class education in the sciences, mathematics, and technology. Parents and teachers should ensure that girls with an inclination and the ability to study science are encouraged to do so.

At present, women constitute less than 2 per cent of the engineering profession in Canada. As Table 47 shows, this situation will be perpetuated with little change in the near future. In 1981-82, only 8.4 per cent of those enrolled in undergraduate engineering courses and only 10.6 per cent of those enrolled in undergraduate applied science and engineering courses, overall, were women. Thus, unfortunately, there will be very few women with the requisite background to enter the profession over the next few years, and there will be

TABLE 47

FULL-TIME UNDERGRADUATE ENROLMENT BY FIELD OF STUDY AND BY SEX, 1981-1982

Field of Study	Male	Female	Females as % of Total	Total
Education	11,514	25,907	69.2	37,421
Fine & Applied Arts	4,799	7,915	62.3	12,714
Humanities	9,862	13,993	58.7	23,855
Social Sciences:	54,841	44,647	44.9	99,488
Commerce & Business Administration	28,829	17,084	37.2	45,913
Law	5,837	3,881	39.9	9,718
Other Social Sciences	20,175	23,682	54.0	43,857
Agriculture & Biological Sciences:	9,346	10,405	52.7	19,751
Agriculture	2,972	1,716	36.6	4,688
Household Science	93	3,180	97.2	3,273
Veterinary Medicine	533	509	48.8	1,042
Other Biological Sciences	5,748	5,000	46.5	10,748
Engineering & Applied Sciences:	35,641	4,234	10.6	39,875
Engineering	32,160	2,966	8.4	35,126
Applied Sciences	3,481	1,268	26.7	4,749
Health Sciences:	8,366	14,335	63.1	22,701
Dentistry	1,540	451	22.7	1,991
Medicine	5,106	3,199	38.5	8,305
Nursing	162	6,155	97.4	6,317
Pharmacy	974	1,744	64.2	2,718
Other Health Sciences	584	2,786	82.7	3,370
Mathematics & Physical Sciences:	16,270	6,358	28.1	22,628
Mathematics & Computer Science	10,298	4,709	31.4	15,007
Other Physical Sciences	5,972	1,649	21.6	7,621
Unclassified	38,592	37,727	49.4	76,319
TOTAL	189,231	165,521	46.7	354,752

Source: Information provided by Statistics Canada, 1983.

TABLE 48

MEDIAN SALARIES, BACHELOR'S AND FIRST PROFESSIONAL DEGREE RECIPIENTS EMPLOYED FULL-TIME BY FIELD OF STUDY AND BY SEX, 1978

Field of Study	Median Salaries	
	Males	Females
Biology	$14,010	$11,460
Household Sciences	—	13,680
Education	15,780	14,850
Engineering	17,680	—
Fine Arts	13,660	12,800
Health Professions		
Medicine & Dentistry	21,330	15,500
Nursing	—	14,690
Pharmacy	17,740	17,630
Rehabilitation	—	15,740
Humanities		
History	14,100	13,030
Languages	15,190	13,790
Mathematics/Physical Sc.	15,170	13,850
Social Sciences		
Business, Management	15,120	14,030
Economics	14,250	13,640
Geography	14,960	13,790
Law	17,470	16,640
Political Science	14,280	12,920
Psychology	15,480	13,400
Social Work	15,860	14,750
Sociology	15,010	13,760
General	13,850	12,990
Overall Median	$15,390	$14,150

Source: Statistics Canada. "Sex Differences in the Employment Characteristics of Bachelor's Degree Recipients" *Service bulletin: education statistics*, Vol. 2, No. 5. Ottawa, 1980, p. 6.

virtually no women in the senior ranks of the next academic generation in the engineering disciplines. In this situation, engineering schools need to take deliberate action to encourage the presence of women. As the Canadian Engineering Manpower Council has noted, however, "Simply graduating more women from engineering programs will not ease the shortage of engineers if these women find their career paths blocked by anything except their own inclinations and abilities."[28] Unfortunately, there still are many discriminatory attitudes and practices in the workplace which must be overcome. In this situation, the profession must make it a top priority to work to overcome such discriminatory attitudes and practices and to promote engineering careers for women as widely as possible.

Women represent an enormously important potential source of highly qualified personnel for Canada in many areas, in addition to the sciences. The Task Force on Labour Market Development has estimated that women will constitute 65 per cent of the expansion in the Canadian labour force in the 1980's.[29] Yet, all surveys and studies make clear that the abilities and skills of women are being grossly under-utilized in some of the key growth areas in our national life such as science, technology, and the professions. In fact, the evidence makes clear that to the extent that women are being trained for jobs in this country, they are being oriented by education towards low paying, low status occupations, or for fields in which there is currently and will be for some time to come a mis-match of supply and demand, particularly in academic job opportunities. The process begins long before young women enter university, of course, but the universities and the school systems could do far more to encourage capable young women to move into those academic and professional areas that have been hitherto the preserve of males in our society.

In terms of Canadian higher education, a number of steps must be taken to open up opportunities for female students at both the undergraduate and post-graduate levels. Steps must also be taken to stop discrimination in the hiring and treatment of female faculty and staff. The present widespread and blatant discrimination in salaries and wages must stop, and be replaced by fairness and justice regardless of sex in employment opportunities and remuneration, and in the awarding of promotion, tenure, and administrative office. Women who have the requisite qualifications, experience, and capabilities should not be made to feel that the upper ranks of the university community, or of business or government, are virtually closed to them because of their sex. Nor should female academics have to consider that the only place for them is in the junior ranks or in part-time positions in the academic world.

Women academics are treated as members of an unacknowledged ghetto, open to exploitation through ad hoc and low paid arrangements. More work needs to be done to document this particular situation and to examine its implications. There is, indeed, need for "a whole new kind of research" about a great many aspects of the status of women in Canadian higher education.[30] But the need for further work, and for continuing research, must not be used as an

excuse for failure to take corrective action now to remedy the many abuses that are patent and only too well documented. Universities and colleges have very nearly buried the real injustices concerning their treatment of women beneath an avalanche of well-meaning reports. Having salved their collective conscience with this plethora of documents, they are now tending to return the issue to the bottom of their agenda. It belongs at the top.

In attempting to address the problems of the status of women in higher education, many universities and colleges have appointed special Women's Affairs Officers to advise their boards, senates, and senior administrations. While this has been genuinely helpful in some instances, the Commission has observed, with regret, that it has often proven to be little more than a gesture, an exercise in tokenism or window-dressing. In some instances, indeed, the existence of such Women's Affairs Advisors and offices has provided an excuse for the rest of the university or college to carry on with its general neglect of the status of women and to continue practices that are effectively discriminatory. With this experience in mind, the Commission cautions against the dangers of labelling certain issues as 'women's issues' when they are, in reality, questions of justice and fairness which ought to be dealt with as general problems of concern to the entire academic community and not segregated off into some corner where they are treated as simply the concerns of women. As long as issues are treated as if they are the concern of a minority only, they will not be adequately or effectively dealt with.

The universities and colleges of Canada must approach the problems posed by the current inequitable treatment of women in higher education as questions of central policy which are properly the concern of the whole institution and of everyone in it, and not simply the concern of those who are adversely affected by such discrimination. On questions of hiring, promotion, and tenure, for example, it ought to be a matter of institutional policy that all candidates and all staff members are treated with fairness, not because they are women or men, but because they are all members of the academic community or aspirants to it. Male students and faculty members will do well to remember that they, too, are the victims of educational streaming. Stereotyping channels them towards the traditionally male-dominated academic fields, thus restricting their options as well.

One sign that there is more awareness of some of the sex discrimination issues at the universities is the increasing recognition now being given to the issue of sexual harassment. It is, of course, not a new phenomenon. It is an old phenomenon that is at last receiving some of the serious attention that it deserves. The C.A.U.T. has developed some guidelines for the handling of sexual harassment problems. The Commission urges every university and college to use them as a base in developing their own procedures for dealing with the issues involved in sexual harassment cases.

Sexist language is one form of sexual harassment. In its way, it contributes to the more overt and institutionalized forms of sexual discrimination.[31] The

Commission recommends that universities and colleges review their policies and publications and that they adopt a policy of eliminating the use of sexist language from their official business, including its use in official publications, advertisements, and job descriptions.

Finally, the Commission notes with pleasure the development of accredited programmes and courses in women's studies at a number of universities and colleges. There is room for more of these programmes and courses, and they can do much to focus attention in teaching and research on the contribution of women. They can also help to make amends for the past neglect of this fundamental dimension of Canadian studies. In addition to the development of women's studies, specifically identified as such, it is as important — perhaps even more important — that proper attention be given to the role of women in all appropriate areas of the curriculum.

The university, the Commission believes, must provide some leadership to society by encouraging women and men to consider work in any academic field that interests them, including those from which they have thus far been traditionally, if unofficially, excluded. University and college admissions counsellors, and school guidance officers, should encourage young women and men to develop their talents in whatever academic areas these may exist. If, for example, the interests and abilities of a woman student point to the sciences or professions, she ought not to be automatically channelled, either overtly or by less obvious pressures, into the arts. This is a complex matter, of course. Critics of this statement simply point to the career choices that women students themselves make as a result of their own prejudices or preferences. That, we submit, is part of the problem. Because of years of conditioning by society and by the educational system itself, young people, of both sexes, often do not see that there are real choices for them to make. Remarkable progress has been made in some areas, it is true; there are now many more female students in professional faculties than ever before, for example. But that is not enough. Admission into the lower-paid ranks of professions is no substitute for equality, and it is no substitute for the provision of full opportunities to women who wish to work in this community and to contribute to it. Universities and colleges have a responsibility to demonstrate to society, through their own actions, that equity is possible and that opportunities should not be denied to people because of their gender.

Until women are permitted to participate fully in the academic community, that community will be less than it could otherwise become. Nor will it be possible for Canadians to have a reasonably balanced knowledge and understanding of themselves or of the national and international societies within which they reside.

The Commission recommends:

1. that Canadian universities and colleges stop discrimination in the hiring treatment of female faculty and staff;
2. that universities and colleges approach the problems involved in correcting the current inequitable treatment of women in Canadian higher education as a question of central institutional policy which is properly the concern of the entire institution, and of everyone in it, and not simply the concern of those who are adversely affected by such discrimination;
3. that the Association of Universities and Colleges of Canada and the Canadian Association of University Teachers establish a joint committee to propose guidelines and procedures designed to ensure fairness and equality of opportunity in treatment in the universities for men and women in hiring, promotion, the awarding of tenure, and selection for administrative office;
4. that the Association of Universities and Colleges of Canada and the Canadian Association of University Teachers establish jointly a programme to monitor, for at least the next five year period, the treatment by universities of women members of faculty and staff, both full-time and part-time, in academic, administrative and support work;
5. that the Department of Employment and Immigration Canada make a grant to the Association of Universities and Colleges of Canada and/or the Canadian Association of University Teachers to meet the costs of the proposed monitoring programme;
6. that the Association of Canadian Community Colleges, working with appropriate agencies and departments at the provincial level, establish mechanisms to monitor the treatment of women in community colleges and to develop guidelines and procedures to ensure fairness and equality in the treatment of teachers, staff, and students regardless of sex;
7. that a properly funded research institute be established to promote continuing research about the status of women in Canadian education and, more broadly, about the status and experience of women in Canadian society;[32]
8. that the Association of Universities and Colleges of Canada and the Canadian Association of University Teachers establish a joint working committee to take the lead in the planning and arrangements for the proposed new research institute, and that the Department of Employment and Immigration Canada and the Department of the Secretary of State provide core funding and assistance to the project;
9. that the Association of Universities and Colleges of Canada and the Association of Canadian Community Colleges urge their member institutions to eliminate employment practices that discriminate on the grounds of marital status;

10. that the Association of Universities and Colleges of Canada and the Association of Canadian Community Colleges actively encourage their member institutions to appoint appropriately qualified women to administrative posts, policy making bodies, and senior academic positions;[38]
11. that the Association of Universities and Colleges of Canada and the Association of Canadian Community Colleges ensure that women are adequately represented on their own councils, committees, and staffs;
12. that universities, colleges, and school systems take more deliberate steps to encourage female students with the ability and interest to do so to pursue their studies in those areas that have hitherto been largely the preserve of male students, in addition to those other areas to which women students have thus far been traditionally, if unofficially, restricted;
13. that educators and policy-makers ensure that there are no barriers at any level of the educational system to block qualified female students from receiving an education in whatever their field of interest may be, including the sciences, mathematics, and technology;
14. that professional and vocational faculties and departments in which women students are appreciably under-represented (including, for example, applied science and engineering, law, medicine, dentistry, commerce and business administration, and journalism) take deliberate action to assist and encourage the enrolment of women, at both the undergraduate and post-graduate levels;
15. that universities and colleges review their student counselling arrangements to ensure that adequate guidance and assistance is being given to female students who may wish to pursue their studies at the graduate level and in academic areas that have tended to be regarded as male preserves;
16. that each university and college provide appropriate day care facilities or arrangements to ensure that no student, male or female, is disadvantaged through lack of access to such services;
17. that national professional organizations, such as the Canadian Council of Professional Engineers, for example, make it a top priority to remove the discriminatory attitudes and practices which still block the career paths of women in the workplace;
18. that universities and colleges use the guidelines for the handling of sexual harassment problems developed by the C.A.U.T. as a base in developing their own procedures for dealing with the issues involved in sexual harassment cases;
19. that universities and colleges adopt a policy of eliminating the use of sexist language from their official business, including its use in official publications, advertisements, and job descriptions;
20. that encouragement and support be given to the further development of accredited courses and programmes in women's studies, and that due attention be given to the role of women in all appropriate areas of the curriculum.

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32. It may prove possible to strengthen an existing organization for this purpose. Alternatively, a new, institute may be desirable.
33. The Commission recognizes that a similar recommendation was made to the AUCC in 1971 by a workshop on "the University and the Status of Women," and that such a recommendation was reiterated at the 1975 AUCC annual meeting, as well as on other occasions. The case for the recommendation is stronger than ever. Both associations need to return to the point and to stick to it with force and conviction.

X

FOREIGN STUDENTS, CANADIAN SELF-KNOWLEDGE, AND KNOWLEDGE OF CANADA ABROAD

Foreign students play an important role in promoting knowledge about Canada abroad. They also contribute to the knowledge and understanding that Canadians have both of themselves and of the rest of the world.

The quest for self-knowledge in any society ought not to be a search that blinds citizens to the realities of the wider international community. Canadians need to be more aware of and to know more about the world outside Canada. To know ourselves, we must know others.

It may not be possible for all Canadian students to see many other countries at first hand. But it should be possible, thanks to the presence of foreign students, for many Canadian students to learn from personal contact about other countries, other cultures, and other ways of doing and seeing things. In this process, they may often find that the subject about which they learn the most will be themselves and their own society. The presence of foreign students, bringing with them their different heritages and perspectives, provides an opportunity for Canadians to broaden their outlook and to enlarge their knowledge of themselves and of others. Moreover, when foreign students return to their own countries they carry with them some knowledge of Canada which will play its part in the promotion of a more informed understanding of this country abroad. This will, in turn, facilitate the development of Canada's international economic, diplomatic, and cultural links.[1] As the Massey-Lévesque Commission observed more than thirty years ago, "the promotion abroad of a knowledge of Canada is not a luxury but an obligation, and a more generous policy in this field would have important results, both concrete and intangible."[2]

Foreign students can play a key role, in particular, in the opening up and maintenance of Canada's links with the international scholarly and professional communities. Their presence is in itself an expression of the international character of knowledge and of the university. Their experience and associations in Canada will, one hopes, pave the way for future co-operation and collaboration in research and in a variety of other fields to the benefit of both this country and their own.

While the whole broad range of knowledge in Canada, Canadian self-knowledge, and knowledge about Canada in other countries stands to gain from the participation of foreign students in our higher education, specific programmes of teaching and research about Canada may benefit in particular. Within Canada, such programmes are enriched by the differing perspectives that foreign students can bring to them. In other countries, students returning from study in Canada can bring their experience and knowledge of this country to support the development of Canadian studies programmes in their own. The Commission notes with pleasure the substantial and varied developments in Canadian studies in other countries in recent years. Since the release of the first two volumes of the Commission's *Report*, which contained an extensive section on the state of Canadian studies abroad, there has been a dramatic increase in the level of foreign scholarly activity and interest in the study of Canada, and also in the level of support for such study. There are now eight associations or

societies for Canadian studies outside of Canada in various parts of the world, including the Australian and New Zealand Association for Canadian Studies and similar bodies in Britain, France, Germany, Ireland, Italy, Japan, and the United States. These associations are linked together through the International Council for Canadian Studies. There are, as well, centres or programmes dealing with the study of Canada in a growing list of countries, including Algeria, Austria, Belgium, Denmark, Finland, Holland, India, Israel, Norway, the Soviet Union, Sweden, Switzerland, Thailand, and Upper Volta. This increasing interest in the study of Canada abroad opens up considerable opportunities for Canadian universities to host foreign students and foreign faculty who have a particular interest in learning, teaching, and research about this country. Canadian scholars and institutions have as much to gain from this process as have the visitors.

A. THE PRESENT POLICY VACUUM

The Commission would like to make two basic points with respect to foreign student policy. First, this is now a large question and an important one for Canadians. In the 1982-83 academic year, there were about 65,000 foreign students in Canada, over 35,000 of them in our universities.[3] Second, Canadians are currently spending, in the university sector alone, more than three hundred million dollars a year, excluding fees, on the education of these students in Canada.[4] It should be possible to achieve a much more balanced approach to policies affecting these students and to realize more sensible results from the expenditure of this money than is presently the case. In this chapter we argue that a truly national foreign student policy needs to be established, and that it must be developed as part of an overall national strategy for higher education, as well as being part of our country's approach to academic and cultural diplomacy.

Little thought has been given by political and educational leaders in Canada to the development of appropriate policies for this country with respect to foreign students. The Canadian Bureau for International Education (C.B.I.E.), based in Ottawa, and a few others have indeed worked hard to draw attention to this aspect of Canadian higher education, but, so far, their efforts have elicited only a mild stirring in the national conscience. It continues to be true both of governments and of educational institutions that they have not yet come to grips with the issues involved. They have not thought through the objectives on which foreign student policies should be based, nor have they worked together to put in place the programmes needed to serve such objectives. Because of this lack of thought and lack of leadership, the admission and treatment of foreign students in Canada is a disjointed, haphazard operation. It should, therefore, be no surprise that the results of the operation are often less fair, less productive, less balanced, and less appreciated both at home and abroad than might otherwise be the case. As a recent study has concluded,

> The present hodge-podge of policies regarding foreign students does not serve well the interests of the students themselves, their host institutions, the various governments, nor, in the end, education.[5]

Yet the foreign student question is a significant one for Canada, as it is for the countries from which these students come. It is as important for our educational institutions, for the Canadian students enrolled in them, for Canadian society as a whole, and for Canada's place in the world, as it is for the foreign students themselves, that sensible and balanced policies be developed for the selection and reception of students from other countries. It is no longer possible to treat the questions arising from the foreign student presence in Canadian higher education as minor points to be sorted out on the sidelines after hours. Staffing, enrolment, funding, equipment, facilities, and highly qualified manpower planning are all affected substantially by the foreign student factor. It has become a pervasive factor that needs to be taken into serious consideration in many aspects of educational planning and educational policy. It is also a major factor, both short-term and long-term, in Canada's international relations.

For other countries, as well as for Canada, the foreign student question is becoming a major issue in public policy. The report on foreign students in the United States prepared for the American Council on Education, for example, concluded that "the education of many thousands of foreign scholars, scientists, professionals, and other potential leaders clearly engages vital national interests," and that "one way or another, foreign students have — and will continue to have — significant effects on the fabric of higher education."[6] Yet, as the report also noted with concern, "a national philosophy or policy on foreign students scarcely exists."[7] Another study of foreign students in American colleges and universities, aptly entitled *Absence of Decision*, found "ignorance and myth abounding,"[8] and the scene "marked more by an absence of decision than by any distinctive pattern of decision making within or across institutions."[9] The authors concluded that serious inquiry into issues related to foreign students was long overdue and that "the potential costs of inattention are, we think, considerable."[10] As they report, there is no dodging the issue:

> During the 1980s and beyond the foreign student in the United States is likely to become an increasingly significant force in economic, educational, political, and social terms. Up to now absence of decision has more often than not characterized the approach to the issue. This is a luxury, like many others, that we are no longer able to afford.[11]

Throughout the world there are now estimated to be approximately one million students taking part in higher education in a foreign country. The number has quadrupled since 1960.[12] This massive movement of students poses many difficult questions concerning costs and admission, in particular for the five countries in which foreign students are most heavily concentrated: Canada,

France, Germany, the United States and the United Kingdom. Together, these five countries take approximately 60 per cent of all foreign students.

Current economic conditions, both within Canada and internationally, are adding to the pressures and strains caused by this large-scale international movement of students. In times of recession and financial constraint it is all the more difficult to cope with the costs and other problems involved in the international movement of students. Yet, it is vital that these problems be handled with sensitivity, imagination, and foresight in a world that desperately needs a better degree of knowledge and understanding between cultures and between nations that are sometimes on the brink of conflict.

In this situation, when large numbers of people, large sums of money, and large international and educational issues are involved, it is no longer possible for a country like Canada — which is now one of the major players — to leave foreign student questions in a policy vacuum. The confusion, uncertainty, misinformation, and lack of balance that result from an absence of policy about foreign student questions are wasteful of time, money, and energy, and are positively harmful in many instances to Canada's international relations and educational institutions. Many questions require sensible answers, and these answers are required without more delay.

The questions being asked about foreign students are legion: who are they? why are they here? is bringing foreign students here the best way to help them and their countries? where do they come from? how many are there? is their number increasing? what are they studying? at what levels in the educational system are they studying? and at which institutions? are they reasonably distributed geographically, and by field of study, and amongst our educational institutions? are Canadians being denied places in their own educational institutions in order to make room for foreign students? are foreign students being properly looked after while they are here? are we making the most of the opportunity while they are here? who is responsible for foreign student policy in Canada? what does it all cost? are we helping those who most need it? what is the benefit to Canada? These and similar questions concern not only foreign students. They touch upon the nature of our universities. Indeed, they touch upon the very nature of our society and its relationship to the world.

Unfortunately, firm and reliable data on which to base answers to many of the questions about foreign student policy are often lacking or incomplete. This lack of information is in itself one result of the policy vacuum that exists in the field. Specific examples of the lack of data about foreign student questions needed for both educational and public policy purposes are noted in this chapter. These include lack of researched information and analyses about the numbers, origins, distribution, personal characteristics, socio-economic background, finances, activities, and costs of foreign students in Canada. None the less, it is certainly possible, drawing upon the information and experience that are available, to identify a number of the major issues and to suggest possible approaches to answering the questions they raise.

B. SOME GENERAL POLICY QUESTIONS

The first question requiring an answer is not, however, one that depends on data for a reply, so much as upon judgement. Why should Canada accommodate foreign students? Or, to put the question more neutrally, should Canada take foreign students? And, if so, why? The same primary question must also be answered in the broader international context. Should the countries of the world make the effort to accommodate substantial movements of students across international boundaries? And, if so, why?

The answer usually given to the question 'should Canada take foreign students and, if so, why?' points to a moral obligation that the country may have to do so. This moral obligation argument has two parts. First, it is said that there is a debt to be paid. Many Canadians have in the past benefitted from the opportunity to study in other countries. Now that our educational system is fairly well developed, we have a moral obligation to repay the past generosity of other countries by opening the doors of our educational institutions, in turn, to foreign students. Second, the moral obligation argument continues, as a country that is comparatively well-developed and rich in resources, Canada must do its share to help the less developed countries by providing educational opportunities for a portion of their students. Depending on the occasion and the speaker, this second moral obligation argument may be embellished with references to Canada's responsibilities for the promotion of peace and world understanding.

The moral obligation arguments for receiving foreign students do have validity. But there is some danger in resting the case for foreign students too heavily on these arguments or in pushing the arguments too far. In times of economic constraint such arguments lose much of their appeal, no matter how valid. Moreover, there is a risk in the moral obligation argument of striking a note of condescension, of talking too much about 'helping those less fortunate than ourselves'. In the same vein, the Canadian version of the moral argument will often affirm that our country is in a special position to do wonders in regard to foreign students because it was never itself a colonial power, never subjugated other peoples, never indulged in racial oppression and so on. In a world that is increasingly sensitive to the problems of cultural minorities and to the plight of aboriginal peoples, it would be wise to avoid such pious, self-congratulatory rhetoric. The history of the Indian and Inuit peoples and the experience of many other minorities in Canada may suggest to onlookers that it is myopic clap-trap.

Without at all discounting the validity of the moral argument, it would perhaps be more effective, more realistic, and more honest to respond to the question 'why should Canada take foreign students?' with the answer: because it is in the country's own best interests to do so. It is, in fact, immensely helpful to Canada to have a reasonable proportion of foreign students in our educational institutions. There are clear political, economic, and educational advantages to be derived from a foreign student presence, provided appropriate thought and

care are devoted to their selection and distribution, and to their treatment while they are here. This argument in favour of foreign students on the grounds of enlightened self-interest has been well and frankly put in a study published by the Overseas Students Trust in the United Kingdom.[13] In the longer term, trade and international relations benefit from the friendships and associations that result from the education of foreign students in a country. In the shorter term, there are economic benefits from the income generated here by foreign student expenditures.

But surely the most immediate and important reason for receiving foreign students is the tremendous potential educational value of their presence. Canadians need to be more aware of and to know more about the world outside Canada; and with this knowledge will come, as well, a better knowledge and understanding of their own country. In Canada, as in the United States, foreign students are all too often "an unrealized, underutilized, and unintegrated resource for relieving the startling lack of knowledge among domestic students about international matters."[14] Through the contribution they can make, both inside and outside the classroom and laboratory, and through the particular knowledge and expertise they bring with them, foreign students can improve the quality of the educational experience offered by Canadian institutions.

Thus, on the grounds of enlightened self-interest, as well as of moral obligation, Canada should indeed welcome foreign students. In fact, the presence of foreign students is probably of greater importance to our own education than it is to theirs.

Enlightened self-interest, as well as moral obligation, also provides an answer to the other primary question that looks at the broader international context of foreign student issues: should the countries of the world make the effort to accommodate substantial movements of students across international boundaries and, if so, why? Again, the political, economic, and educational arguments are clear-cut and compelling. To these may be fairly added, without risk of the charge of rhetoric when speaking in international terms, that the international mobility of students is one of the foundation stones of a peaceful, stable, and increasingly interdependent world. The conclusions of the Consultative Group on Student Mobility within the Commonwealth apply to the whole globe, to the commonwealth of learning as well as to the Commonwealth of Nations:

> We are unanimously of the opinion that student mobility within the Commonwealth is of crucial importance to each member country and to the Commonwealth as a whole. We are strongly of the view that any society is enriched by an understanding of the cultures and circumstances of others. We believe that this understanding can best be gained by personal experience. We are convinced that student exchange provides unique opportunities for sending and receiving countries to benefit from the sharing of such experience.[15]

Another primary question about foreign students is who in Canada is responsible for foreign student policy? Indeed, given the balkanization of the country in the field of education, are we capable of developing any agreed policies or common approach towards this important aspect of our international relations?

A case can be made, depending on one's preference, for foreign student matters to be the primary responsibility of the individual educational institutions, or of the provincial governments, or of the federal government. Many academics, for example, have tended to see foreign student questions as essentially questions to be decided by our educational institutions. While this is a self-comforting and academically impeccable view, it is hopelessly unrealistic in today's world. As the Commission on Foreign Student Policy acknowledged, "educational institutions have not addressed the issues raised by the presence of foreign students with the care that they might have."[16] As that Commission further noted, although, "some Canadian postsecondary institutions have attempted to come to grips with foreign student policies, . . . they have suffered from a lack of clearly articulated principles and coherent well-reasoned models. This has left a policy vacuum which has been filled, in part, by governments."[17]

Nonetheless, the Commission on Foreign Student Policy, ever hopeful, sticks with the view that foreign student policy is primarily the responsibility of the educational institutions. Its recommendations, therefore, are initially addressed to these institutions, on the grounds that they are the bodies most directly affected by and concerned with foreign students. The Commission on Foreign Student Policy does suggest that "it is time for Canadian post-secondary institutions to examine their own policies on foreign students", and cautions that if these institutions do not address the foreign student issues "governments will take the decisions out of their hands."[18]

The reality is that the inability of Canadian postsecondary institutions to cope with the large and costly problems involved in foreign student affairs has left a vacuum, with the consequence that the country lacks any adequate or coherent approach to these problems. It is neither surprising nor to their discredit that our educational institutions have been unable to resolve the problems inherent in developing appropriate foreign student policies. They lack the legal, financial, and administrative resources to do so. The only effective capacity for policy making in this complex and costly area lies with government. It is unhelpful to assume that our universities and colleges, individually or collectively, have now, or have had for years, such capacity. In today's world, the primary responsibility for foreign student policy lies with government. No other body has in these times the legal, financial, and administrative resources needed to develop and apply such policy.

However, governments, too, have failed to develop coherent policies for foreign students in Canada. The federal government, mindful of provincial sensitivities where education is concerned, has tended to deal very gingerly with foreign student questions, working at the problems around the edges and usually

only when it could not escape doing so — for example, when questions of immigration, visas, employment, and foreign aid were involved. The provincial governments, for their part, have often played the role of dog in the manger — failing to work together to develop policies for foreign students but warning the federal government away from the area on the grounds that education is a provincial responsibility. In so far as they have responded at all to the need for policies for foreign students, individual provinces (or a group of provinces in the case of the Maritimes) have gone their separate ways. The Council of Ministers of Education, as presently constituted, has shown itself to be utterly ineffectual as a vehicle for developing any common or coherent policy in this field.

The answer, then, to the question 'who is responsible for foreign student policy in Canada is that no one knows and, also, that no one has cared enough to take any effective steps to provide a better answer. The result is the confusion, uncertainty, disjointedness, and irrationality that mark this country's handling of foreign student questions. Such a situation cannot be allowed to continue because of the disservice it so often does to foreign students, as well as to our educational institutions and to our international relations.

Common sense would seem to suggest that the primary responsibility for foreign student policy should lie, indeed lies inescapably, with the government of Canada. As the thorough study completed by Peter Williams concludes,[19] while foreign student policy is multi-dimensional in nature, such policy lies more in the area of foreign than educational policy. From a practical point of view, it is the federal government that has responsibility for and control over the movement of foreign nationals in and out of this country. Seen in the wider context of our international relations, it is the government of Canada that must take the major role in developing foreign student policy. If it does not, there will be no coherent Canadian policy in this important area.

To make this point is not to suggest an exclusive or even a dominating role for the federal government in the field of foreign student policy. What is needed is a national approach to foreign student questions in which the federal and provincial governments work together with representatives of the educational community. A proposal to this effect is presented at the conclusion of this chapter.

In the development of a national approach to foreign student policy, consideration should be given to the question: is bringing foreign students to study in Canada the most effective way to help them and to further the development of the countries from which they come? Might it be better to put the money and effort involved into helping to develop educational institutions in the countries concerned? Much more could often be accomplished by spending in an economically less-developed country the large amount of money it takes to bring a student to Canada in order to educate him or her here. A good deal of work is needed to find the right balance between these two approaches to helping with the education of foreign students and to ensure that by taking foreign students we do not, inadvertently, retard the development of educational institutions in

some other countries. Studies are also needed to see whether, over a period of time, our provision of places to foreign students in Canada may, again inadvertently, contribute to a brain drain from their country of origin.

The Australian Universities Development Programme, developed by the Australian Vice-Chancellors' Committee, seeks to mobilize the resources of Australia's 19 universities to help strengthen universities in neighbouring developing countries. The Programme concentrates on staff development, training, and research in universities in the developing countries and aims to provide aid which will allow universities and academics in developing countries to improve their own capacities in teaching and research. The Programme has been supported financially by the Australian government, through the Department of Foreign Affairs and the Australian Development Assistance Bureau, from its commencement in 1969.

C. A PROFILE OF FOREIGN STUDENTS IN CANADA

Some of the other questions being asked about foreign students and foreign student policy are, at least at first glance, of a more factual and statistical nature. But behind the statistical question lie other questions that are often of a non-statistical nature. In this field, as in every other, the final question and the last decision must always entail a value judgement. For example, how many foreign students are there in Canada? Are the numbers increasing? How many should there be?

First, how many are there? As Table 49 indicates, there were 65,007 foreign students in Canada in the academic year 1982-83. Of these, 18,696 were in primary and secondary schools, 7,503 were in postsecondary non-university educational institutions, and 35,505 were attending university. An additional 3,304 foreign students were in training in hospitals, religious institutions, language schools and other unspecified locations.

Second, the total number of foreign students in Canada at all levels has, indeed, increased substantially in recent years, rising from 47,914 in 1980-81 to 65,007 in 1982-83 (Table 49). At the university level, the foreign student enrolment increased from just under 28,000 in 1980-81 to over 35,500 in 1982-83. Table 50 provides further evidence of the growth in the number of foreign university students in Canada, from just under 20,000 in 1974-75 to more than 35,500 in 1982-83, an increase of some 79 per cent in less than a decade.

Statistics Canada analysts anticipate a further rise in the number of foreign students at the postsecondary level because of the dramatic increase in the number of such students at the elementary and secondary levels of Canadian education. It was found that a large number of these students were registered in Grades XII and XIII, or their equivalents, and that "Since the main purpose of these students is to qualify for postsecondary education in Canada . . . it is likely that most of them will attempt to enter Canada's postsecondary institutions in subsequent years.[20]

As Table 49 acknowledges, the data about the numbers of foreign students, although remarkably precise, are not quite firm. This paradox is explained by problems of classification. Moreover, there are differences in the data relating to foreign students, as well as to many other questions, between Employment and Immigration Canada, Statistics Canada, and the educational institutions. Table 56 illustrates this point by providing an opportunity to compare the number of foreign students reported by the immigration file with the number of foreign students reported by the universities themselves. Such differences arise in many instances from lack of an agreed set of definitions of foreign students and the absence of a common approach. In addition, there is evidence that, particularly in the field of foreign students, the data are often incomplete because of the difficulties involved in collecting information. Nevertheless, after examining these points, the Commission is satisfied that the data contained in Tables 49 and 50, and in other tables presented in this chapter, provide a reasonably accurate statement of the position and that the essential facts and trends are correctly reported.

The third question about the number of foreign students, how many should there be?, is a matter of opinion and of judgement, rather than of statistics. This Commission offers two observations. First, an examination of foreign student data from some other countries suggests that the foreign student enrolment as a percentage of the total enrolment at Canadian postsecondary institutions is not at present unreasonable when compared with that of such countries as the United Kingdom, France, Germany, the United States, Austria, Switzerland, Australia, and New Zealand. There are, however, questions about the composition, distribution, academic level, and field of study of these students that need some serious consideration. Second, one of the elements in a national approach to foreign student policy, as proposed in this chapter, should be an on-going search for a fair and sensible balance in the number of foreign students, as a proportion of total Canadian enrolment and also as to countries of origin, field and level of study, and distribution within Canada. Foreign student questions are almost by definition, complex and delicate. Rather than beginning by establishing official limits or quotas on the numbers of foreign students, it would be better to follow the motto of York University and 'to try the way', to seek an acceptable balance by the application of positive policies rather than by imposing arbitrary figures and percentages at the outset.

Foreign students total about 5 per cent of full- and part-time university enrolment in Canada; this percentage has grown slightly from 4.1 per cent in 1975-76 to 5.2 per cent in 1982-83. Foreign students comprised about 8 per cent of full-time enrolment in 1982-83, compared to about 6 per cent in 1975-76 (Table 51). By way of comparison, and depending upon definitions, foreign students constitute about 20 per cent of the enrolment in higher education in Switzerland, about 13 per cent in France, about 10 per cent in Austria, and about 10 to 12 per cent in the United Kingdom. Again depending upon definition, they constitute about 5 to 6 per cent of university students in New Zealand, 4 to 5 per

TABLE 49

FOREIGN STUDENTS BY INTENDED TYPE OF EDUCATION AND REGION***
1980-81 TO 1982-83

REGION	Primary and Secondary					Post-secondary Non-university Trades and Other					University*					Total**				
	1980-1981	1981-1982	Percentage Change 1980-81 1981-82	1982-1983	Percentage Change 1981-82 1982-83	1980-1981	1981-1982	Percentage Change 1980-81 1981-82	1982-1983	Percentage Change 1981-82 1982-83	1980-1981	1981-1982	Percentage Change 1980-81 1981-82	1982-1983	Percentage Change 1981-82 1982-83	1980-1981	1981-1982	Percentage Change 1980-81 1981-82	1982-1983	Percentage Change 1981-82 1982-83
Atlantic Provinces	329 (2.5)	395 (2.2)	20.1	411 (2.2)	4.1	216 (3.8)	210 (3.3)	-2.8	176 (2.3)	-16.2	2,252 (8.1)	2,414 (7.3)	7.2	2,600 (7.3)	7.7	2,718 (5.7)	3,022 (5.1)	11.2	3,292 (5.1)	8.9
Quebec	1,055 (8.1)	1,219 (6.8)	15.5	1,243 (6.7)	2.0	905 (16.0)	1,024 (16.1)	13.3	1,199 (16.0)	17.1	6,689 (24.0)	6,862 (20.8)	2.6	6,782 (19.1)	-1.2	9,069 (18.9)	9,745 (16.5)	7.5	10,042 (15.4)	3.0
Ontario	8,124 (62.6)	11,976 (66.8)	47.3	12,472 (66.7)	4.2	2,680 (47.2)	3,252 (51.1)	21.3	4,367 (58.2)	34.3	13,138 (47.2)	17,188 (52.1)	30.8	18,747 (52.8)	9.1	24,279 (50.7)	32,703 (55.3)	34.7	36,837 (56.7)	12.6
Prairie Provinces	1,640 (12.7)	2,117 (11.8)	29.1	2,247 (12.0)	6.1	1,174 (20.7)	1,172 (18.4)	-0.2	1,149 (15.3)	-2.0	3,741 (13.4)	4,100 (12.5)	9.6	4,754 (13.4)	16.0	6,819 (14.2)	7,682 (13.0)	12.7	8,602 (13.2)	12.0
British Columbia	1,828 (14.1)	2,221 (12.4)	21.5	2,323 (12.4)	4.6	699 (12.3)	709 (11.1)	1.4	612 (8.2)	-13.7	2,025 (7.3)	2,415 (7.3)	19.3	2,622 (7.4)	8.6	5,029 (10.5)	5,943 (10.1)	18.2	9,234 (9.6)	4.9
TOTAL	12,976 (100)	17,922 (100)	38.1	18,696 (100)	4.3	5,674 (100)	6,367 (100)	12.2	7,503 (100)	17.8	27,845 (100)	32,979 (100)	18.4	35,505 (100)	7.7	47,914 (100)	59,095 (100)	23.3	65,007 (100)	10.0

* University figures based on data provided in Table 50.

** These totals include as well a category of "other students" who are mostly in hospitals, religious institutions and language schools, and approximately 500 students per year who are at the university level but unspecified as to location.

*** Data based on valid authorizations as of December 1 of each year cited.

Source: Max von Zur-Muehlen (Statistics Canada), Table prepared for the Commission, July, 1983. Data is from Immigration File.

TABLE 50

FULL- AND PART-TIME FOREIGN UNIVERSITY STUDENTS BY REGION, 1974-1975 TO 1982-1983

Year	Atlantic Provinces	Index	Quebec	Index	Ontario	Index	Western Region	Index	TOTAL	Index
1974-75	1,576	100.0	4,820	100.0	9,654	100.0	3,771	100.0	19,841	100.0
1975-76	1,829	114.6	5,780	119.9	9,794	101.5	5,185	142.8	22,788	114.9
1976-77	1,861	116.6	7,540	156.4	10,507	108.8	6,311	167.6	26,219	132.1
1977-78	2,040	127.8	6,863	142.4	10,323	106.9	6,820	180.9	26,046	131.3
1978-79	2,109	132.1	6,644	137.8	10,524	109.0	6,483	171.9	25,760	129.8
1979-80	2,094	131.2	6,586	136.6	11,157	115.6	5,847	155.1	25,684	129.4
1980-81	2,252	141.1	6,689	138.8	13,138	136.1	5,766	152.9	27,845	140.3
1981-82	2,414	151.3	6,862	142.4	17,188	178.0	6,515	172.8	32,979	166.2
1982-83	2,600	162.9	6,782	140.7	18,747	194.2	7,376	195.6	35,505	178.9

Source: Max von Zur-Muehlen (Statistics Canada). Table prepared for the Commission on Canadian Studies, July, 1983.

cent in Australia, about 2 to 4 per cent of students in higher education in the United States, and about 5 per cent of total enrolment in postsecondary institutions in the Federal Republic of Germany.[21] In India and Malaysia, the percentages are in each case about 0.3 per cent of the total university student population. Foreign students comprise slightly more than 1 per cent of the enrolment at the University of the West Indies and slightly less than 1 per cent at the University of Guyana.

While an average of about 5 per cent of full- and part-time university enrolment in Canada being comprised of foreign students does not seem excessive, in light both of world conditions and of the advantages accruing to Canada, there are some large questions to be asked about the make-up of our foreign student body. Moreover, not far behind the statistically answerable questions: who are they? and where do they come from? lurk the more difficult questions: who should they be? and where should they come from?

It is true, as the Canadian Bureau for International Education has noted, that "there are students in Canada from nearly every country in the world."[22] As Table 52 indicates, using C.B.I.E. data for 1980, Canada attracts students from some 174 countries and from all the major areas of the globe. A closer examination of the Table raises questions, however, about a lack of balance in the spread of countries and regions from which these students come to Canada.

TABLE 51

FOREIGN STUDENTS AS A PERCENTAGE OF THE FULL-TIME AND OF THE PART-TIME CANADIAN UNIVERSITY ENROLMENT, 1975-1976 TO 1982-1983

YEAR	As % of Full-time Enrolment	As % of Full- and Part-time Enrolment
1975-76	6.2	4.1
1976-77	7.0	4.6
1977-78	7.0	4.4
1978-79	7.0	4.4
1979-80	6.9	4.3
1980-81	7.3	4.4
1981-82	8.2	5.0
1982-83	8.3	5.2

Source: Max von Zur-Muehlen (Statistics Canada), Table prepared for the Commission on Canadian Studies, July, 1983.

TABLE 52

FOREIGN STUDENT ENROLMENT IN SECONDARY AND POST-SECONDARY INSTITUTIONS BY GEOGRAPHIC ORIGIN, BY CONVENTIONAL GROUPINGS

Area	Secondary	% of column total	Post-secondary	% of column total	Combined	% of column total
Africa (47)[1]	194	(1.8%)	3,973	(11.9%)	4,167	(9.5%)
Americas & Caribbean (48)						
U.S.A.	853	(7.9%)	4,168	(12.5%)		
Others	1,300	(12%)	4,303	(12.9%)		
Area subtotal	2,153	(19.9%)	8,471	(25.5%)	10,624	(24.1%)
Asia (24)						
Hong Kong	4,100	(38%)	7,660	(23%)		
Malaysia	2,451	(22.7%)	3,599	(10.8%)		
Others	795	(7.4%)	3,892	(11.7%)		
Area sub-total	7,346	(68.1%)	15,151	(45.6%)	22,497	(51.1%)
Australasia (11)	84	(.8%)	259	(.8%)	343	(.8%)
Europe (30)	712	(6.6%)	3,301	(9.9%)	4,013	(9.1%)
Middle East (14)	299	(2.8%)	2,084	(6.3%)	2,383	(5.4%)
Grand Totals (174)	10,788	(100%)	33,329	(100%)	44,027	(100%)

Note 1: Numbers in brackets indicate the number of countries in each group.

Source: Commission on Foreign Student Policy. *The right mix: the report of the Commission on foreign student policy*. Ottawa, 1981. Canadian Bureau for International Education, p. 29, Table 3.

The great majority of foreign students in Canada come from a relatively few countries and they are not, as a group, representative of the full international community. For example, nearly one-quarter (23%) of the foreign students at Canadian postsecondary institutions come from one place, Hong Kong. There are nearly twice as many students from Hong Kong as there are from 47 countries in Africa put together. There are more than twice as many students from Hong Kong as there are from the more than 30 countries of Europe put together. In fact, there are almost as many students in Canada from Hong Kong as from all the countries of Africa, Central and South America, and the Caribbean put together, even though there are students in Canada from 94 of these countries.

Another 11 per cent of the foreign students in Canada are from one other country, Malaysia, so that more than one-third of all the foreign students attending Canadian postsecondary institutions are from just two sources, Hong Kong and Malaysia. To draw attention to this fact is not to deprecate the value or propriety of having a substantial representation of students from these two countries, but simply to point to the extraordinary imbalances in the foreign student body in Canada which result from lack of a coherent approach to foreign student policy.

Not only is the foreign student body in Canada profoundly unrepresentative of the geographical breadth of the international community, but these students come overwhelmingly from the more well-to-do countries of the world. As Table 53 indicates, well over one-half (54.2%) of the foreign post-secondary students in Canada come from 50 high-income countries, while barely one-tenth (10.4%) come from the 40 poorest countries of the globe. As Table 54 indicates, less than 3 per cent of the foreign university students in Canada come from 25 of the "Least Developed" countries, using the standard United Nations definition for this term. In 1982-83, only 779 of the more than 35,500 foreign university students in Canada were from these "Least Developed" countries.

It would perhaps be unwise to press the point too far. There are some rich students in poor countries and plenty of poor students in so-called rich countries. None the less, the high proportion of foreign students coming to Canada from the high-income countries, and the very low proportion coming from the low-income countries, does raise the question: are we giving help to those who most need it? Or, indeed, to those who most deserve it? Unfortunately, there is little information available about the financial circumstances and socio-economic background of the foreign students in Canada. As the Canadian Bureau for International Education has observed,

> The social and economic background of foreign students is the subject of considerably more speculation than informed analysis. Stereotypes abound: the starving African student, the rich American, the student from Hong Kong with a car and house, the son of the oil sheik.[23]

TABLE 53

FOREIGN STUDENT ENROLMENT IN SECONDARY AND POST-SECONDARY INSTITUTIONS BY GEOGRAPHIC ORIGIN CLASSIFIED BY LEVELS OF INCOME[1]

	Secondary	% of column total	Post-Secondary	% of column total	Sub-group total	% of column total
High income countries (50)[2] (GNP per capita over US $2,500)						
Hong Kong	4,100	(38%)	7,660	(23%)		
U.S.A.	853	(7.9%)	4,168	(12.5%)		
OPEC (6)	36	(.3%)	250	(.8%)		
Others	1,508	(14%)	5,940	(17.9%)		
	6,497	(60.2%)	18,018	(54.2%)	24,515	(55.7%)
Middle income countries (84) (GNP per capital between US $400 and $2,500)						
Malaysia	2,451	(22.7%)	3,599	(10.8%)		
OPEC (6)	411	(3.8%)	3,499	(10.5%)		
Others	1,094	(10.2%)	4,690	(14.1%)		
	3,955	(36.7%)	11,767	(35.4%)	15,723	(35.7%)
Poorest countries (40) (GNP per capita below US $400)						
OPEC (1)	60	(.6%)	534	(1.6%)		
Others	275	(2.5%)	2,920	(8.8%)		
	335	(3.1%)	3,454	(10.4%)	3,789	(8.6%)
GRAND TOTAL (174)	10,788	(100%)	33,239	(100%)	44,027	(100%)

Source: Special tabulation, Employment and Immigration Canada, March 5, 1981 of Student Authorizations valid December 31, 1980.

Note 1: Classification of income levels derived from In the Canadian Interest? Third World Development in the 1980's. The North-South Institute. Ottawa, 1980.

Note 2: Numbers in brackets indicate the number of countries in each group.

Source: Commission on Foreign Student Policy. *The right mix: the report of the Commission on foreign student policy*. Ottawa, Canadian Bureau for International Education, 1981, p. 28, Table 2.

TABLE 54

FOREIGN UNIVERSITY STUDENTS IN CANADA FROM 25 OF THE "LEAST DEVELOPED" COUNTRIES, 1979-1980 TO 1982-1983

Country of Citizenship	1979-80	1980-81	1981-82	1982-83
Afghanistan	7	4	2	2
Bangladesh	129	171	193	198
Brunei	11	15	21	27
Laos	0	0	0	0
Equatorial Guinea	1	0	0	0
Haiti	134	130	93	58
Botswana	19	28	39	42
Burundi	7	7	5	8
Central African Republic	12	8	12	12
Chad	5	3	4	0
Ethiopia	21	27	28	21
Gambia	3	1	2	5
Guinea	1	2	5	8
Lesotho	42	39	20	18
Malawi	27	26	32	26
Yemen	4	2	5	2
Mali	52	36	30	32
Niger	32	29	35	25
Rwanda	22	28	26	33
Somali Republic	2	2	7	9
Sudan	14	19	22	23
Swaziland	20	19	12	8
Tanzania	92	122	148	160
Uganda	55	49	44	39
Upper Volta	16	17	34	23
TOTAL	728	784	819	779

Note: The standard United Nations definition of "Least Developed" is used.

Source: Max von Zur-Muehlen. *Foreign students in Canada, 1981-82;* updated for the Commission, July, 1983, by Dr. von Zur-Muehlen using immigration data.

None the less, it is valid to ask the question: are we helping to provide education for the needy and deserving from around the world, or are we attracting to our educational institutions, in large part, simply those who can pay? This question should be high on the agenda of those responsible for a foreign students policy for Canada. Such information as is available suggests that "most come from advantaged, urban backgrounds, like their Canadian counterparts, and have a relative or friend who has previously studied in Canada", that "the bulk of foreign students are the children of entrepreneurs, businessmen or professionals", and that they are "for the most part individuals from advantaged socio-economic backgrounds".[24]

There are also questions to be asked about the distribution of foreign students within Canada. Are they distributed in a reasonably balanced way geographically, institutionally, and linguistically? Is there some appropriate balance in the way they are spread out across the regions and the provinces of the country, amongst the educational institutions of the country, and with respect to the two official languages of Canada? The answer to each of these three questions is that there is not.

As Table 49 indicates, in 1982-83 over one-half (52.8%) of the foreign university students in Canada were in one province, Ontario. More than one-half (58.2%) of the foreign students attending community colleges were also in Ontario, as were two-thirds (66.7%) of the foreign students attending primary and secondary schools in Canada. The province of Quebec had just over one-third the number (6,782; 19.1%) of foreign university students that there were in Ontario (18,747; 52.8%). The four Atlantic provinces had about 7 per cent of the foreign university students, the three prairie provinces about 13 per cent, and British Columbia about 7 per cent.

As Table 50 indicates, this imbalance in the distribution of foreign students within Canada is a matter of long standing. In 1974-75, for example, 48.6 per cent of foreign university students were concentrated in Ontario. Moreover, an examination of current trends suggests that the imbalance will continue and perhaps become even more pronounced, unless corrected by the development of some appropriate policies for the selection, distribution, and assistance of foreign students.

As Tables 55 and 56 demonstrate, the imbalances between educational institutions in foreign student enrolment are even more pronounced than those that exist between provinces and regions. In 1980-81, the foreign student percentage of full-time enrolment ranged from a high of more than 20 per cent at 4 universities to less than 2 per cent at many others, and from a high of nearly 10 per cent at one community college to less than 1 per cent at many others (Table 55).

More recent studies at Statistics Canada suggest that the imbalance between universities in their full-time foreign student enrolments became even more substantial in the case of some institutions in the two subsequent years (Table 56). In 1982-83, over one-quarter of the full-time enrolment of one

university was comprised of foreign students. Within Ontario, with its sixteen provincially-assisted degree-granting institutions, nearly one-half of the foreign students were enrolled at three universities, Toronto, York, and Windsor. The University of Toronto alone, had one and one-half times as many foreign students as all of the twelve universities in the Atlantic region put together. In the prairie provinces, with a total of nine universities, more than 30 per cent of the foreign students reported by universities were enrolled at one institution, the University of Alberta.

The imbalance is also pronounced in the differences in foreign student enrolment between anglophone and francophone universities. In Quebec, the proportion of the full-time enrolment made up of foreign students at the two major anglophone universities, McGill and Concordia, was amongst the highest in Canada in 1980-81, in each case exceeding 20 per cent (Table 55). Nearly 70 per cent of the foreign students in the province were at these two institutions. On the other hand, the proportion of full-time enrolment made up of foreign students at the two major francophone universities was much lower, in the range of 3.5 per cent at Laval and 6 per cent at Montreal. In 1980-81, less than one-third of the foreign students in Quebec were enrolled at the francophone universities. This picture had changed somewhat two years later. In 1982-83, the proportion of foreign university students in Quebec at McGill and Concordia had dropped to 55 per cent. The proportion of the full-time enrolment made up of foreign students had increased to 4.4 per cent at Laval and to 6.3 per cent at the University of Montreal. None the less, well over one-half the foreign university students in Quebec were still attending the Anglophone institutions.

These imbalances — geographical, institutional, and linguistic — raise serious questions about the distribution of foreign students within Canada. These questions need consideration in the context of the development of a coherent foreign student policy. If one of the chief values of a foreign student presence is the improvement of the educational opportunities available to Canadians by the addition, through personal contact, of an international dimension to their experience, then it is important that such students be spread in a reasonably balanced way throughout the country. The heavy concentration of foreign students in certain regions, at certain institutions, and in certain programmes, is defeating this purpose. The concept of "the right mix" for foreign students applies as much to their distribution among Canadian regions and universities as to an appropriate variety in their backgrounds and countries of origin.

One may wonder if the growing tendency in a number of countries to admit large blocs of students from another country on contract will help either to obtain a good mix in their foreign student population or to facilitate the opportunities for such foreign students to come to know the students and people of the host country. The 1970s saw three large programmed movements of students into Canada, from Venezuela, Nigeria, and China. The students' costs were paid by their own governments through contracted agents in Canada. The

pros and cons of such contractual programmed movements of students need to be weighed carefully, perhaps all the more so because they lend themselves to government manipulation and can be attractive financially even when they are not so attractive academically.

Large-scale influxes of students from one source can create academic, psychological, and social ghettos unless very special care is taken with their reception and distribution. If such contracts result in self-contained "rent a campus" or "rent a programme" situations, rather than in opening up wider and more balanced opportunities for the students concerned to come to know the host country, then such an approach may not be the best way either to assist foreign students or to achieve the benefits that can result from their presence.

Similar concerns and questions arise about the distribution of Canadian students outside Canada. How well are the horizons of Canadians being broadened by the range of countries abroad in which our students pursue their studies? How diverse are the perspectives and experiences that such students are gaining for themselves and also bringing back to enrich this country? As Table 57 indicates, the range and number of Canadian postsecondary students abroad are still severely circumscribed. Of a total of 18,092 Canadian postsecondary students reported to be outside Canada in 1979, over 15,000 (83.6%) were in the United States. Another 1,748 were in France (5.3%) and the United Kingdom (4.4%). There were, then, fewer than 1,300 Canadians pursuing postsecondary studies in all the remaining countries of the world.

Programmes and arrangements to encourage and assist Canadian students to range more broadly in pursuit of further education abroad might well constitute part of a national approach to foreign student policy. The academic and cultural agreements Canada already has with a number of countries might provide a framework within which to begin working out this particular aspect of a foreign student policy.

There were, incidentally, some 4,000 American postsecondary students in Canada in 1980 (Table 52) as opposed to some 15,000 Canadian postsecondary students in the United States. Although numerically fewer, the American students are, in proportion to the populations of the two countries, a much more considerable factor in the foreign student question in Canada than are the Canadian students in the foreign student question in the United States. Canadian students in the United States constituted about 4.5 per cent of the foreign postsecondary students in that country in 1980-81,[25] whereas American students constituted about 12.5 per cent of the foreign postsecondary students in Canada.

TABLE 55

POSTSECONDARY INSTITUTIONS WITH THE LARGEST FOREIGN STUDENT ENROLMENTS, 1980-1981

Institutions	Province	Student Authorizations Valid Dec. 31, 1980	As % of Total Full-time 1980-81 Enrolment
UNIVERSITIES			
University of Toronto	Ontario	2,869	10.6
McGill University	Québec	2,495	20.1
Concordia University	Québec	2,142	22.3
University of Windsor	Ontario	1,331	21.6
York University	Ontario	1,247	11.9
University of Alberta	Alberta	1,196	7.6
U. of Western Ontario	Ontario	1,132	8.3
University of Manitoba	Manitoba	1,072	10.0
University of Ottawa	Ontario	1,052	10.8
Simon Fraser University	British Columbia	997	23.8
University of Guelph	Ontario	905	10.4
University of Waterloo	Ontario	841	5.9
U. of British Columbia	British Columbia	826	4.9
Carleton University	Ontario	796	10.6
Université de Montréal	Québec	716	6.0
McMaster University	Ontario	678	8.0
Université Laval	Québec	541	3.5
Queen's University	Ontario	515	5.3
		21,351	
COMMUNITY COLLEGES			
George Brown College	Ontario	297	7.8
Algonquin College	Ontario	257	3.5
Humber College	Ontario	220	3.0
St. Clair College	Ontario	194	4.8
Dawson College	Québec	183	2.8
Centennial College	Ontario	151	3.4
St. Lawrence College	Ontario	149	4.1
Mt. Royal College	Alberta	119	4.6
Northern College	Ontario	111	9.7
Fanshawe College	Ontario	105	1.8
Grant McEwan College	Alberta	100	6.0
		1,886	

Sources: Derived from the Commission on Foreign Student Policy. *The right mix: The report of The Commission.* Ottawa, Canadian Bureau for International Education, 1981. Table 5, p. 33; and Statistics Canada and Employment and Immigration Canada — special tabulations, 1983.

TABLE 56

UNIVERSITIES WITH LARGE FOREIGN STUDENT ENROLMENTS, 1982-1983

	Valid Student Authorizations Immigration Canada, Nov. 30, 1982 *	As % of Full-time Enrolment **	Visa Students Registered at University as reported to Stats. Canada ***	As % of Full-time Enrolment **
University of Windsor	2,325	28.0	2,171	26.1
Simon Fraser University	1,187	21.4	NA	
McGill University	2,714	15.9	2,630	15.4
York University	2,325	15.5	2,339	15.6
University of Guelph	1,305	12.6	1,308	12.6
Carleton University	1,156	12.2	1,198	12.6
University of Ottawa	1,486	12.1	1,610	13.1
Concordia University	1,331	11.3	1,126	9.6
University of Toronto	3,783	10.9	3,940	11.3
University of Manitoba	1,344	8.8	1,430	9.4
McMaster University	956	8.6	988	8.9
University of Western Ontario	1,306	7.6	1,305	7.6
University of Alberta	1,556	7.4	1,472	7.0
Université de Montréal	950	6.5	918	6.3
University of Waterloo	1,068	6.6	1,021	6.3
Queen's University	721	6.4	762	6.8
University of British Columbia	1,095	5.3	911	4.4
Université Laval			825	4.4

* Student Authorization information derived from the immigration file

** Full-time enrolment information is preliminary

*** Reports on visa students from the universities include both full-and part-time students. Typically, however, relatively few foreign visa students register as part-time students. For example, at the University of Windsor only 61 of the reported 2,171 students are part-time.

Sources: Revised statistics from: Statistics Canada, *A statistical portrait of Canadian higher education from the 1960's to the 1980's*. Ottawa, 1983, Table 13, p. 37; also Unpublished data provided to the Commission from the Post-Secondary Education Section of the Education, Science and Culture Division, Statistics Canada, July, 1983.

TABLE 57

CANADIAN POSTSECONDARY STUDENTS ABROAD BY COUNTRY, 1972, 1976, AND 1979

Host Country	1972	%	1976	%	1979	%
The United States	9,679	78.2	11,120	77.5	15,130	83.6
France	765	6.2	1,011	7.0	954	5.3
Germany	167	1.4	309	2.2	311	1.7
United Kingdom	1,032	8.3	944	6.2	794	4.4
Italy	50	0.4	96	0.7	93	0.5
Switzerland	111	0.9	105	0.7	99	0.6
Belgium	115	0.9	66	0.5	58	0.3
Austria	40	0.3	55	0.4	44	0.2
The Vatican	47	0.4	76	0.5	81	0.5
Australia	110	0.9	123	0.9	105	0.6
Greece	12	0.1	35	0.2	52	0.3
Japan	18	0.1	40	0.3	26	0.1
Denmark	13	0.1	34	0.2	23	0.1
Poland	38	0.1	48	0.3	50	0.3
New Zealand	19	0.2	37	0.2	20	0.1
Ireland	NA	-	45	0.3	57	0.3
Israel	107	0.9	NA	—	NA	—
Subtotal	12,304	99.4	14,134	98.5	17,897	98.9
Other Countries	[illegible]	0.6	208	1.5	195	1.1
TOTAL	12,379	100.0	14,342	100.0	18,092	100.0
Host Countries Reported	50		50		45	

Source: UNESCO, *Statistical Yearbooks, 1974, 1979, 1982.*

D. WHAT DO FOREIGN STUDENTS STUDY IN CANADA AND WHAT ARE THE IMPLICATIONS?

Questions about the academic level and field of study of foreign students also need to be examined in considering foreign student policy. How many foreign students are there at the undergraduate level in Canada, as opposed to the post-graduate level? What is an appropriate balance for foreign student numbers between these two levels? At which of these levels is it most helpful to foreign students to provide them a place at a Canadian university? Are foreign students concentrated in certain fields of study? If so, are foreign students taking places away from Canadian students in these fields? Might it be desirable to seek some better balance in the distribution of foreign students by field of study?

In 1981-82, about 25 per cent of foreign students in Canada were enrolled at the graduate level, compared to about 8 per cent of Canadian students.[26] None

the less, there were also some 20,500 foreign students studying in Canada at the undergraduate level, including some in diploma and certificate courses. As indicated in Table 58, foreign students constituted about 6 per cent of the full-time undergraduate enrolment at Canadian universities in 1982-83. In the United Kingdom, foreign students constitute about 7 per cent of the undergraduate enrolment and in the United States a little less than 3 per cent.

One may wonder if Canada is making its most useful contribution to international education when some 75 per cent of the foreign university students are enrolled at the undergraduate level — particularly when substantial numbers of these students come from countries that have well-developed university systems of their own. In the case of high-income countries, it may at least be questioned whether Canadian taxpayers should be footing the bill for the undergraduate education of foreign students who might receive such education at home. In the case of less-developed countries, it may be argued that Canadian financial assistance could be used to better effect by helping such countries to develop their own postsecondary institutions, in particular initially at the undergraduate level. If this approach is not taken, the dependence of such countries on foreign higher education will be increased and prolonged. For the individual student, too, it will sometimes be the case that it is a disservice to remove him or her from their own society to study at the undergraduate level in another country. The unintended result may sometimes be that such students will lose touch with their own culture at a time of crucial importance to their personal development. Nevertheless, there will also be many situations in which a place at a Canadian university provides the best or only chance for a deserving foreign student to obtain an undergraduate degree.

Such questions need to be weighed carefully in the shaping of foreign student policy. Such a policy will need to be sufficiently flexible to take into account the different needs and circumstances of the countries from which students may seek to come to Canadian universities, as well as the individual circumstances of each student.

The case for making places available to foreign students at Canadian universities is often stronger at the graduate level than at the undergraduate level. At that point foreign students will have completed their undergraduate studies in their own country and Canada will be less open to the risk, or charge, of alienating such students from their own society and culture, and of retarding the development of their own universities, by providing them a place in our educational institutions.

As Table 58 indicates, over one-quarter of the doctoral students in Canada (28.5%) were foreign students in 1982-83. Moreover, as shown in Table 24, there has been a very large increase in the number of full-time foreign doctoral students in Canada in recent years. Indeed, "one of the most significant features in graduate enrolment trends has been the relative growth in foreign students".[27] The percentage of full-time doctoral students who are studying in Canada on foreign student visas almost doubled in the nine years between 1972-73 and

TABLE 58

FOREIGN STUDENTS AS A PERCENTAGE OF THE TOTAL FULL-TIME CANADIAN UNIVERSITY ENROLMENT BY ACADEMIC LEVEL, 1972-1973 TO 1982-1983

Year	Undergraduate	Masters	Doctoral
1972-73	3.8	12.1	13.9
1973-74	4.8	13.2	15.3
1974-75	4.4	16.7	16.6
1975-76	4.8	15.8	17.8
1976-77	4.8	16.1	22.4
1977-78	5.1	15.8	24.1
1978-79	5.1	15.1	24.9
1979-80	5.0	14.8	24.9
1980-81	5.1	15.0	25.2
1981-82	5.6	16.0	27.0
1982-83	6.0	15.8	28.5

Source: Max von Zur-Muehlen (Statistics Ca[illegible]), Table prepared for the Commission on Canadian Studies, July, 1983.

1981-82, rising from 13.9 per cent to 27 per cent. By way of comparison, 36 per cent of post-graduate students in the United Kingdom were foreign students and about 22 per cent of the full-time graduate students in the United States were foreign students in 1979-80.[28]

The fact that more than one-quarter of the full-time students at the doctoral level in Canada are foreign students does cause questions to be asked such as: is this too high a percentage? and, are there too many foreign doctoral students? It is important for educational institutions and government to recognize that there is public concern about these points and to provide clear answers to the questions that are being asked. This Commission does not think there are too many foreign doctoral students in Canada. On the contrary, as argued in general terms at the beginning of this chapter, it believes that there are immense advantages accruing to Canada from having foreign students here and that this is particularly true if the students are at the post-graduate level, provided they have been chosen and properly assisted as part of a well-planned and balanced foreign student policy. It may perhaps be that the current percentage of the total Canadian doctoral degree enrolment constituted by foreign students is a bit high. But, the Commission believes, as it has argued in earlier chapters, that the answer lies not in a reduction in the number of foreign graduate students, but in an increase in the number of Canadian students doing graduate work with an eye

to the future needs of this country for more highly qualified manpower, more research, and more knowledge in many fields. There is very little evidence of foreign students taking places away from potential Canadian students at Canadian universities. The problem is, rather, one of encouraging and assisting Canadian students in a more effective manner to pursue their work at the post-graduate level, and of enabling Canadian graduate schools to expand and develop to meet the future requirements of the nation.

It may be, however, that foreign students are too much concentrated in certain fields and that, consequently, they are "over-represented" in some academic areas, as the Commission on Foreign Student Policy has suggested.[29] Of the foreign students at Canadian universities in 1979-80, 35 per cent of the undergraduates and 45 per cent of the graduates were enrolled in scientific and technical courses, as opposed to 21.5 per cent and 23 per cent, respectively, of Canadian students.[30] In 1981-82, as shown in Table 24, foreign students constituted 50 per cent of the doctoral enrolment in engineering, more than one-third of the doctoral enrolment in mathematics and physical sciences, and one-quarter of the doctoral enrolment in agriculture and the biological sciences. Preliminary estimates from Statistics Canada indicate that foreign students constituted 55 per cent of the doctoral enrolment in engineering at Canadian universities in 1982-83.

It is understandable that foreign students are "attracted to practical programmes with good employment prospects which provide technological knowledge in demand in developing countries."[31] Such heavy concentration of foreign students in some areas has implications, however, for Canadian higher education that need thought. Consideration needs also to be given to the nature of the educational experience being offered to foreign students when so many of them are clustered in particular fields. Moreover, there are many other academic fields in which Canadian universities have much to contribute to foreign students and which would benefit from a more substantial foreign student presence. As with so many other aspects of the foreign student situation in Canada, this circumstance points to the need for national policies and mechanisms to attain a more reasonable balance in the composition and distribution of the foreign student enrolment.

E. THE RESPONSIBILITIES OF THE HOST COUNTRY: WHAT SHOULD BE DONE TO ASSIST FOREIGN STUDENTS IN CANADA?

Once foreign students have been admitted to Canada it is surely incumbent on us to assume certain responsibilities to make them welcome and to advise and assist them during their stay in order that their time here can be as productive and congenial as possible, both for them and for us. Yet our reception and treatment of foreign students within Canada continues to be unplanned, haphazard, and frequently very unsatisfactory. Indeed, in Canada as in the United States, there is some evidence that in recent years "colleges and

universities have become less attentive, imaginative, and organized in their capacity to respond to the needs of foreign students on their campuses".[32] It is not surprising that one study found that 10 per cent of foreign students in Canada have no social contacts and think that no one in this country cares what happens to them.[33]

Foreign students face special challenges when they choose to study in another country. They need assistance in adapting to a society and culture, and to an educational system, with which they may be unfamiliar. Personal and social alienation can result from long periods of study abroad. Foreign students will also be subject to a bewildering array of restrictions and regulations over which they have no control and which are often unhelpful, whatever their original intent. It is no wonder that dissatisfaction sometimes sets in and that at least some foreign students return to their homes defeated by their experience here or without drawing from it the full benefit which it might have provided to them and to us.

The treatment of foreign students on their arrival in Canada and while they are here requires the same care and thought as does their selection and distribution before they come to Canada. This, too, should be part of a well-planned and coherent foreign student policy. Both these functions require a national approach, in which the federal and provincial governments and the educational institutions play their appropriate roles. In addition to the necessary national mechanisms for developing and administering policy, adequate local arrangements are needed, including in particular a network of experienced foreign student advisers.

Both academic and extra-curricular activities should be developed to encourage Canadian students and foreign students to benefit from each other's presence. The potential value of foreign students as an educational resource is still little recognized despite the obvious value of the knowledge about other societies and other cultures which they bring with them. Their particular knowledge and experience should be drawn upon in a more considered way by our educational institutions and they should be properly remunerated for their services in this capacity.

Universities should be prepared to make reasonable adjustments in the curriculum, or in post-graduate regulations, or in research programmes, to ensure that their programmes help to meet the special needs of foreign students and that they do not place unnecessary burdens upon them. Government should be prepared, as part of a sensible foreign student policy, to meet the marginal extra costs that this may entail, as is now being done on a pilot project basis in Australia.

Many foreign students must operate in Canada in a language not their own. For such students, the opportunity of some second-language training should be made available at, or through the help of, the institution that has admitted them. Provision to assist with the cost of such language instruction, in either of Canada's two official languages, should be included in the budget provided by

the Canadian government to support education in the country's two official languages.

Provision should also be made by the educational institutions admitting foreign students for these students to have the opportunity to take some courses about the society, history, culture, or physical circumstances of Canada. The costs involved in providing such opportunities to foreign students to learn about Canada while they are here should be met by special grants for this purpose from the Canadian government.

In addition, a special programme of awards should be established for foreign students interested in pursuing studies about Canada in Canada on a full-time basis. The Commission proposes the establishment of a two-part programme: a programme of fellowships that would bring some students to pursue full-time graduate or post-doctoral work in Canadian studies, and a programme of scholarships for some students at the senior undergraduate level to spend a year majoring in Canadian studies. These fellowships and scholarships should be awarded on the basis of academic merit to students who have demonstrated a prior interest in Canada through work at their home institutions in Canadian studies or on Canada's place in the world. Initially, two hundred graduate fellowships and one hundred undergraduate scholarships should be established through this programme, to be funded through the academic relations division of the Department of External Affairs.

The present programme of Government of Canada Foreign Student Awards might charitably be described as bizarre in its lack of logic and lack of balance. These awards are restricted to citizens of seventeen countries: Belgium, Brazil, Denmark, Finland, France, the Federal Republic of Germany, Hungary, Italy, Japan, Mexico, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and Yugoslavia. Fourteen of these seventeen countries are on one continent, and only one or two of them could be described as being a part of the developing third world. This list of eligible countries, dating from the mid-1970s, appears simply to have grown at random, reflecting the interests of the day and of various individuals. The lack of balance in the countries from which the award winners are selected is matched by a lack of balance in their placement in Canada. More than one-half the award winners go to one province (Quebec), about one-third go to Ontario, and less than 10 per cent go to the rest of Canada. It is time for this programme of Canadian Government Awards to be scrapped and replaced by one that is more balanced both in the range of countries from which winners are selected and in their distribution across Canada.

Early in 1983, the British government announced a substantial increase in its financial support for the Commonwealth Scholarship and Fellowship Plan. This decision was all the more welcome and generous in view of the strong commitment of the Thatcher administration to a policy of economic restraint. It would be appropriate for Canada and other Commonwealth countries to match this action in support of Commonwealth student mobility by making proportionate increases in their support for this pioneering international foreign

students programme that was established largely on Canada's initiative more than two decades ago.

A decision taken some years ago by the federal government removed from foreign students the right to take part-time or summer employment without a work permit. A work permit is to be issued only when there is no qualified Canadian available for the job. This has meant that many foreign students of academic merit, denied even the chance of this modicum of earned income, have been unable to come to Canada, and that, except for those on substantial scholarships or otherwise subsidized, only the children of the very rich from outside the country can afford to attend our universities. It has also prevented valuable non-academic contacts between foreign students and Canadians which might have been gained in the course of part-time or summer employment. Would it not make more sense to have a foreign student policy that sorted out who should be allowed to come to Canada to study, and on what terms, and that then treated such students well and without discrimination? The point of control should be before foreign students arrive in Canada and not through the imposition of punitive rules while they are here. If this country is sincere in its current interest in the North-South dialogue and in the promotion of international understanding, it is time to reconsider the decision to deny to foreign students, once admitted to Canada, the right to seek the same kind of part-time and summer employment as their Canadian classmates.

F. COSTS AND FEES

Questions about the costs of educating foreign students are being raised with mounting insistence in all the countries that have a large foreign student enrolment. How much does it cost? Who pays? Who receives? What are other countries doing about the handling of such costs? Who should pay for the education of foreign students? Which students? And how much? Are differential fees the answer?

It should not be surprising that such questions are being asked in Canada as elsewhere. The number of students and the level of costs involved are such that it would be surprising if such questions were not being asked. Nor is it inappropriate, as some internationally-minded educators and students seem to feel, that taxpayers and governments should be taking a growing interest in these questions. The Canadian public has a legitimate interest in the uses made of its money, and governments have a responsibility to attempt to ensure that expenditures incurred on behalf of the public, including expenses relating to foreign students, are reasonable and put to good effect.

What does the education of foreign students cost Canada? As noted earlier, Dr. von Zur-Muehlen estimated that, in the university sector alone in 1981, the education of foreign students cost $250 to $300 million annually, exluding fees. But how much money do foreign students bring with them into Canada or generate by their activities and expenditures while here? The Canadian Bureau for International Education has argued that "the expenditure of money by the

Canadian taxpayer, through grants to institutions, is roughly equal to the amount of money imported into Canada by incoming students."[14] The fact of the matter is, however, that we do not know what the real financial costs and benefits are. As with so many other areas of foreign student policy, or lack of it, firm data based on research over a period of time to allow testing, correction, and analysis, are not available. There has not yet been a properly sustained research programme to provide the data that would make possible a reliable calculation of the economic costs and benefits of the foreign student presence in Canada. Indeed, governments and educational institutions have not yet worked together to establish even the common tools that are needed to make possible the provision of such information.[15]

In the absence of such information, there is growing public support for a user-pay approach to the costs of the education of foreign students in Canada. This sentiment is reflected in the imposition of differential or higher fees for foreign students by six Canadian provinces: Alberta, Ontario, Quebec, and the three Maritime provinces. These fees are 50 per cent to 700 per cent higher than those for Canadians or permanent residents studying within the same province.[16] Moreover, the likely trend is for the amount of such differential fees to increase. The differential fees imposed on foreign students by Ontario, for example, increased from 30 to 50 per cent of costs for students enrolling in September, 1982, and were further increased to a level which represents two-thirds of cost for the 1983-84 academic year. Prior to 1977-78, only a few institutions charged differential fees for foreign students.

A differential fee for foreign university students, under various names and guises, is being applied in a growing list of countries. In the United States, it frequently takes the form of appreciably higher fees for "out-of-state" students. In New Zealand, commencing in 1979, foreign students, with certain exceptions, must pay an additional fee of N.Z. $1,500. In Australia, foreign students, again with some exceptions, must pay to the Australian government each year an "administrative services fee" of between A $1,500 and A $2,500, depending on their field of study, before a visa is issued or renewed.[37] Australian students pay no tuition fees. The differential fees for foreign students in the United Kingdom, with the exception of students from the European Economic community and some others, rose again in the 1982-83 academic year. Whereas United Kingdom and European Economic Community students paid first degree fees of £480 and post-graduate fees of £1,413, overseas student fees were £2,700 in arts courses, £3,600 in science courses, and £6,600 in the clinical years of medicine, dentistry, and veterinary science.[38] Nor are such higher differential fees for foreign students applied only by the more economically developed countries. The University of the West Indies, for example, except for a small quota of "specially admitted students", charges the full economic costs to foreign students. Thus, while a home student from the territories supporting the University would pay a fee of Jamaica $105 in Arts and General Studies, a student admitted under the

quota of "specially admitted students" would pay a fee of J $1,425, and other foreign students would pay the full economic costs fee of J $8,696.[39]

What is the result of the introduction of such differential, higher fees for foreign students? The honest answer is that no one really knows, because adequate research has not yet been done to provide the data on which an assessment could be based. In some countries, including the United Kingdom, the number of foreign students has wavered or dropped, as it was indeed intended to, since the imposition of differential, higher fees. But in some other countries, including Canada, the number of foreign students has increased despite the imposition of differential fees. This has caused some observers to suggest that "such fees have so far not proven greatly deterrent"[40] and that little has changed as the result of their imposition.

It may be true that, in Canada, the imposition of differential, higher fees on foreign students has not yet proven a great deterrent with respect to the total number of foreign students coming here to study. But we do not know what the imposition of these higher fees has done to the socio-economic mix, to the social and economic backgrounds from which this country is drawing foreign students. As the Commission on Foreign Student Policy has noted, the differential fee "penalizes equally the brilliant poor student from a very poor country in Africa and the wealthy student from a country that makes a policy of exporting students for higher education."[41] Or, to paraphrase Anatole France, the law in its majestic equality does not distinguish between rich and poor foreign students, both are charged very high fees.[42]

Differential fees do discriminate in favour of foreign students from wealthier backgrounds. They do discriminate against those in greatest financial need. And they do so without any regard for academic merit. In terms of our educational system's international component, the imposition of differential higher fees on foreign students makes a mockery of this country's claim to be committed to equality of opportunity in education. It is no wonder that there is widespread and growing concern, both in Canada and in many other countries, about the consequences of the imposition, in an undiscriminating manner, of such differential fees. There ought to be. It is doubtful that the imposition of across-the-board higher fees for foreign students serves Canadian self-interest. It certainly does not serve the dimension of our foreign student policy which is concerned with discharging our moral obligation to assist with the educational needs of less developed countries.

This would not, however, be the case if the imposition of differential, higher fees on foreign students were offset by an adequate national programme to assist deserving foreign students. Such a programme should be flexible enough to distinguish between the needs of the different countries from which such students might come and also to distinguish between the needs and merits of individual students making application to come. The case for such selectivity in the application of differential fees, and in the selection and treatment of foreign students, is a strong one, and it is one to which the Commission on Canadian

Studies subscribes. The merits of this approach have not been realized by government in Canada, and the academic community has done little to draw it to their attention, so little, in fact, that the Commission on Foreign Student Policy could observe in 1981 that, "this Commission is not aware of any serious efforts by institutions to convince governments of the need for selectivity in their differentials."[43]

This situation points again, as do so many other matters relating to foreign students in Canada, to the need for a foreign student policy — a policy that can be truly national in the sense that it is shaped and supported by the federal and provincial governments working together, with the assistance and active participation of representatives of the educational community. A reasonably uniform national approach to the selection and funding of foreign students is required to replace the increasingly complex, confusing, and inequitable way in which foreign students are admitted to Canada and treated while they are here. In broad terms, this Commission would propose a two point approach to the funding questions involving foreign students: first, that there be established a substantial national programme of selective support for foreign students; second, that all other foreign students be treated on an equal footing and charged fees at a "no-subsidy" level which would cover the full marginal costs of their education in Canada. Existing scholarship and assistance programmes for foreign students could be integrated with the new national programme of support for foreign students or could be operated in co-operation with it. The no-subsidy, full marginal costs fee level should be applied to foreign students enrolling in future years, not to those who are at present enrolled at a Canadian institution.

The costs of a substantial national programme of selective support for foreign students will be large. But so will be the savings effected in public expenditures by the reduction in the current expenditures on foreign students who are benefitting, regardless of need or merit, from subsidized education in Canada to the amount of several hundreds of millions of dollars, despite the differential higher fees that have been imposed. It should be possible, for example, to establish a major national programme of support for 10,000 selected foreign students, chosen on the basis of merit, need, and international balance, and yet at the same time to save the public purse a sum in the order of $200,000,000 a year by ceasing to subsidize other foreign students and raising the level of their fees to cover the full marginal costs of their education.

This proposed new approach to the funding of foreign students combines equity with economy, and yet would make provision for the selection and funding of a very substantial number of foreign students on the basis of merit and need. It would also provide the means, through selectivity, to achieve a better balance in the countries of origin and in the distribution and fields of study of foreign students in Canada.

The foreign student question, with all its complex ramifications, is now a big question for Canada. It has important implications for our international

relations, for the nature and balance of our educational institutions, and for the public purse. The numbers of people and amounts of money involved are substantial, indeed. Consequently, it has become a major question in terms both of educational policy and, more broadly, of public policy. It can no longer be left unresolved in a policy vacuum.

Because of the absence of a foreign student policy, the admission and treatment of foreign students in Canada is a haphazard, disjointed operation, marked by frequent imbalances and irrationality, which does not serve the best interests either of foreign students or of Canadians. Yet immense advantages accrue, or could accrue, to Canada from the presence of foreign students, provided appropriate thought and care are devoted to their selection and distribution and to their treatment while they are here. To this end, appropriate policies and arrangements on a national scale are required.

The Commission recommends:

1. the adoption of a positive and welcoming posture towards foreign students by government and educational institutions in Canada;
2. the development of a national foreign student policy — a policy that can be truly "national" in the sense that it is shaped and supported by the federal and provincial governments working together, with the assistance and active participation of representatives of the educational community;
3. the establishment of a national agency, a Council on Foreign Student Policy and Programmes, charged with the responsibility for developing and administering foreign student policy and foreign student programmes;
4. that the Council on Foreign Student Policy and Programmes be comprised of members nominated by the federal government, by the provincial governments through the Council of Ministers of Education Canada and by appropriate national educational organizations;
5. that the Council be funded primarily by the federal government, with support from the provinces through the Council of Ministers of Education;
6. that the Council be empowered to receive and administer grants and gifts from the private sector as well as the public sector;
7. that the advice and assistance of the Canadian Bureau for International Education and other appropriate educational organizations be sought in the establishment of the Council;
8. that a substantial national programme of selective support for foreign students be established, to be funded through the Council on Foreign Student Policy and Programmes and administered by the Council;
9. that existing scholarship and assistance programmes for foreign students in Canada be integrated with the new national programme of selective

support for foreign students, or operated in co-operation and consultation with it;

10. that all foreign students not in Canada under the auspices of the national programme of selective support for foreign students, or of a programme operated in association with it, be treated on the same footing and charged fees at a no-subsidy level which would cover the full marginal costs of their education in Canada; the no-subsidy, full marginal costs fee level should apply to students enrolling in the future, not to those currently enrolled at a Canadian college or university;
11. that the chief criteria for the national programme of selective support for foreign students be academic merit and academic promise, but that in planning and operating the programme the Council have in mind the desirability of a foreign student presence in Canada that is reasonably representative of the breadth of the international community;
12. that all aspects of the foreign student policy, including the operation of the national programme of selective support for foreign students by the Council, have the flexibility to take into account the different needs and circumstances of the countries from which students may seek to come to study in Canada, as well as the individual needs and circumstances of each student;
13. that, in pursuit of the goals of ensuring a more fully international foreign student body and of having the flexibility to give help where it is most needed, the Council direct a proportion of the national programme of selective support for foreign students to students from the less developed countries; the Council should, for example, set as a target an increase in the percentage of foreign students from the 40 least developed from its present level of less than 10 per cent of the foreign students in Canada to a level of 25 per cent by no later than the end of this decade;
14. that a national network of foreign student advisers be established by the Council, and funded by the Council, to counsel and assist foreign students and also to advise and assist the educational institutions where foreign students are enrolled in regard to foreign student questions;
15. that the other responsibilities of the Council for Foreign Student Policy and Programmes include research, monitoring, assessment and action, as appropriate, concerning:
    a. establishing a fair and sensible balance in the number of foreign students as a proportion of the total Canadian enrolment;
    b. finding the correct balance between bringing foreign students to Canada and using the resources this entails to assist with the development of educational institutions in other countries;
    c. serving as a referral centre and clearing house for inquiries from foreign students about study in Canada, for the distribution in other countries of relevant information about study in Canada, and for the circulation of relevant information about foreign student policy and

foreign student programmes to educational institutions and to government offices in Canada;

d. ensuring that the distribution of foreign students within Canada is reasonably balanced among the regions and provinces, among the educational institutions, and with respect to the two official languages;

e. ensuring a reasonable distribution of foreign students as to academic level of study and as to academic field of study;

f. conducting an accurate and sophisticated public education programme about the role of foreign student policy and the contribution made by foreign students to Canada;

g. publishing an annual report to the federal government and Council of Ministers of Education in the form of a widely circulated public document which would enable educational institutions, interested members of the public, and foreign students themselves, as well as the governments, to know the current facts and issues.

16. that the Council take steps to gather and to disseminate data concerning foreign students and foreign student questions which are required as a basis for the formulation of foreign student policy and for the planning and operation of foreign student programmes;

17. that the Council assist educational institutions to develop both academic programmes and extra-curricular activities which will encourage and assist Canadian students and foreign students to gain from each other's presence;

18. that each university establish a working group to examine and make recommendations upon policies, programmes, and arrangements for foreign students at their respective institutions;

19. that the potential value of foreign students as an educational resource, because of the knowledge which they bring with them of other countries, other cultures, and other ways of seeing and doing things, be better recognized by the Canadian educational institutions at which they are enrolled; that these institutions seek to draw upon the knowledge and experience of foreign students in a more planned and considered way; that foreign students, to the extent that they wish to participate in such activities, be properly remunerated for their services in this capacity; and that the Council assist the educational institutions in making and in funding such arrangements;

20. that universities and colleges be prepared to make reasonable adjustments in the curriculum, in post-graduate regulations, and in research activities, to ensure that their programmes help to meet the special needs of foreign students and that they do not place unnecessary burdens upon them; that the Council assist the educational institutions with the marginal extra costs that such adjustments may sometimes entail, as is now being done on a pilot project basis for foreign graduate students in Australia;

21. that the opportunity of second language training in either of Canada's official languages be made available to foreign students at, or with the help of, the educational institution which has admitted them; that the costs of such language instruction be met, through the Council, from the budget of the federal government for education in the official languages;
22. that educational institutions admitting foreign students make provision for these students to have the opportunity to take some courses about the society, history, culture, and physical circumstances of Canada; and that the costs involved in providing such opportunities for foreign students to learn about Canada while they are here be met by grants for this purpose from the Council to the institutions concerned;
23. that a special programme of awards be established for foreign students interested in pursuing studies about Canada in Canada on a full-time basis; that this programme consist of fellowships to be awarded to students wishing to pursue full-time graduate work or post-doctoral work in studies about Canada, and scholarships to be awarded to senior undergraduate students wishing to spend a year majoring in Canadian studies; that these fellowships and scholarships be awarded on the basis of academic merit to students who have demonstrated a prior interest in Canada through work at their home institutions; that, initially, 200 fellowships be established at the graduate and post-doctoral level and 100 scholarships at the senior undergraduate level, to be funded through and administered by the Council on Foreign Student Policy and Programmes in consultation with the academic relations division of the Department of External Affairs;
24. that foreign students, once admitted to Canada, be allowed while they are here to seek the same kind of part-time and summer employment as their Canadian classmates.

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APPENDIX I.

CANADIAN ASSOCIATION OF UNIVERSITY TEACHERS GUIDELINES ON CANADIANIZATION AND THE UNIVERSITY

Preamble

One function among the many legitimately assigned to a university is to develop an awareness and understanding of the society in which we live. This society, of course, has local and national as well as international aspects, all of which require attention. The university thus has an important role to play in the development of community and national identities. If we assume that university faculty play an important or even dominant role in the learning process, then we can properly expect that faculty members at Canadian universities be familiar with the Canadian situation and, further, be committed to the development and enrichment of the Canadian community, or engage themselves to acquire this familiarity and commitment.

The Canadian university community must also be concerned that qualified Canadians be given opportunities for employment at Canadian universities.

The C.A.U.T. is opposed to the use of the authority of governments and legislatures to enforce or encourage rules concerning methods of appointments within universities. If this position is to be maintained, the following conditions are necessary:

1. openings available at Canadian universities should be made known to Canadians by means of advertisements in the *C.A.U.T. Bulletin* and *University Affairs* and by formal and informal employment services, including departments of manpower or labour. Such searches must not be avoided or their purpose defeated by appointments made on the basis of personal contacts only;
2. the appointment of a person who is not a Canadian or legally a resident of Canada should be justified to the satisfaction of a university or faculty committee.

The C.A.U.T. further urges that academic, professional, and government agencies co-operate in the preparation, publication, and annual revision of five- to ten-year projections of positions available and of graduate degrees granted in each academic discipline at Canadian universities. These projections would allow individual students a better opportunity to plan future careers, and universities a better opportunity to encourage Canadian talents in areas of projected needs through the development of adequate graduate programmes in those areas.

The C.A.U.T. is always prepared to investigate any allegations of anti-Canadian discrimination in appointments, and to endeavour to correct improper or unsatisfactory practices.

Guidelines

1. For the purpose of these guidelines, a person who, on the date of application for a university post, is a landed immigrant or holds a ministerial permit as a consequence of being a refugee or of being prohibited from applying for landed immigrant status should not be distinguished from Canadian applicants.

2. For each position a set of qualifications relevant to that opening and the relative importance of each should be clearly stated. These qualifications should not place graduates of Canadian programmes or Canadian graduates of programmes at home or abroad at an unfair disadvantage.

3. The opening and the required qualifications should be called to the attention of Canadian applicants by appropriate procedures such as wide advertisement letters to Canadian universities, etc. That is, there should be active search for qualified Canadian candidates.

4. Each university with a bi-cameral system of government should establish a university-wide appointments review committee where one does not already exist. In any case, the following would be desirable arrangements for such a committee.

   i. The committee should be elected by the senior academic body or other appropriate body and should have a clear majority of full-time faculty members on it;
   ii. The committee should, in the first instance, advise the president on all appointments;
   iii. The committee should also supply the senior academic body annually with a list of appointments made as well as its decisions as to whether each was adequately advertised in Canada;
   iv. A representative of the faculty association should sit on the committee as a non-voting participant;
   v. Before recommending any new appointments, this body should, *inter alia,* ensure that these guidelines are adhered to. In particular it should assure itself that
      a) The qualifications listed were reasonable and the selection procedures fair;
      b) An active effort was made to recruit Canadians.

   The department seeking to make an appointment of a non-Canadian should be charged with making the case for the appointment to the satisfaction of this body.

5. Each university with a unicameral system of government should strike an appointments committee at the faculty rather than the university level. In other respects, the recommendations of item 4, above, should be followed, *mutatis mutandis*.

6. The appointment should be offered to the best-qualified Canadian who meets the stated requirements, unless the university-wide review committee, or if it does not exist, the senior academic body, is persuaded that the appointment in the case of a non-Canadian is justified.
7. Once appointed, the nationality of the faculty member should not affect the terms and conditions of that employment. These include, for example, academic freedom, salary, promotion, and tenure.

BIOGRAPHICAL NOTES

Thomas H.B. Symons

Thomas H.B. Symons, the Chairman of the Commission on Canadian Studies, is the Vanier Professor at Trent University. He is the author of numerous studies and articles dealing with education, public affairs, culture, human rights, and international relations.

Educated at the University of Toronto and at Oxford and Harvard Universities, Professor Symons was the Founding President of Trent University and served as its president and vice-chancellor from 1961 to 1972. He has served subsequently as Chairman of the Commission on Canadian Studies, Chairman of the Commission on French Language Education in Ontario, and Chairman of the Ontario Human Rights Commission. He mediated the disputes concerning French language school arrangements in Sturgeon Falls, 1971, and in Cornwall, 1973, and was chairman of the Federal-Provincial Task Force on Canadian Ratification of the United Nations Covenants on Human Rights in 1975.

Professor Symons is at present Vice-President of the Social Sciences and Humanities Research Council of Canada and special adviser to the Secretary of State on postsecondary education. A member of the Applebaum-Hébert Committee to review federal cultural policy, he has been actively involved with the arts, helping with the work of a wide range of voluntary community and national cultural organizations and serving as a member of both the Canada Council (1976-1979) and the Ontario Arts Council (1974-1976).

Professor Symons has also taken an active part in international cultural and academic relations. He is a past chairman of the Association of Commonwealth Universities and currently serves as chairman of the International Board of United World Colleges.

Recognition of Professor Symons' work in the fields of education, culture, human rights, and international relations has come from a number of universities and colleges in Canada and other countries. A Fellow of the Royal Society of Canada, he was named an Officer of the Order of Canada in 1976.

In 1982, Professor Symons became the first Canadian to receive the Distinguished Service to Education Award of the Council for the Advancement and Support of Education. The Council represents 2,300 universities and colleges in the United States, Canada, Europe, and South America. Given annually since 1941, the award is intended to recognize significant national and international service to education.

James E. Page

James E. Page, Director of the Canadian Studies Programme for the Department of the Secretary of State, has been a teacher, consultant, researcher and writer in the field of Canadian studies for fifteen years. He is author of *Reflections on the Symons Report, Seeing Ourselves* and *A Canadian Context*

for Science Education, as well as various articles and reviews dealing with Canadian education, Canadian studies and international education.

Educated at Queen's University and at the University of Toronto, Mr. Page was the Founding President of the International Council for Canadian Studies; a member of the founding executive of the Association for Canadian Studies and President of that organization for four years; the Founding Director of both the Canadian Studies Bureau and the International Office of the Association of Canadian Community Colleges; and the founder of a bibliographic publication entitled *Communique: Canadian Studies*. He is a member of a number of professional organizations and serves on a number of boards of voluntary organizations including the International Council for Adult Education and the editorial board of the *Journal of Canadian Studies*.

Mr. Page has presented special lectures and seminars on Canadian studies and on higher education from coast-to-coast in Canada and in Europe, Africa, India, Japan, the Middle East and Australia. Over the years he has served as a consultant to the National Film Board of Canada, the Science Council of Canada, the Department of the Secretary of State, the Ontario Institute for Studies in Education, and other national bodies.

In June of 1983 Mr. Page received the "Award of Merit" of the Association for Canadian Studies, the first presentation of the Award made by the A.C.S.

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