I HAVE CHosen AS THE TITLE of my address* "Universities, Colleges, and Federal Grants". I do not imagine that what I have to say will have much effect upon trends in higher education or upon the policies of the various institutions engaged in work in that important field. But it is a useful exercise to set down one's thoughts and ideas about such matters, and it may provide some "markers" or "sign posts" for those who wander along the route.

The first part of this exercise is, in a sense, in the field of "semantics"—that is, the meaning of words and the accurate use and definition of the words that we use. I wish it were possible to reserve the term "universities" for those large and complex institutions made up of a variety of faculties and including all or most of the professional schools and carrying on research and graduate work at the higher levels. If this were done, we would find that there are in Canada a limited number of institutions that we would describe as "universities": one in British Columbia, one in Alberta, one in Saskatchewan, one in Manitoba, three to five in Ontario, three in Quebec, and two in the Atlantic Provinces. This definition and this limitation would not in any way reflect upon the importance, the status, or the value of the work done by other institutions which should, in my opinion, be described as "colleges". There is, for instance, in Williamsburg, Virginia, and institution known as the "College of William and Mary" whose origins go back to the early colonial period. It is a large institution with a long and honourable record and reputation but it, like many other institutions in the United States (among them Dartmouth, Amherst, Bowdoin, Reed, and Carleton) are proud of their titles "Colleges", and are glad, too, to limit the scope of their work mainly to the fields.

*This paper was read as the Robertson Memorial Lecture for 1961-62 at Prince of Wales College. President MacKenzie began by expressing his pleasure in returning to a province and a college that had made so distinguished a contribution to Canadian education.
of the liberal arts and basic sciences and to leave the more expensive, complicated, and advanced operations to other larger and more ambitious institutions. Even in Harvard, which has grown into a great University, we find that "Harvard College", the liberal arts part of that institution, continues to be thought of as the real heart and core of the University and the one to which much loyalty and a great deal of attention are given.

Here in Canada, however, we seem to have come to the conclusion that everything and everybody giving anything beyond Grade X or Grade XI high-school work should be known as a "university", and all our institutions rush off to their legislatures and get acts or charters describing themselves as "universities" despite the fact that their work may be of the most limited kind. The reason for this, I believe, is the desire to acquire prestige and status and to enable these institutions to qualify for benefits under legislation intended to apply to universities or to university graduates. The politicians, sometimes without too much personal knowledge of higher education but always with an eye to the political effects of their actions and decisions, almost inevitably grant whatever is asked for in this respect.

In saying this, I do not mean to reflect upon the excellent work done in many—and probably in most—of these colleges. I do mean to point out, however, and do so emphatically, that these institutions are not "universities" in the larger sense of that word; that they do not and are not competent to operate the difficult and expensive professional schools, such as those of medicine and dentistry; and that they cannot possibly provide facilities for advanced graduate work and research.

As if this situation were not confusing enough, we have added to it by creating or permitting real differences between the colleges themselves. Some of these colleges are relatively senior institutions, giving four years of excellent work in the liberal arts and sciences and, in some cases, providing special preparatory training for the professional schools, or special facilities and training in diploma courses or in the wider areas of adult education. Others are "junior colleges" in the sense that they give only one, two, or three years of the work usually expected of students proposing to take degrees. The students taking these courses in these institutions then go on to other colleges or universities to complete their higher education. Some educators, however, consider courses offered in certain junior colleges as "terminal courses" which enable students to continue their work and education beyond the level of the high school but without the necessity of proceeding to degrees.

Prince of Wales has been an "academic junior college"; it has had a long and distinguished record and reputation; and most of its graduates who have gone on, mainly to complex universities, for advanced professional work and degrees, have al-
most always been outstandingly successful in these institutions. Unfortunately for Prince Edward Island, the majority of these graduates do not return to this "little Province" and, while this may be understandable in terms of the ambitions and careers of the students, it is a drain upon the best brains and creative energies of the province. It is partly because of this, I suspect, that some individuals in this province are seriously considering expanding the facilities and offerings of Prince of Wales College and asking the Legislature to give it a charter to confer degrees—this in the hope that more of its young people will remain to take these degrees, and, more important, having taken them, will be available for posts in schools, in government service, in business, and in other walks of life in the province, in which degrees are necessary or desirable. This, I feel, is a reasonable and laudable ambition and plan, provided—and this I stress—that you do not become too ambitious and do not try to do things beyond your powers or to offer courses for which you are not and cannot be adequately equipped. In other words, if you do decide to change and expand, I hope that you will be content with the status of a fully developed college of the liberal arts and sciences and that you will strive to achieve in that still limited area the kind of excellent reputation that you have always enjoyed in your present field of operations.

"Universities", "colleges", and "junior colleges" are not, however, the full and complete story and picture of post-high-school education in Canada, for there are other institutions which differ in one respect or another from any of these. There are, for instance, within our complex universities, "affiliated" or "federated" institutions of various kinds. In British Columbia, for example, we have five affiliated theological colleges on our own campus. Only two of them, those of the United and the Anglican Churches, are at present giving work leading to degrees in Theology; the others, the Roman Catholic, the Presbyterian, and the Baptist, now provide most valuable residence accommodation and student supervision, but will in time, I am sure, take on other duties of an academic kind and may themselves confer theological degrees.

We have also in the city of Victoria an institution, Victoria College, not unlike Prince of Wales, which has been affiliated with the University of British Columbia from the beginning of both our operations. This past year, Victoria College has advanced to a four-year status, and last May held its own "Congregation"—at which our degrees, that is, degrees of the University of British Columbia, were conferred upon its first graduates. This year, with some 1,700 students enrolled in the two faculties of Arts and Science and Education, the people of Victoria are very vigorously debating the question of whether they should have a completely sep-
arate "university". Those who propose this are hoping to acquire from this change in title and relationship certain prestige and advantages which they feel they cannot possess while affiliated with the University of British Columbia.

Further, in one of our smaller centres in the interior, Nelson, which has a population of just over 7,000, our Roman Catholic friends have established Notre Dame College, and for the past few years have been giving two years of work leading toward degrees. For some time they were affiliated with Gonzago University, a Catholic institution in Spokane in the State of Washington. This year they have—wisely, I believe, because Notre Dame is a Canadian institution operating in Canada—sought and have been given affiliation with St. Francis Xavier at Antigonish, and under the tutelage and supervision of that institution are proposing to expand their offerings and their facilities so that by 1966 or 1967 they, too, will be conferring degrees that will carry, I expect, the "imprimatur" of St. Francis Xavier.

In the Province of Quebec there is a substantial number of "classical colleges", nearly all affiliated with Laval, the University of Montreal, or the new University of Sherbrooke. Some institutions in the Maritime Provinces, and some in other Provinces of Canada, are much closer to the pattern of the classical colleges in Quebec than to complex universities, though, for the reasons I have suggested above, they like to and do describe themselves as "universities".

And then there are the technical institutes, such as Ryerson in Ontario, which give advanced and high quality work of a specialized kind, but do not confer degrees. However, if the pattern of human behaviour in other parts of the country and continent persists, it is almost certain that these, too, will in due course not only claim the right to confer degrees, but will expand into the fields of the liberal arts and will describe themselves as "universities".

This multiplication and variety of institutions operating in the area of higher education has raised questions whether this is good and whether the services they render to their own communities and our Canadian society are valuable and worthwhile, or whether these institutions may create problems and situations which will be unfortunate and possibly detrimental. There are many arguments pro and con.

There are, I believe, some sixteen degree-granting institutions and colleges in the three Maritime Provinces, serving a combined population of about 1,500,000 people. I have no doubt whatever that they make valuable and important contributions to the communities in which they are physically located, and I am sure they make it possible for a larger number of attractive and intelligent young men and women to get more education, that is, beyond the high school, than would otherwise be possible. If these three Maritime Provinces can afford to support financially all of
these institutions and if—and this is more difficult and more important—they can find enough able, trained, and experienced men and women to staff them, then they are obviously assets, provided always that these institutions limit their ambitions and their offerings to what in the circumstances they can do effectively.

But my own long experience in higher education has convinced me of two things. The first is that the total resources that are available in any province and in Canada as a whole for higher education are very definitely limited. This is true of both finances and staff. Unwise dispersion and dissipation of these limited resources must result in inadequate resources for some, if not all, of our institutions.

The second disadvantage or disability grows out of the possibility that we may be holding out to our young men and women the idea that they are getting in these institutions the same kind of intellectual and professional opportunities, training and education, which in fact can be found only in the more adequately financed and staffed places or in the large, relatively wealthy, complex universities. If this be true, it does less than justice to good and deserving young people and, in my opinion, should not be encouraged. At the very least, definite limitations should be placed upon the further multiplication of these institutions and upon the extent of the work which they may propose to do.

This brings me to the third part of my subject: federal aid to higher education. Here I would like to set out, at some length, my general views about this whole controversial question.

It is frequently claimed that “education” is a “provincial matter”. In our constitution, the B.N.A. Act, it is provided that education is within the jurisdiction of the provinces. At the recent meeting of attorney generals of the provinces to consider ways and means of amending our constitution, the only positive statement issued seems to have been that the section in the B.N.A. Act dealing with education could not be amended without the consent of all the provinces.

I understand the reasons for this, and I sympathize with these reasons and motives. In so far as it has reference to schools and to education at the school level, it is probably a sound arrangement and I am prepared to approve it. But education in its broad and inclusive sense is concerned with ideas and concepts and “things of the mind”. It is also part of the training and the disciplining of the emotions. It is based on knowledge and understanding and information. It conditions and shapes individuals, groups, nations, and the whole world of men and women of which we in Canada form a part. There was, no doubt, a time in history when communication was, to all intents and purposes, non-existent, in which it was possible to confine education and its effects to a limited geographical area. It is still possible, through
the agencies of language, culture, or an ideology, to restrict the influence of education and to channel it in a given and desired direction. For example, I suspect that the masses of the Chinese and Russian people do not know much about Canada and Canadians or about the other countries and peoples of the West. I am sure that many of the inhabitants of the Congo are ignorant of everything beyond their tribal borders. I suspect that many dedicated communists have closed their hearts and minds to our virtues and their own defects—and both do exist—and I am certain that in our democracies, Canada, the United States, Britain, and France, there are many ignorant and emotionally undisciplined people.

Two or three centuries ago, or even as late as 1900, this restricting and confining of knowledge may have been inescapable or even acceptable. But today, in the kind of world we live in, it is just not good enough, nor can it be allowed to continue if we are to survive on this earth. Regardless of what the lawyers may draft and decide (and I am one of them), humanity is on the march, and education in the broad aspects in which I am using the term is spilling over boundaries and frontiers everywhere.

The radio, and particularly television, films, advertising, newspapers and picture magazines, and the ideas and information they convey, are no respecters of persons, of frontiers, or even of languages. Again, as evidence, I give you the U.S. S.R., Asia, and Africa, all in revolutionary turmoil almost certainly because of the ideas and information that have poured over their borders. Science in particular uses a common language, and ideas run like wildfires across the world, regardless of all of the walls and frontiers that men create. In the positive and creative areas, this is good, for if we exchange and pool our knowledge about space, about medicine, about physics and chemistry, and about human nature and human society, there seem no limits to the future that lies ahead. But if we refuse to do this, if we try to retain the old dividing walls or to build new ones, then we are certainly in for a difficult, dangerous, and unhappy future.

None of this implies or suggests that I like conformity and uniformity, or believe they are inevitable or necessary. On the contrary, I believe most strongly in differences within a nation and between and among individuals, provided that they are based upon the freedom of the individual and upon his access to all the knowledge and information and wisdom available anywhere and everywhere. This then is the international or world setting.

For the rest, I would like to put Canada and Canadian education into this world picture. Obviously, we must, within the limits of the physically and financially possible, give all of our citizens the best and the most education they can benefit
If we do not do this, there will be no place for us in this rapidly changing world. But to do it will require good schools, good teachers, good newspapers and magazines, good movies, good radio and television and a good system or systems of adult education.

Of special concern to those interested in university or higher education are expanding enrolments, more buildings and equipment, more teachers and directors of research, and a great deal more money. Here are some relevant statistics. First, according to Dr. Somers, President of St. Francis Xavier, between 1940 and 1950 the college-age group in Canada increased by about 25,000. In the decade between 1960 and 1970—our present decade—it will increase by 500,000. This is the measure of the numerical difference in our problem. One other fact: in the period 1940-1950, about 8% of the college-age group were in colleges and universities. It is estimated that some 33% of this age group have the ability to benefit from higher education. It is also stated that in the U.S.S.R., about 19% are given higher education, in the United States over 20%. In the latter country, the percentage is rising and, because of social pressures, may well go above 40%. Our present (1960-61) percentage in Canada is 11%.

The question that I, as a university president, ask is this: what do the people and governments of Canada want the universities to do? We can, in fact must, if monies are not forthcoming, deny higher education to many of our sons and daughters, and limit our enrolment rigorously to the “brains”, the “geniuses”, and the very high I.Q.’s. The ordinary folk in that case will not get in. Or we can spend more money on higher education. As I have stated above, education is a provincial matter, and the governments and legislatures of the provinces must accept the basic responsibility for it. This means, among other things, that the governments and legislatures must find much of the money required to support all education, including our universities.

But, in addition, I suggest that, because of the nature of higher education and of society and the world we live in, much of the money for our universities should and must come from the government and parliament of Canada. In my introductory remarks I made mention of the international character of education. If that be true, and I claim that it is, then only our national authorities can cope with it, or have the obligation to do so.

Higher education in most of its aspects has always been and is national and international in character and content. Students and teachers have traditionally wandered about the world they know to search for knowledge, experience, and information, or to sit at the feet of great teachers. This is true of Canada.
We at U.B.C. have students from every province and most of the countries of the world. Our graduates go off to all parts of Canada and to all parts of the world; and what is true of U.B.C. is true of practically all Canadian universities. This kind of thing is not the main or normal responsibility of a provincial or municipal government.

The future of our country, Canada, as I have said (as well as of our provinces) depends upon research in science, in agriculture, forestry, fisheries, in medicine, and I would hope in the area of human relations. In all of these fields, as well as in defence, our federal government is presently participating, through the National Research Council, the Defence Research Board, various departments of government, and the Canada Council.

Following the end of World War II, the government of Canada contributed over $200 millions to assist in the education of the veterans. Since 1951 it has each year contributed millions directly to the universities and colleges on a per capita, per student basis. This year this will amount to about $26,000,000 or more (if Quebec is included). In addition, the government of Canada operates the three defence colleges, is increasing its aid to vocational training, and is administering and paying for its share of Colombo and Commonwealth scholarships plans.

I have cited these activities to support my thesis that the federal government over many years has been, is, and must continue to be in the business of higher education in its broad and varied and appropriate aspects, in an important way. There is nothing wrong or illegal about this. In fact, it is good and desirable, provided always that the federal government and parliament, or any other government, does not attempt to control the universities and higher education. Some measure of influence is, of course, inevitable if money is made available for specific purposes or even for general fields such as "science", but that is true of any money given by private citizens, corporations, foundations, or religious denominations.

The direct per capita grants given by the government of Canada to the universities have been free and without "strings". The only influence it has had has been to improve the quality of the work done, to change the emphasis as between science and the humanities, and probably to encourage the creation of new institutions.

It is argued, I know, that through a redistribution of the taxing powers the provinces could look after all the needs of education, including higher education, within the respective provinces. In theory this is so. In practice, because much of the work done by universities is not of immediate and obvious concern to the provinces, I do not believe the provinces would give their universities enough or un-
controlled support. Highways, rather than Colombo plans, are the proper and understandable interest and concern of the provinces.

It is for reasons such as these that I assert and continue to assert that, if Canada is to provide for the educational needs of its people and to maintain its place in a changing world, the Government of Canada and the Governments of the provinces will have to give more money to the universities.

At the present time, apart from the very extensive aid given by the Federal authorities to research and to other special areas (e.g. agriculture, forestry, fisheries, military colleges), the principal sources of this aid to the universities and colleges are the federal grants and the capital endowment funds of the Canada Council. I had some part in the proposals made to the federal government about this federal aid. In the early years of World War II, I was the Chairman of the Committee of the National Conference of Canadian Universities which considered and reported upon the expected post-war problems of our universities and of the veteran students who we knew would be coming back to us. Again, in the years 1948, 1949, and 1950, I was a member of the Royal Commission on the National Development of the Arts, Letters and Sciences—the “Massey Commission”—which recommended both the establishment of the Canada Council and direct grants of federal monies to the universities. Since the establishment of the Canada Council I have been a member of that Council, with some responsibility for the uses made of the capital grants and the revenues from the endowment fund. My basic attitude has always been that the people, and more particularly, the young people in each Province were equally entitled to the same amount of federal aid for higher education as the people of every other Province. Because I do believe in diversity and in a division of authority and responsibility between and among the provinces, I have also insisted that the provinces themselves should have the basic decision as to how these federal monies should be distributed within the provinces. By this I mean that if a province, for example, Manitoba, Saskatchewan, Alberta, or British Columbia, decides that there shall be only one university with affiliated institutions within the province (as these provinces have done), then the federal monies made available should go to these institutions for the benefit of the young people who attend them. If, on the other hand, those of you in the Maritimes prefer to have some sixteen degree-granting institutions and colleges, I see no reason why the funds assigned for each of your provinces should not be distributed among your institutions in any way that you care to devise and recommend. This view and this policy have in effect been pretty well accepted and implemented by the federal authorities, and the present formula states that the amount assigned to each province will be based on the total population of
that province. As a result, there has been complete equality between the provinces. Within each province these monies have been and are distributed on the basis of the certified number of full-time students proceeding to degrees enrolled in the institutions within the province.

The university capital grants of the Canada Council have also been distributed in accordance with this same formula. This policy and this formula, I know, have been matters of continuing debate and substantial criticism in these Maritime Provinces, and particularly in Nova Scotia. Now, as one who was born and who lived as a boy in Nova Scotia, who served for a period as the President of the University of New Brunswick and who has maintained very close ties and connections with the Maritimes, I am aware of the special problems of these provinces, and I have the greatest sympathy with them. By “problems”, I mean that their economic resources and development are not as great as those of some of the other provinces, and because of this, their revenues and their wealth are limited accordingly. For these reasons, I not only have no objections to their receiving special consideration and special support from Ottawa, but have contended that this should be done. But I do believe that this support should be general support of the general revenues of the Maritime Provinces and should not be achieved by changes in the formula of federal grants to universities. If this were done, that is, the payment of general grants, as it has in effect been done in recent years, it would leave the distribution of this special aid a responsibility of their provincial governments and would, if they believe in the importance of higher education, carry with it the duty on the part of their provincial governments of ensuring that more of their provincial revenues are expended upon their colleges and universities.

I know that an alternative to the scheme at present operating has been urged by some people in the Maritimes, and this is that Federal grants to universities should be pooled and distributed not on a basis of equality between the Provinces but on the basis of the numbers of students enrolled in the various colleges and other eligible institutions. This would be more advantageous to my own university and province than to any others in Canada, but in the present state of Canadian education, I do not believe that it would be fair or equitable: this because of the very real differences in the organization of higher education in our provinces; of the real and important differences in respect of the levels and ages at which young people may attend universities and colleges in the various provinces; and of the differences in respect of admission standards as between institutions. As illustrations of this, I believe it is still possible to enter universities in the Maritime Provinces from Grade XI. In Ontario one must have passed the Grade XIII examinations for entrance to universities. In
Saskatchewan and Alberta Grade XII is considered senior matriculation and gives university entrance to a three-year pass course. In British Columbia, we call Grade XII (B.C.) junior matriculation and Grade XIII senior matriculation, and admit accordingly. In Quebec, because of the relationship between the classical colleges and the universities, university entrance at Laval, Montreal, and Sherbrooke is usually after the baccalaureate—or first degree—which differs in many respects from our English-language B.A.

As to the argument that the presence of students from other countries and from other provinces creates additional financial burdens upon universities and colleges, I can only say this: that I believe it of great value to any institution of higher learning to have variety within the student body, for these students with different backgrounds, traditions, and education bring to each of us a broader and a better understanding of human beings and the country and the world we live in; and I believe that any university or college worthy of the name and title should encourage these out-of-province students to come and should be glad to assist them in the ways that we now do. If, however, they do create an impossible financial burden, then there are two ways of dealing with this. The first is to limit or refuse their admission; the second, to do as many of the state institutions in the United States now do, that is, charge special and additional fees to these out-of-province students. Personally, I do not like these practices, for they smack of the parochial and show limited vision and imagination. They also deprive our own young people of the very great benefits of association with these out-of-province students. I am glad that, to the best of my knowledge, none of our Canadian institutions at present gives effect to the practice.

There is, however, one other problem of university finances and federal grants that does interest me very much. This grows out of the fact that the per capita cost of students to an institution and to a province can and does depend upon the institution in question and on the nature of the work that it does. I know as a fact that it costs far less money to provide higher education for students in the liberal arts, in Education, and in certain other fields of study, than it does in Medicine and Dentistry.

The average annual cost to a university for each student in the Faculties of Medicine and Dentistry, for instance, will probably be between $3,000 and $5,000 for the four final years. This cost does not include very substantial amounts spent on research and in other activities connected with these faculties. If these costs are added and distributed on a per-student basis, they will probably add another $3,000 to $5,000 per student.

From this it will be seen that this kind of education is very expensive, and it
explains in part why the number of medical and dental faculties in Canada is limited. These same high costs apply to advanced graduate work and research. For instance, in the field of nuclear physics, apparatus such as cyclotrons, betatrons, Van der Graff machines, and reactors will costs hundreds of thousands of dollars and may even run into millions. It is obvious that the number of these that Canada can afford, or that any one university can pay for, is limited; but if we are to keep up with the rest of the world in this kind of research, and we must, then some of our universities must provide these facilities.

It has been mentioned that properly qualified staff is probably harder to obtain than the money. There is no particular difficulty about finding “bodies” to supervise work in classrooms and in laboratories, but the number of really distinguished scholars and teachers in the world and in Canada is very small, and unless a university or college has some of these it will never achieve excellence and distinction, and its contribution to our society and our nation, as compared with that of Harvard, Yale, Oxford, and Cambridge, will be insignificant.

For such reasons I feel that these special aspects of higher education are matters of proper concern for the federal government and parliament and that these authorities should be willing and eager to contribute generously in meeting part of the expenses of exceptionally high-cost work. This cannot be done on the basis of the present formula and policy, which results in the same support going to the less expensive operations in the lower-level institutions as to the more expensive and the higher-level. My suggestion, therefore, is that in addition to the present per-capita and per-student grants made by the federal government, that government should make substantial additional grants, perhaps on a per-student basis, to those institutions with the expensive professional schools and the advanced research and graduate departments and faculties. It would not be too difficult to sort out the institutions or those sections of them entitled to this discriminating treatment; nor would it be too difficult to decide upon the amount of this expensive and high-level work that each institution is actually doing. This special treatment would not affect the general principle that less expensive education such as that in the humanities, the social sciences, and the teacher-training institutions is important, for it is, and I gladly support the present policy of giving reasonable federal aid to this work in these institutions. But I believe this policy should be supplemented with another and more discriminating one.

These, then, are some of my views on universities, colleges, and federal aid. In brief, I believe that we should attempt to distinguish between universities and colleges. I believe, too, that we should support and develop the maximum variety of
opportunities in post-high-school education that we can pay for and staff and equip. In this striving after variety we should encourage and perhaps insist that institutions limit their activities and that they work out a sensible division of labour among themselves. This might apply right up to the highest levels and include the complex universities, as indeed it does in certain limited respects as, for instance, Faculties of Forestry, Departments of Fisheries and Oceanography, and Schools of Veterinary Science. I also believe very strongly that the federal government and parliament do have a major responsibility in certain areas of higher education. I am convinced that, unless our federal authorities continue to recognize this responsibility and meet it in a generous way, Canadian higher education will never be anything other than second rate.

I have made no mention in this paper of the difficult, serious, and acute problems facing all of us over the years ahead because of the tremendous increase in the numbers of young men and women who are seeking higher education, and who are entitled to get it. As already noted, Monsignor Somers has pointed out that the age group suited to higher education had increased during the decade 1940-1950 by 25,000, and that in the present decade, 1960-1970, this same age group would increase by 500,000. This is not a guess or a speculation; these young people are now living here in Canada, and a little mathematics will show that those of us in higher education now and over the next ten years and beyond will probably—and I hope actually—have to take care of many times the number of students that we were responsible for ten or twelve years ago. It will be noted that I hope “actual” numbers because I believe very strongly that the young people of today have just as much right to higher education as we, their predecessors, had in our day and generation. Moreover, our neighbours and competitors, and particularly the U.S.A. and the U.S.S.R., are providing post-high-school education of a variety of kinds for far larger numbers and percentages of their young people than we are. If we hope or intend to keep pace with them, the most important requirement in achieving this lies in the education of our young men and women.