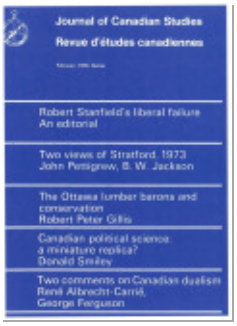
A perspective on graduate studies in Canada

A. E. Safarian



Journal of Canadian Studies/Revue d'études canadiennes, Volume 9, Number 1, February 1974, pp. 42-52 (Article)

Published by University of Toronto Press

42. *op. cit.*
43. For example, the very long bibliography in the recent textbook by Richard J. Van Loon and Michael S. Whittington, *The Canadian Political System,* McGraw-Hill of Canada, 1971 is overwhelmingly given over to reference to writings of the previous decade.
44. *After Strange Gods, op. cit.*
45. See for example the strictures on neoclassical economics by Kari Levitt in *Silent Surrender,* Macmillan of Canada, 1970, Toronto, Chapter 2.
46. University of Toronto Press, 1972, p. 9.
47. University of Toronto Press, 1954.
48. "The Electoral System and the Party System in Canada, 1921-1965," I *Canadian Journal of Political Science,* No. 1 (March, 1968), pp. 55-80.
49. Prentice-Hall of Canada, Scarborough, 1971. See particularly the contributions by Hockin, Schindeler, Doern, Wright, Smith and Wearing.
50. University of Toronto Press, 1972.
51. University of Toronto Press, 1969.
52. University of Toronto Press, 1971.
53. Macmillan of Canada, Toronto, 1973.
54. This is essentially the argument made by Allan Kornberg and Alan Tharp in their essay "The American Impact on Canadian Political Science and Sociology" in *The Influence of the United States on Canadian Development: Eleven Case Studies,* Richard Preston, Editor, Duke University Press, Durham, 1972, pp. 55-98.

A perspective on graduate studies in Canada

A. E. SAFARIAN

Canadian graduate studies have been the subject of harsh criticism in recent years. We are told that the large public subsidy to such education is not matched by adequate returns to society, that there are more pressing social needs, that substantial unemployment exists for highly-skilled students in any case, that graduate studies and/or students represent an elitist approach to education inconsistent with present day tendencies and that the organization of graduate studies is both wasteful and increasingly irrelevant to present needs. The Draft Report of the Commission on Post-Secondary Education in Ontario is one of several recent studies which was particularly critical of graduate (and professional) education in some or all of these terms.

Any general charges of this type are likely to find some bases. I am going to suggest that, however valid in some cases, the overall direction of this criticism is misleading and — if carried through to policy — dangerous to both the universities and to society. Moreover, it has had the effect of concealing and distracting from some of the more pressing real questions which should be getting more attention.

The need for graduate study has been evident since the inception of the University. The forerunner of the University of Toronto, King's College, opened in 1843; when its first degrees were awarded in 1845 there were three recipients of the degree of Master of Arts. The first Ph.D.s at Toronto were awarded in 1900. The scope of human knowledge has expanded so much and in such unimagined ways that its systematic understanding and improvement required some organized approach. A great deal of intellectual development occurs in other institutions or by the individual working alone. The thrust of human understanding has been uniquely aided by the resources which a great institution can concentrate, the systematic education which is offered, and above all the contacts among scholars with similar objectives but different backgrounds and accomplishment.

Let me point out first what a major achievement the decade of the sixties represented in graduate studies, and pay tribute among others to those politicians who urged us to bend every effort to expand and gave us the incentives to do so. For a decade the universities of this country were given substantial public support to develop graduate work beyond the disgracefully small numbers and often low quality of programs which we had ten or fifteen years ago. Now that

we have developed programs of some depth and breadth, at least in a number of important fields, there are disconcerting signs that strenuous efforts are or will be made to substantially reduce these programs, even in areas where the strengths are spotty.

This expansion and enrichment at the graduate (as well as undergraduate) levels is one of the great social accomplishments of our times. Instead of pride in it, however, we find increasing restiveness about it. This is based on several issues — let me deal with them in turn.

The question of numbers of graduate students and their subsequent employment continues to dominate discussions of the value of education. Whether that is the right criterion for evaluating the contribution of education and research is something else again and I will return to it. There is no question that many students from post-secondary institutions, including graduate students, have had difficulty finding satisfying jobs in recent years. What continues to surprise me is that some of our critics take that as proof of "overproduction" in the universities or a bad investment of public funds in education. The fact is, of course, that there is a situation of serious continuing unemployment for the labour force in general, and university graduates like others have been caught up in that. That, I suggest, is an indictment of whatever policies or lack of policies led us to general unemployment, rather than of the universities. In a country where 10% or so of the younger workers are unemployed and 6.5%-7% of all the work force, it is not surprising that persons whose skills and education are above average are also having difficulty finding jobs. I do not wish to underestimate these difficulties, particularly for those who have not yet completed their degrees and are prematurely forced (usually by financial problems) to seek a job, or for the group who will be seeking jobs in the next few years. But the one study we have in Canada of this subject, that of the employment status of those who received Ph.D.'s in a given year, suggests that the situation has been greatly exaggerated in public discussion. A study by the Canadian Association of Graduate Schools shows that in 1970-71 there were 1,314 Ph.D. recipients of whom 72 did not have jobs at the time the degree was completed. In 1971-72, 53 of the 1,446 degree recipients did not have jobs. About 38 per cent of the 1971-72 degree holders had university positions, 4 per cent were in community colleges, 9 per cent in industry, 4 per cent in private research institutes, 8 per cent in government, 7 per cent in a variety of jobs in commerce and finance, self-employed, high school teaching, etc., 4 per cent unemployed, and 27 per cent on research fellowships. (The latter figure in the 1964-69 group of Ph.D.'s in Ontario, incidentally, was 25 per cent.)

I realize that data of this (or any other) kind are subject to interpretation. Many of these persons got their jobs before the degree, for example, and some with a degree are having trouble finding jobs. Yet I believe the available data suggest that employment of highly educated persons is not the general disaster it is so often made out to be.

What about the near future, however? There is clearly going to be some slackness in demand for some types of highly skilled and educated persons for a few years given the large numbers who enrolled some years ago and who will be securing degrees over the next few years, and the fact that the levelling or decline of enrolments in universities across Canada means fewer opportunities for employment in university teaching. But I would warn against planning of graduate studies by such simple and aggregative approaches. First, it is a mistake to talk about graduate studies as if it were a single field with single prospects; there is enormous variety in opportunities across it, with some areas, such as urban and environmental studies, expanding greatly. Second, the University and its students have already adjusted very substantially to many of the excess supply situations. Thus we have had

two years of fairly level enrolment in graduate studies across Canada and, in the present year, a decline in full-time enrolments, compared with rapid increases of 15% or more in previous years. There has also been substantial switching among fields by students in response in part to their perceptions of career opportunities. Third, and highly important, for many kinds of graduates it is very difficult to make a prediction about job opportunities. In many fields of study the student is concerned to understand a particular area of knowledge, rather than about a particular job he will do later. He may go to one of a number of occupations, not often closely related, when he graduates and later. In the past our Ph.D.'s have tended to go mainly into universities. That will continue to be the main objective of students in a number of fields, but some changes are occurring and more may be expected to go to other educational institutions and governments and private businesses. The potential here is evident if one looks at the United States' experience. In the United States in the 1960's about half the Ph.D.'s in the sciences and engineering went into universities, compared with a figure closer to 75% in Canada. In the social sciences and humanities the contrast is also marked. About 85% of our graduate Ph.D.'s went to work in universities in Canada in the sixties, compared with something like 60% in the United States. In the Master's programs even greater shifts may occur, since many such programs now have considerable numbers of part-time students or are largely composed of students whose career objectives do not include the Ph.D. or teaching.

I am concerned that policy on universities and colleges is being made on the basis of still highly experimental technical findings which are subject to considerable misunderstanding. I have already suggested the facts often appear less dramatic than the generous publicity given by the national media to any indication of over-supply, no matter how qualified, in post-secondary education. Any finding which might cast this in doubt receives a decent burial (if any) far down on the inside pages.

Much of the concern here comes of course not from the experience of the last year or two but the considerable increase expected in the next few years in the numbers of persons who will be receiving higher degrees. I must say, however, that this too depends on how you look at these forecasting models and in particular which ones you look at. I have had the opportunity to look at three of these recently for Canada, one of which showed huge surpluses for years ahead, a second an approximate balance of demand and supply in most major areas with surpluses in others, and the third pointed to surplus only in the humanities. All three models in my opinion give insufficient attention to the feed-back of information and the effects it has on enrolment in the educational system. The differences between the models also reflect what are rather small adjustments in the assumptions but resulting large effects on the difference between supply and demand. In particular, the attempt in such forecasts to fit graduate students to specific occupations is one reason why such forecasts so frequently turn out to be seriously in error, and this will be even more the case to the extent that the universities continue to move away from the specialization of the past.

To put this more directly: plans for university and college financing based on the immediate future (or, worse still, the experience of the recent past) are clearly going to be wrong in this case. Those who are now considering graduate work through either the Master's or the doctoral level will not be graduating for two to six years. We seem to be making decisions about graduate studies based on employment prospects in the present year or in the last year or two, when the relevant horizon is several years from now.

We may be making a serious error of public policy across Canada by imposing, through further reductions in financial sup-

port, still greater adjustments on graduate enrolment than are already taking place. The probable effect a few years hence could be substantial shortages in a number of areas of graduate study, which cannot be easily remedied (except by further immigration) given the length of time it takes to complete graduate studies. Just consider the position that a graduate student finds himself in today. He is concerned, of course, by the short-term employment market. If he is continuing in the university and hopes to support himself with summer work, he finds that this is much more difficult to find. His fees are being raised across the country. Student scholarships and bursaries are being cut substantially in most cases. The teaching assistantships which many of them relied on are being reduced or eliminated because of financial stringencies within the universities. If he is fortunate enough to have an income which entitles him to taxation, he finds for the first time that he is to be taxed, that he is eligible for other kinds of payments for health insurance, unemployment insurance, and so on. It is true that he can get a loan-grant form of aid from most provincial governments, but these are geared to undergraduate needs rather than his. He is already in a position, for example, where he may have secured a substantial loan liability as a result of his undergraduate education, and in any case the loan-to-grant proportion has gone up in such schemes. I know there are other reasons which are not financial in nature which are involved in the student drop-out, but I believe these are not nearly as serious at the graduate level as they are at the undergraduate level. Many graduate students are independent of parents financially. Faced with the kinds of pressures I have noted, those who persevere with graduate work may have lots of problems but motivation for study is not likely to be one of them.

Some adjustments were necessary after the huge expansion of the 1960's. No doubt also other social goals are competing very strongly for greater attention. What I am concerned about is the information base on which such decisions are being made and the values which are being emphasized. The case for judging our enrolments and our performance in the past appears to have been based very largely on questions of employment prospects for highly skilled manpower in the economy. All of this appears to consider the function of the university, and of its contribution to society, solely in terms of a clearly foreseeable and rather specific job or measurable contribution to economic growth as conventionally defined. Universities have a substantial stake in all of this, of course. But we resist very much the idea that that is or should be taken to be our sole contribution, or sole method of assessing that contribution. At a time when the concept of national production as conventionally measured has everywhere been diminished as an indication of social progress, of cultural advance, and of the quality of life generally (purposes incidentally for which that concept was never intended) it seems odd to find closely related measures being applied to evaluate the contribution of education. Moreover, the problems which the universities are increasingly being asked to address themselves to in their education and research bear very little relationship to these conventional measures. I refer to such issues as the attempts to erase urban blight, to purge the environment, to create effective transportation systems, to provide adequate health care, and to attack the more persistent types of poverty, all of which have a pay-off which is very imperfectly measured by present indicators of progress. We are also in the midst of a cultural renaissance of great dimensions in this country. None of these, of course, are the exclusive preserve of the universities — far from it. I am well aware also that indicators of social and cultural progress, as well as broader definitions of economic progress, are fraught with many questions and ultimately rest on a clearer definition and agreement on values. But I do

not see any alternative to this if we are not to fall into the trap of a strictly manpower and commodity-production approach to the measurement of progress. Indeed the preoccupation of some governments with commodity production as distinct from service production suggests that we have a long way to go in this respect. I do not think that all aspects of a humanistic approach to life can ever become measurable, of course, but I do believe they can be defined and considered more systematically and that the university is one major institution which can help in this and should be judged in considerable part by its success in this respect.

It is often said that students generally are paying too small a share of their education. The proportion they are said to be paying is generally one-sixth or less. But this measure is based on a misconception of the true cost of a university education. From the point of view of *society*, which is what a government should be considering, the costs which are involved are both the cost to the individual and the social cost. This goes well beyond the direct costs involved. To be more precise, students must temporarily give up income which they could earn if they were not at university, and society gives up the production associated with that income. Even in a period of too-high unemployment most students would have some form of job if they were not at university. If you add in this foregone income, it turns out the students are paying something closer to 40% or even more of the true private and social costs involved in going to university.

Another complaint one sometimes hears, related to this point, is that the kinds of returns the public expected from the investment in education are not high returns or are not forthcoming at all. There may have been too many expectations from investment in education in the past, but once again we are going to the other extreme in much discussion on this subject today. The fact is that nobody has attempted any kind of systematic thinking (I will not use the term "measurement") on the returns to society which education provides. The Commission on Post-Secondary Education simply assumes there are no social returns of any kind, except for the fact that if students get higher incomes than they otherwise would there is higher income tax earned by the state. But none of the other advantages to the community which some would associate with higher education — everything from cultural effects to the effects on industrial development — received any consideration whatsoever in that study. Insofar as the strictly private economic benefits are concerned, it is not surprising that those benefits were not realized for some people who came out to a labour market where there was significant unemployment. Once the unemployment problem has been licked, the private benefits in terms of higher incomes will once more be evident. Are the governments of Canada, in their thinking about the returns from public investment in education, really going on the assumption that the currently high rates of unemployment among young people in particular, and also in the economy as a whole, are going to continue indefinitely? If so, that assumption can easily be challenged. Within the next few years we are going to be entering a period when the low birth rates of the past fifteen years will have their effects on the labour force, just as we have been passing through a period when the high birth rates of the earlier past had their effects on very rapid rates of growth in the labour force. Once again, we should be thinking in terms of developments four, five or six years hence rather than the immediate situation.

We must emphasize that extreme care be taken in assessing the implications of experimental analysis for policy in this field. It took a major effort by the public and by the universities alike to build to the present levels and degree of sophistication in university graduate studies. The valuable infrastructure — human, organizational and physical — which has been assembled at great cost in

the graduate departments and centres serves not only our teaching and related research needs, but is of increasing significance to the development of public policy at all levels. Serious damage to parts of this infrastructure cannot be repaired easily or soon. The "breathing spell" experienced by graduate enrolment at the moment has its advantages. It has corrected some of the areas of oversupply, it has led us to sort out our priorities more carefully, and it has instituted both the methods and the spirit of cooperative approaches among Ontario universities. The moderation of extensive growth in numbers presents us with a long-needed opportunity to concentrate more on the quality of our teaching and research, to improve areas where both public and private demands and break-throughs in knowledge and organization promise high rewards. It would be a pity to miss the payoffs after so much investment in education.

It is easy to criticize present arrangements on a matter as complicated as this and much harder to prescribe what we should be doing. But I would like to attempt to outline at least some of the key issues that command attention on some rational basis. First and most important, both the universities and the community require somewhat more stability and planning than we have been living with for the last few years in the graduate sphere and indeed in universities generally. I know there is a school of thought which suggests that the universities and other public institutions had better get used to the suddenness of some of the changes in the political arena. We are cautioned not to react to such changes with cries of outrage and to respond quickly and gracefully. I suggest that such thoughts are too pessimistic both in terms of the health of our institutions of higher education and in terms of the capacity of the public sector to implement some sensible planning in this area. I suggest in fact that without such planning both students and faculty will be seriously demoralized, the politicians will be seriously embarrassed, and the universities will be unable to perform their services to individuals and to the community. Specifically I think university finances in the graduate area in particular (but not exclusively) should be related to some planning period of perhaps five years, with a checkpoint along the way. I realize long-term planning many involve some short-term rigidities. The alternative, however, of living from year to year financially and otherwise involves far more dangers. In particular, since the length of time involved for higher degrees may extend to five or six years beyond the bachelor's degree, it seems to me that the financial and other planning should extend for that period of time.

I think it will be clear to you that my earlier comments on manpower planning were not meant to criticize the concept as such so much as the very inadequate models which have been developed to date. In particular I would hope that at some all-Canada level broad aggregates rather than specific job forecasts *per se* would be developed on a continuing basis both to help determine the financial allocations to universities and as guides in terms of information to individual choices by students and by universities. I hope that none of this will lead to rigid job allocations and quota allocations by specific disciplines. Even in highly controlled economies where governments control both the entry to universities and the entry to occupations and the planning of occupations, such manpower allocation schemes have generally turned out to be quite disastrous in the case of highly skilled persons at least. I am quite certain in any case that the public will indicate its policy priorities clearly in terms of expenditures, and given its control directly over research grants in particular, the universities will respond and are responding to these priorities. I am not impressed by those who expect the universities to put aside their basic research which is not done by others in the community and to concentrate their

energies in solving immediate and practical problems. Governments are already in a position, and have already substantially oriented much of university research, to solve such problems. They are in a position already, particularly through research grants, to secure further orientation to clearly defined priority areas. But what they must not expect of the universities is any surrender of the right to explore and enquire widely, for most of us believe that that is the best possible situation for the discovery and growth of new knowledge. That necessarily involves freedom to pose the questions which appear relevant and to undertake activity which may not have immediate practical results. I cannot help thinking here of the extremely small support which was available, except of course from universities, to the work one or two of us began on foreign ownership of Canadian industry in the late fifties.

The overall level of commitment of public resources to graduate studies is one thing, its rational allocation among universities and within universities is something else again. I am going to concentrate here on the question of allocation between universities. This is not because I believe more efficient allocation of funds within universities is impossible. On the contrary, most universities now have several sets of data and techniques to assist in planning more consistent allocations of funds between divisions. But more and more as we consider these data, many of us have become convinced that the university as such is the wrong unit for really effective reductions in unit costs with quality given, or for improvements in quality with given unit costs. An economist could hardly fail to point out that lower cost curves or a more efficient location on such curves depends in good part on structural changes in them and between the set of institutions involved. Each university could be operating in an efficient manner on both its cost and demand side (in principle at least and given certain assumptions about social costs and social benefits) yet there could be a great waste of effort and of public funds because of an inefficient organization of the system of universities taken together.

Let me be more specific, looking particularly at Ontario — although the same effects are evident in some other provinces. The spread of graduate work to a large number of institutions has consequences which are painfully familiar to students of some Canadian manufacturing industries — that of too many firms, with too many types of products, with short-runs and high unit costs. The fourteen Ontario universities exemplify all too well this proliferation in far too many fields. For several years now we have had under control through the Ontario Council on Graduate Studies the problem of entirely new graduate programs at a university, for these must be subjected to a careful appraisal process external to the university. What do you do about the changing enrolments in *existing* programs, however, whether a particular discipline is in an expansion or contraction phase? Moreover, the prestige traditionally attached to graduate work has been matched by formula financing by the province which pays considerably more for the registration of graduate than undergraduate students. If anyone doubted that universities were maximizers and even optimizers, they should take a look at the resultant proliferation of graduate work across the province.

One solution which has been suggested is to simply cut the weight given to graduate studies in the formula. If graduate studies objectively deserve that weight in terms of costs, however, this would simply stimulate us to make the reverse error. The Commission on Post-Secondary Education urged, in its draft report, a variant of this — that Ontario should separate research costs from teaching costs and award research costs in some manner at least partly divorced from numbers of students, graduate in particular. Someone at the University of Toronto might be expected to have at least some secret

yearning for such an outcome in the expectation that his university, and a few others, would clearly gain overall from any such allocation of research funds that was not wholly arbitrary. Yet the basic assumptions about the separation of teaching and research are so questionable for much of what we do in universites that one wonders why a government interested in this approach does not make explicit what is involved — that some universities would become something else — and simply ban graduate work (or at least the Ph.D.) in such institutions. Moreover, the separation of teaching and research, once agreed, is fraught with dangers to the institutions which would gain. One can easily imagine which of these would be cut when governments decide budget cuts are necessary. One can also ask if we are not throwing away one of the strongest points of our Canadian programs, the close relation (budgetarily and academically) of graduate and undergraduate programs. For example, it is an article of faith, and generally the practice, at a place like the University of Toronto that as a member of the graduate faculty you do not teach only at the graduate level. A number of the larger and better known American graduate programs, by contrast, generally divorce graduate and undergraduate faculties fairly sharply. No doubt that helps to give them some better graduate programs than we have, but often at a fearful cost in terms of the quality of their undergraduate programs.

How, then, do we get to a somewhat greater degree of specialization among universities, both between and within graduate fields, without the cure itself becoming worse than the disease? The technique we are trying in Ontario is voluntary planning among the universities. This involved an embargo on *all* new graduate programs in 19 fields and a discipline assessment in each of these fields, based on planning just where future developments will take place plus some restructuring of present programs. A critical part of each assessment is the report of a group of three to five distinguished consultants (all but one in the field involved) drawn from outside the province. I expect some very useful information and proposals to come from this process. But I hope it does not lead, because of lack of action by universities on the proposals or by intention, to rigid central planning of graduate studies and enrolments. This approach, exemplified by quotas on graduate enrolments by programs and by universities, is unlikely to yield the best results from the viewpoint either of the public or the universities. It substitutes a collective judgment by a university-oriented administrative group for the judgment of individual graduate students and the efforts by universities to develop programs which will attract them. I do not object to some overall limits in particular fields where clear continuing tendencies to over-expansion are evident. What is in question is the method of allocating any given number of places by rigid quotas to particular institutions. Such a procedure denies students some of the opportunity they have to influence where expansion should occur by the choices they make. It reduces the incentives which the university departments and universities as such should have to produce and improve programs with an eye to excellence and the attraction of students and faculty. Experience in other fields suggests quotas are difficult to adjust once given, even when seen to be out of date. We believe far less specialization and excellence will occur by quotas than by more competitive schemes of allocation, and the results will be still higher costs to the public for any given degree of quality.

The problem, of course, is to find alternative methods of allocation to particular universities which will yield a result consistent with any overall figure set for Ontario if government decides to set such a limit. One way to do this which allows the fullest choice of place to students and also incentives for improvement to universities, might be to seek collective standards of entry to

broad graduate fields which will yield the overall Ontario numbers which are desired. This would preserve specific student choice and a healthy academic competition between universities, subject to any overall constraints the public sector thinks suitable either in order to fix its commitment to education or because it thinks it can plan manpower accurately. My strong preference would be to set very broad allocations by fields, such as the humanities, and to let student choice and institutional capacity and commitment determine more detailed allocations. Another way would be, again within any overall constraint on numbers, simply to derive a better evaluation system for our graduate programs, let students use these as guides as to where to go (taking their formula income to the university chosen) and universities use these as guides as to where to put their funds.

But none of these will solve the problem of inter-provincial specialization, nor will it necessarily encourage enough programs to serve national purposes at international levels of excellence. Prime Minister Pearson some years ago asked aloud whether the federal government should not be using its influence to create some centres of excellence by concentrating somewhat more research and other government aid in certain subjects in certain universities — a department of economics in one province, of chemistry and physics in a second, of agricultural economics in a third, and so on. The proposal was drowned in the resulting outburst of constitutional and institutional protest. It is still not too late for the federal government to use its hold over research grants and its other powers to develop much more concentrated aid, by institutions and by fields, so as to develop what will be both regional and national centres of excellence in some further subjects. Too much of recent history suggests that the inevitable pressures on the provincial governments will, unfortunately, tend to work the other way — to multiply the number and the geographic location of the institutions of post-secondary education in order to ensure access on the broadest basis to them. For, in spite of all of the criticisms of post-secondary education and some short-term problems, the fact is that the demand to expand it is still growing in many quarters. The argument is over which types to expand. The Commission on Post-Secondary Education is a good example. With all of its strictures on the universities, especially professional and graduate studies, the underlying theme is to make post-secondary education available to a great many *more* people. Personally, I favour this. But I am not as sure as some seem to be that it can be done without substantial additional financing if quality is to be maintained, and I believe that universities, if they cannot offer excellence to all who come to them, deserve neither the name nor the support of the public.

None of this should be taken to mean that university graduate programs should be considered rigid for all time and unresponsive to both changing academic and societal needs. There is a view of graduate studies as a highly rigid and specialized study of a narrow area, and the suggestion is that it is the departmental orientation of such studies which gives it this focus. One can find examples to make the point in any large institution, but I would argue that it is generally a misplaced criticism. The discipline orientation of the departments or faculties helps to give them the high quality we associate with graduate work, but many of the departments are in fact conglomerates of closely related disciplines and they overlap one another in many ways. It is on the secure base of the departments, moreover, that strong areas of inter-disciplinary work have been built. Inter-disciplinary studies through teaching and research groups or arrangements are in fact very common in graduate studies at the University of Toronto, both through a score of centres and institutes and direct links between departments. There is in fact a high degree of cross-appointment of faculty be-

tween graduate departments, including many fields which (at first sight) do not appear related to one who might take a less unified approach to knowledge. There is less inclination to permit students to take courses in other fields, apart from a minor, an approach to learning which I would like to see expanded while avoiding the pitfalls of a cafeteria model of learning. All of this is closely related to several enquiries under way at the University of Toronto, designed to find methods of bringing the resources of the University's various units into closer liaison to serve new teaching and research needs. The hope is that this process will create flexible organizational forms which will meet such needs while being able to revert to other programs when necessary.

Another area where considerable thought is necessary is our role in graduate programs for persons who can attend on a part-time basis only. Once again, there are a number of professional Master's programs geared to part-time studies, and disciplines involved in the M.A. and M.Sc. where part-time students are accommodated. I am not sure this has received the systematic attention it deserves in a metropolitan area such as Toronto, nor have we given enough thought to the requirements of various groups for retraining through a degree program or by certificate and short-course programs. Most departments at Toronto and at other Ontario universities believe the Ph.D. program requires a concentrated period of resident study and research, but some are asking whether a more flexible way of meeting this need can be established for some types of students.

One of the major problems on our agenda is the closer links which we are being encouraged to form with government and the private sector to tackle problems which the latter regard as urgent. I would point out that this type of service to social need is already highly developed now — legions of exploration teams, task forces and royal commissions dominated by academics advise governments on policy, while the private sector has (somewhat more slowly) begun to develop similar links. Both government and other groups clearly would like even closer links. I think there is much to our mutual advantage in contacts of this kind between university graduate schools and external bodies, provided certain critical constraints are kept in mind. One is that a university's primary commitment is to learning, and what we do in research for ourselves and for others should relate back to that. Moreover, we are not interested simply in specific applications to particular problems, but applications which we can generalize to advance knowledge. It is one thing to help solve a problem in housing in a particular part of Toronto, quite another to ask what this teaches us about the solution of such problems in general and the principles of economics, of architecture, of sociology in particular. I need hardly add, though some seem to forget it, that both the process of learning and the nature of universities require prompt publication of the results of such research, full freedom to comment on the subject by the scholars and full acceptance of responsibility for the ideas by the scholar, not the university. There is often a tension between the requirements of external support of this kind — usually short-term, pragmatic, subject to changing popular pressures and tending to seek consensus of views — as against much university research, which is often longer-term, concerned with developing generalized principles, and critical of accepted views and values. Valuable further links to public needs can be developed if these distinctions are kept in mind and the terms and institutions involved respect them. Any attempt simply to harness university research to immediate and felt needs will give the worst possible outcome both to the process of learning and to public service. The tragic state of many large graduate schools in the United States now that massive applied research financing has been cut and public problems are being

re-defined is a good case in point.

But let me put this in a more positive way, and express the hope that the renewed government interest in university research may help to solve the financial problems of our humanities and social science departments. Some decades ago the scientific fraternity with great foresight (and, inevitably, some errors) put scientific and engineering research on a stronger continuing financial base, with great benefits to both universities and the Canadian community at large. Despite the investment in the Canada Council, the Ontario Graduate Fellowships and some other means, we have been much slower to meet the needs of the humanities and social sciences. Great care will have to be exercised in meeting these needs, for the nature of research in many of these fields is very different from that of the sciences and the government-university relationship even more delicate. Yet I find it disconcerting that our society can give such emphasis to the need for improving the quality of life and give such weak support to these areas. At the University of Toronto, for example, 45% of the M.A. students and 23% of the Ph.D. students in the humanities received no support in 1971-72 from fellowships, research funds, teaching assistantships and student aid plans. Many others received only nominal support from these sources. The situation in the social sciences is only somewhat less depressing. If this can happen in what is recognized as one of the great graduate schools in this country, one wonders what the situation is in some of the others.

I have painted a somewhat dark picture in parts of this paper, but perhaps I should close optimistically by noting that some people have painted a darker one. I quote from *The Market for College Graduates* published by Harvard University Press:

> There are both alleviations and aggravations inherent in the present situation . . . . A guided and orderly adjustment is necessary to fore-stall discontent, snowballing of costs, and an eventual revolutionary movement sparked by millions of unemployed, frustrated, and down-graded college graduates. Our young men and women should know what to expect before, rather than after, they go to college. . . . My main purpose is to show that a large proportion of the potential college students within the next twenty years are doomed to disappointment after graduation, as the number of coveted openings will be substantially less than the numbers seeking them. It is essential that an educational or a public relations campaign inform our young men and women of the market situation in both the professions and other desired occupations. . . . I see no easy remedy for the surfeit of college graduates. It remains a problem despite various methods of alleviating it.
>
> The book was written in 1949.