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QUALITY OF CANADIAN UNIVERSITIES WITH SPECIAL REFERENCE
TO DREE REQUIREMENTS

P.K. Datta
in association with
T.C. Penney

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I. Prologue

This is the second and concluding report on the problem that the Department of Regional Economic Expansion has been experiencing in hiring ES category personnel with academic and/or research background related and relevant to this Department's special requirements.

The first phase of the report dealt with the problem per se. The conclusions drawn therein emphasized the fact that the Department should be responsible for generating the special type of professional expertise that it requires rather than requiring the universities to do so. The specific pros and cons were discussed.

Subsequent to that, an examination of the curricula offered by the universities across Canada revealed that only a few institutions were offering courses having relevance to regional problems at a given level of micro-dimension that is of importance in relation to the DREE's specific terms of reference.

To follow up on this particular deficiency in the university curricula, a two pronged question was posed: (a) what is the existing state or quality of a given Canadian university?
(b) what is the quality of the regional studies programs that

are offered at some of the institutions?

These questions are hypothetical since it is extremely difficult, if not altogether impossible, to assess or measure the quality of a university. The variables, such as enrolment, staff age and qualification, etc, against which the quality of an institution could be measured, are themselves open suspects. Added to that, the quality of existing statistical information and the state of our existing knowledge regarding the mix of different variables that may help assess an institution as "good" or "bad" are biased as well as incomplete, to say the least.

With regard to question (b), in the absence of any opportunity to discuss the offered curricula with the faculty and student body at the specific universities, the second best approach was to form a very subjective view based on the review of the levels at which the courses were offered. This approach of course leaves much to be desired. The findings however, indicate that such courses are offered at a very aggregative and macro level and could well have been named as "Planning" or "Development" rather than "Regional studies". Consequently, in the body of the following text it has been consciously neglected.

It must be stressed once again that although the concept, "Quality of University" is a viable term quite approaching tangibility, it is indeed one of the most difficult tasks there is to prove it or measure it. Nevertheless, an attempt is made. The findings are at times grotesque and at all times subjective in nature despite our efforts to be as objective as possible while operating with insufficient statistical information and other impediments. In most instances,

it has been virtually impossible to gather such information on a time-series basis. As a result our observations are based on 1970-71 evidence. The past performance cannot be compared except qualified judgment based on sequence of events that may or may not have any effect on the visualized trend.

Mr. T.C. Penney of the SHAB has researched and provided most of the statistical information. His contribution has gone beyond that, to useful suggestions for the body of this text. General discussions with him have clarified a number of knotty issues and helped the formulation of the present format.

Dr. A. Horvath of the Education Division of the Statistics Canada has kindly made available to us much of the confidential unpublished financial statistics of the universities by region.

II. Limitations

This study is limited to its very narrow scope in more than one way. First, because of the nature of the Department of Regional Economic Expansion's stated needs it became imperative to concentrate our efforts in areas of direct concern or interests of the Department. Secondly, due to lack of sufficient and pertinent information it was felt that all the offered curricula of the Canadian universities should be looked into. Thirdly, due to constraint upon time, it was decided that Humanities and Social Sciences area should be covered more extensively than any other area. Fourthly, financial awards posed a major problem. Except for Canada Council, detailed information of the operations of the National Research Council, Medical Research Council, etc. were available only in a very broad and aggregative form from confidential files of the Statistics Canada. Finally, manpower resources is the constant source of frustration in any research endeavour.

Hence, although this project masquerades under the title of quality of universities in Canada, it in fact tries to take a shot in the dark maze of only one aspect of total university activity with a very defective gun indeed!

III. Introduction

The Foreword in Dr. Allan Cartter's book "An Assessment of Quality in Graduate Education" (Washington, D.C. 1966) appropriately begins with "Excellence, by definition, is a state only the few rather than the many can attain. Striving for academic excellence, however, is a worthy ideal for colleges and universities, and it can be reasonably argued that every educational institution should meet minimum qualitative standards, and particularly if it offers graduate work". This statement is a true and professed objective of all educational institutions. The reality however acts in inexplicable ways and the constellation of a variety of causal relations do impose mediocrity, and even worse, upon some institutions despite best of intentions. On the other hand, due to normal aging process some institutions simply tend to fade out of old glory while retaining the glamour of the bygone days.

To the aspiring researcher of the quality of a university is imposed the awesome task of defining what is quality and what are its precise components. The definition cannot be any other than subjective and a reflection of the particular views of the individual. To that extent, the usefulness of the exercise becomes limited. A generalized definition of the quality must be found. Quality is a pedestrian term encompassing a very wide spectrum. Scientifically quality is a mode of assessment in degrees of excellence within the positive (i.e. good) and negative (i.e. bad) bounds. A proof of this definition, however, is never conclusive since the scope for any rigorous analysis is rather limited by the fact that the variables that are to be used are, by nature, very brittle indeed. The task can be further complicated

if we pose, as we must, questions such as the quality of the teaching staff and the quality of the institutions in providing teaching and research facilities and atmosphere.

It needs no further support other than a reference to Massey Report in the early 1950's and the Bladen Report in the mid 1960's, both on the issue of the Canadian dilemma of quality vs. quantity of Canadian educational system, that the question of quality of university is an issue, complex as it is, involves many other more complex issues that must be examined before any proximate result on the quality of university may be obtained.

The task is time consuming as well as financially expensive. For the present analysis, both of these constraints were severely imposed. As a result, we did not have any opportunity to meet with the officials of the AUCC, not to mention any university upon which a judgment has to be passed.

The explicit objective of the present study is not to catch a thief as it were, but to examine the various physical components of an educational institution and then to attempt an evaluation of the quality that may become self evident from the array of statistical information that has been mastered for this study.

It must be cautioned however, that based on the evidence presented here, the researcher as well as the reader is in no way competent to pronounce "good" or "bad" of any institution. One can only indicate that incomplete and insufficient as the evidence is, there is a great need for further deliberation upon this crucial and complex issue.

In essence then, we have tried to avoid painting the Bull's eye around the arrow for the simple but dubious pleasure of "hitting" the Bull's eye.

IV. Canadian Universities

It becomes evident from a review of the history of growth of Canadian universities that unlike in other countries, (barring a few Canadian institutions), the growth (in physical numbers or otherwise) of Canadian universities has depended mostly upon the pressures other than felt need or demand for such services. Exhibit No. I below is of some interest:

Exhibit I. Growth of Canadian Universities and Total Population by Region, 1950/51-1970/71.

	Atlantic	Quebec	Ontario	Western	Canada
Number of Universities:					
1950-51	5	4	5	4	18
1960-61	8	5	11	4	28
1970-71	12	8	16	11	47
Average Annual Rate of Growth (%):					
50/51-60/61	4.9	2.3	8.2	0.0	4.5
60/61-70/71	4.2	4.8	3.8	10.6	5.3
50/51-70/71	4.5	3.6	6.0	5.2	4.9
Total Population (in '000):					
1950-51	1618	4056	4598	3712	14009
1960-61	1627	5259	6236	4808	18238
1970-71	2058	6028	7703	5727	21568
Average Annual Rate of Growth (%):					
50/51-60/61	0.1	2.6	3.1	2.6	2.7
60/61-70/71	2.3	1.4	2.1	1.8	1.7
50/51-70/71	1.2	2.0	2.7	2.2	2.2

Clearly, the growth of population is not a decisive factor in the growth of universities. Over the two decades (1950/51-1970/71), the average annual rate of growth of Canadian universities per annum has ranged from 3.6% in Quebec to 6.0% in Ontario while the population grew at a rate ranging from 1.2% in Atlantic Provinces to 2.7% in Ontario during the same period. One could, however, presume that the need (demand component) was there but shortage of finance had lagged the supply component. In fact, both the Massey Report and Bladen Report came to the same conclusion and predicted qualitative degeneration of Canadian universities if such a lack of finance continued to plague them. The factor, in the context of quality of Canadian universities, that stands out is that, traditionally the Canadian concern regarding quality of universities has been viewed as the concern about availability of financial resources. In part this may very well be true; but this cannot be the whole truth. Subsequent to Massey and Bladen Reports, came other reports - among them the MacDonald Report - which while deliberating upon quality of university, laid special emphasis upon research facilities at Canadian universities and concluded that (1) existing financial resources of Canadian universities were not sufficient for "quality" research; (2) research grants giving organizations, such as NRC, MRC, and Canada Council - especially Canada Council - were not living up to their roles; (3) the federal and provincial governments were to seriously consider this problem since "education is the cornerstone upon which is laid the foundation of social and economic growth and development of a nation". These issues, let us assume are valid. But the fundamental question is whether the availability of ample financial resources is a guarantee for qualitative improvement? The resolution of this query however begs answer to yet another fundamental question: do we assume that the existing quality of Canadian universities is unacceptably poor?

In the absence of any positive answer one must draw the sad conclusion that investigations have been conducted, volumes have been written and conclusions have been drawn with unjustly biased preconceived notions. This report is not an apology for the past injustice nor is it frivolously presumptuous of the role of just and impartial critic of the higher educational system of Canada. The limitations of the present report are numerous; and with that ugly realization in mind, our efforts have been invested in presenting a broad array of the physical nature and functional activities of the Canadian universities.

One most peculiar characteristic in the process of growth of Canadian universities is that whenever any serious attempt has been made to financially assist the universities in their efforts to improve their quality, more universities have come into existence rather than strengthening the existing ones. Too, some existing universities instead of striving for upgrading of the existing curricula, have ventured into expansion of the same.

In short, in the past, the Canadian universities have tended to closely follow the growth pattern of the U.S. university system without proper assessment of the existing or potential capacity of the indigenous resources. The lack of systematic expansion program or planning has led to increased number of universities having questionable existing quality or potential for improving the same.

It is pertinent to ask at this juncture, what role for Canadian universities was envisaged in the context of Canadian society and economy during the decades (1950/51-1970/71) of spectacular expansion of these institutions? Surely, such aims did proclaim the visions of great educators such as Newman, Humboldt and

Flexnes, to name a few, but the discomfiture of Canadian universities since the late 1960's belies that fact and strongly indicates the state of affairs of a corporation on the verge of bankruptcy due mainly to lack of clear aim.

The Canadian universities are not the only ones that are facing a "crisis", this situation is now universal. The fact that some of the internationally better-known universities such as Harvard (USA); Cambridge (UK); and Heidelberg (W. Germany), to name a few, are still enjoying the privilege of quality institutions, may very well be resting on the laurels of past glory and achievements. The fact that the graduates of such institutions are treated preferentially for their assumed quality may be nothing more than misconception and glamour-blindedness on the part of the prospective employers. How often do we ask which university does he come from rather than what has he done since graduation and what can he do?

It is true that education is a process of learning to think for oneself under the guidance of a teacher. This is in fact the foundation of the Pythagoreans. And the onus of responsibility is thus laid directly upon the quality of the teacher; and the "Chicken and Egg Syndrome" continues. One may be a "good" teacher but he will be unemployable with any university without a long list of publications in respectable professional journals. As a result, better known "good" professors are, in reality, "good" researchers and hardly teachers.

In Canada, however, the measure, publication is the quality of a teacher, does not seem to hold well as Exhibit II indicates.

EXHIBIT II

PUBLICATIONS IN SELECTED JOURNALS DURING 1970-1972

Universities	Sociology			Anthropology			Economics		
	1970	1971	1972	1970	1971	1972	1970	1971	1972
	1	2	3	4	5	6	7	8	9
Atlantic:									
Memorial	1	-	2	1	1	1	-	-	-
Dalhousie	1	-	-	-	-	-	1	1	-
St. Mary's	-	-	-	-	-	-	-	1	1
Total	2	-	2	1	1	1	1	2	1
Quebec:									
Montreal	-	-	8	-	-	1	-	-	-
McGill	2	-	-	-	-	-	-	-	-
Laval	-	-	-	-	-	-	-	-	1
Sherbrooke	-	-	-	-	-	-	-	-	1
Total	2	-	8	-	-	1	-	-	2
Ontario:									
Guelph	-	1	-	-	-	-	1	1	-
York	-	4	3	-	1	1	-	-	1
McMaster	-	4	-	1	1	-	1	-	3
Toronto	5	6	3	-	1	-	4	-	3
Waterloo	-	2	-	-	-	-	1	2	2
Lakehead	-	1	-	-	-	-	-	-	-
Western Ontario	-	3	-	-	-	1	4	5	1
Queen's	1	-	7	-	-	-	1	5	5
Carleton	-	-	1	1	1	-	-	-	1
Laurentian	-	-	1	-	-	-	-	-	-
Windsor	-	-	-	-	-	-	-	-	1
Trent	-	-	-	-	-	-	-	1	-
Total	6	21	15	2	4	2	12	14	17
Western:									
Winnipeg	-	-	1	-	-	-	-	-	-
Manitoba	-	1	1	2	-	-	-	2	-
Alberta	1	2	-	9	1	-	-	1	1
Calgary	-	-	2	1	1	-	-	-	-
Saskatchewan	1	-	-	-	-	-	-	-	1
U.B.C.	2	3	1	-	-	-	4	5	6
Victoria	-	-	-	-	1	1	-	-	-
Simon Fraser	-	-	-	-	-	-	1	1	-
Total	4	6	5	12	3	1	5	9	8
Canada:	14	27	30	15	8	5	13	25	28

Source: Various Learned Journals.
(see Appendix for details)

It appears, from the evidence gathered from a survey of selected learned journals¹, that Canadian universities contribute much less toward search for knowledge compared to their counterparts elsewhere. This evidence, however, is inconclusive and raises several interesting questions. First, that Canadian universities 'shun' public display of their dedication; or second, that the universities do not have any facility for advanced and fundamental research that add to our knowledge; or third, that the stated objective of Canadian universities is to foster an environment for teaching alone with little or no research emphasis; or fourth, that the Canadian universities do not have human

1) The survey covered the years 1970, 1971 and 1972. It is an inconclusive test since only Economics, Anthropology and Sociology were examined. Still the result is interesting. The following journals were covered:

<u>Economics</u>	<u>Anthropology</u>	<u>Sociology</u>
Quarterly Journal of Economics	American Anthropologist	American Journal of Sociology
Econometrica	Current Anthropology	American Sociological Review
Economics Journal	Human Organization	Rural Sociology
Kyklos	Arctic Anthropology	Daedalus
Journal of Political Economy	Anthropologica	International Journal of Comparative Sociology
American Economic Review	Western Canadian Journal of Anthropology	Sociological Review
Canadian Journal of Economics		Sociology and Social Research
Economic Development and Cultural Change		Revue Française de Sociologie
Review of Economic Studies		Canadian Review of Sociology and Anthropology

resources capable of research that are welcome and acceptable for publication. There is no way to accept or refute any of these assumptions. By size, by status, or by reputation, across Canada, the universities have indicated a strikingly similar pattern of absenteeism from the world of publication.

The next logical step in the quest for quality of universities will be age and academic background of the teachers. Table I (Appendix) presents a breakdown of age distribution at different levels of teaching staff by faculty. Unfortunately, information at the provincial or regional level are not available. To that extent, the all-Canada average is not a very instructive one, except perhaps for the fact that, in general, across the country, the teaching staff is below 50 years of age and that the age differential between a full professor and an Assistant professor is very low. The so-called generation gap or communication gap, one may expect, does not exist in Canadian universities as it does in the United Kingdom for instance. Often times, the conflict and tension that exist among the teaching staff belonging to old school and new school, do transmit beyond the staff chamber to the students via confusion and negligence.

The academic background or educational qualifications of the teaching staff is interesting. Table II (Appendix) breaks down this information by region. It is interesting to note that, in all the regions, the Assistant professors seem to be by far the largest group of Ph.D. degree holders and the smallest group is represented by full professors. A pedestrian equation of age and education in Table II (Appendix) reveals a significant feature. The Assistant professors are in the age group 30-34 whereas the full professors are in 45-49 age group. One is tempted to argue that possibly Ph.D.'s do make better teachers than others and that since the majority of the Ph.D. holders are Assistant professors they, in all likelihood, are not

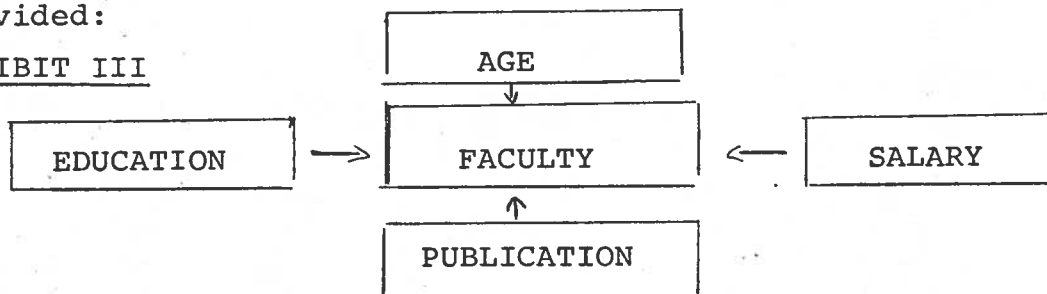
called upon to design the education/knowledge transmission process; therefore, the question of quality does indeed arise. However, this argument, if at all posed, cannot be substantiated on the basis of the limited information that we have. It will be futile, even dangerous to delve into this type of hypothetical argument.

Table IIa (Appendix) shows the distribution of highest earned degree of teachers by region as percentage of Canada total. Although it is apparent that Ontario has the largest number of Ph.D.'s (41.8%) amongst its teaching staff and Atlantic Provinces the lowest (8.0%), the significance of this information must rest there for precisely the same reasons as indicated above.

The last but not the least important visible material source of quality of teachers is the financial reward for their services in salaries. Despite differences in economic affluence, population concentration, etc. the salary range for all levels of teachers from region to region seem to vary very little (Table IV - Appendix). The difference that exists may be explained largely due to differences in cost of living index.

Thus far the physical characteristics of the Faculty has been provided:

EXHIBIT III



The question is, what does it prove? To be scientific, one must confess that it proves nothing. It has been noted that (1) with respect to age, there is hardly any noticeable difference among the regions; (2) salary differences from region to region is rather small (probably explained by cost of Living Index); (3) contribution of research findings to learned journals are few and far between from all regions; and (4) there is a sharp difference in educational qualifications of the faculty among the regions.

This does not allow one to descry any pattern of conformity or a matrix to describe a region better or worse patron of its university system. All that can be concluded is that since the average age of population in Canada is lower than that indicated for the Canadian University faculties, there is nothing strange in (1); as regards noticeable differences in highly educated Faculty from region to region, it is an established fact from migration studies in Canada that educated people (= Canadians + immigrants) tend to prefer Ontario, Quebec and British Columbia respectively, for expectations of higher economic returns and such other felt needs and objectives, hence there is nothing alarming about (4); as regards publications, to be charitable, one must consider the following facts, (a) the sample is rather small and incomplete, (b) for most of the selected journals the time-lag between submission and publication varies from 1 to 2 years, (c) due to high mobility among the university teachers, affiliation with the institution where the actual research and writing was completed and the affiliation with the institution indicated when published may not be the same. Hence the effectiveness of the evidence presented in Exhibit II may be doubtful.

In general, it is possible to suggest that irrespective of

of the location or size or age of an institution of higher education in Canada, there is a fundamental similarity from one region to the other, which the present study, due to constrained terms of reference, has not succeeded in investigating. However, the Cartter Commission study "Assessment of Quality in Graduate Education" for the United States, which undertook a survey of a large number of American Institutions, respondents and fields, concluded that it was virtually impossible to assess the quality of an institution and that the excellence of a particular faculty did not depend upon the popular excellence rating of a given institution. This conclusion may well apply for Canadian universities although subsequent evidence provided in this report seems to reject this assumption.

The only plausible source of bottleneck in achieving desired degree of quality in any given region in Canada may, theoretically, arise from the following asymmetry:

Age: $P \equiv ASP \equiv AP$ 

$\therefore P \equiv AP$

Education: $P < ASP < AP$ 

$\therefore P < AP$

Salary: $P > ASP > AP$ 

$\therefore P > AP$

where, P= Professor
ASP= Associate Professor
AP= Assistant Professor

Since the age differential is very small among the three levels of faculty and since academic background reject the experience hypothesis for placement at a given stratum; one must also reject the academic excellence by far more qualified than either Associate Professors or Full Professors. One must ask as to what actually happens? Unfortunately, to search for an answer is not within the scope of this report. Too, existing statistical information does not provide a clue or an answer. But, to assess the quality of a university in Canada, the answer to this puzzle will be an important link.

V. Canadian Universities Once Again

In this section an attempt has been made to assess the physical and financial position of Canadian universities. It is only fair to caution that the statistical information contained herein are of dubious quality, they have been checked from various conflicting sources, the definition and design for the same information, at times, do not correspond or compare, and that upon rigid examination most of this statistical information seems to be altogether too vague to afford and/or sustain any hypothesis or assumption. Due to this niggardliness statistical information, all pertinent data have been presented to portray the universities in different regions in their documented order rather than attempt the hazardous task of crossing the English Channel in a badly leaking boat. Further, it will be evident to the reader that despite maximum utilization of available statistical resources, the evidence presented are more or less deaf and mute, rather than corroborative witness.

Table V (Appendix) shows the distribution of universities by region and by degree program offered according to broad subject classification. There are in total 33 institutions recorded by the Association of Universities and Colleges of Canada. The undergraduate colleges, technical and vocational institutions have not been incorporated for the purpose of the present study.

Of the 33 institutions recorded, 24 (72.7%) were offering post-graduate (in Masters and Doctorates) degrees in one or more indicated subject classifications in 1971-72. Ontario has the dubious honour of being the site of 50% of these postgraduate degree offering universities.

In general, most of these universities have a strong similarity in the pattern of concentration in courses that are offered. Sociology, Psychology, Economics, Geography and Philosophy run second best to Historical studies and Linguistics. This peculiar characteristic of heavily emphasizing these two subject areas in most Canadian universities will be strongly demonstrated in the course of this study when tabulating Canada Council grants to the universities.

It is indeed difficult to ascertain precisely what role the undergraduate enrolment plays in giving an indication of an institution's scholastic quality or achievement. One would tend to presume that undergraduate enrolment will depend directly upon two major factors: (a) easy accessibility (transportation or geographic distance), and (b) general economic environment of the (1) family, (2) of the country.

Table VI (Appendix) presents the provincial disaggregation of undergraduate enrolment by sex for the year 1970-71.

The male and female undergraduate enrolment as percentage of respective population between ages 18-21 years were highest in Alberta (25.8% and 17.2% respectively) and lowest at 10.4% and 5.7% respectively in Newfoundland. Although both male and female population in age group 18-21 in Ontario and Quebec were highest in Canada and very close to each other, both enrolled male and female students as a proportion of population of the said age-group were about 50% lower than in Ontario.

Enrolment in Masters degree program during 1970-71 indicates that over 65% of total Canadian enrolment was accounted for in the provinces of Ontario and Quebec and less than 35% was rather unevenly distributed among the rest of the universities.

(see Table VII, Appendix). This broad pattern was followed in nearly all Masters degree programs. Two reasons may be discerned for this phenomenon: first, both Ontario and Quebec are most populous provinces with highly developed industrial-urban complexes, and secondly, and perhaps more importantly, despite economic discrepancy between these two provinces, the industrial and urban cores are identically competitive for the limited resources. Validity of this assumption is borne out by the fact that during 1970-71, over 71% of all Canada Doctorate enrolments were located in Quebec and Ontario (see Table VIII, Appendix).

From the assessment of the enrolments at graduate and post-graduate levels, it becomes quite evident that, besides the two proximate rationals given above. There is yet a third reason - that is - the universities in these two provinces may in fact be leaders among Canadian universities. This however, does not, with any degree of clarity, indicate that the quality of universities of these two provinces are better than in others.

This theme will be discussed further in the context of distribution of research grants.

Table IX (Appendix) is of special interest to the Department of Regional Economic Expansion. Only 5 provinces do have degree programs in regional, urban, environmental and social planning. The perusal of university calendars have indicated, however, that most of them are very aggregative in nature. Compared to enrolments in other areas, the "popularity" of this group in curricula seems to be rather low. Ontario alone, among the 5 provinces, has a more or less comprehensive and coordinated scheme.

It is worth mentioning here that at Carleton University during the late 60's a formal plan and a conscious effort was made to organize an Institute of Regional studies. The year I cost was estimated at \$60,000 and a skeleton working group was organized (which included most of the handful of regional experts of Canada). Unfortunate financial situation of the University in recent years however, has put the plan under mothballs as it were. Conversations with colleagues at Carleton University indicate that enthusiasm is still there to warrant retrieval of the dormant Institute provided financial assistance from outside is forthcoming. A full set of briefs and proposals and plans is readily available if so desired.

The teacher/student (full time) ratio across the regions for the period 1965/66 to 1970/71 (Table X, Appendix) indicates that except in Ontario, where the ratio has remained more or less stable, all other regions show a declining trend.

Regarding teacher/student ratio there are two diametrically opposite views. One holds that this ratio should be as small as 1:5 for effective, successful and qualitative transmission of knowledge. The other holds that the ratio should be much higher, such that modern and scientific educational system can be brought into aid most effective and qualitative education. Apparently Canada falls in the unfortunate middle category and is exposed to criticism from both schools of thought.

Finally, there is the most important, all-absorbing question cost of operation. Unfortunately, it has not been possible to gather information on all aspects of cost such as, capital expenditure, depreciation, etc. The Statistics Canada publishes the operating costs in an aggregative form from which it is possible only to gather knowledge about the increasing difficulties faced by the institutions of higher education in Canada due to general increases in costs for all services.

In fine, this information has only one true significance, that is, soliciting grants and aids from governments and other organizations.

Table XI (Appendix) presents total operating costs of universities and colleges for the years 1968/69-1970/71 for the regions. During the period under consideration wages and salaries across the country accounted for 62% at the lower bound to 71% in the upper bound. The cost per student (full time) has continued to rise.

The operating costs toward Library facilities have however tended to fluctuate within a very narrow band across the country.

Assisted research within these institutions, on the other hand, has generally indicated a slight decline as a percentage of total operating cost.

What conclusion must one draw from this? That the educational institutions have sufficiently deviated from the basic objective and have tended to operate more on the lines of business corporations. The state of university has ungainfully verged on to multiversity.

Since the early 50's to early 70's, the Canadian institutions of higher education have been subject of a number of Royal Commissions and other enquiring bodies in their endeavour to study the problems of finance. Many a dark foreboding have, in the past successfully persuaded the federal as well as the provincial governments to subsidize these institutions from time to time. But whether such assistance has in fact been of

any help or not is not known. What is known is that during those specific periods more universities came into existence and the existing ones further expanded. The eternal question of quality or quantity, in the context of Canada, always seemed to have settled for quantity.

In 1951, Massey Commission for the first time identified the perpetual shortage of financial resources of the universities as "crisis of quality" and recommended massive federal support to avert this crisis. In 1964, Bladen Commission encountered an increase in the number of universities and diagnosed the intensification of the said crisis and recommended yet further massive federal support. In 1970, Hurtubise-Rowat Commission saw a further increase in the number of universities and almost critical crisis stage in Canadian university system. One is left to wonder whether massive government supports have not been the main cause of such continually progressive crises. The possibility that the governments have neglected to respond in past to such recommendations for financial assistance is remote indeed.

The fact that the universities do face a problem of crisis proportion in executing their two-pronged role of teaching and research is true beyond any doubt. And that this problem is based on finance is also equally true. Despite numerous commission reports, there has been virtually no systematic national, regional or provincial estimates of the financial needs of the universities; nor has there been any realistic reconciliation of the so-called "explosion of educational expectations" by stages. Between mid 1950's to mid 1960's, Canadian universities let loose their reins in all senses of the term in every sphere of their activities. One wonders whether this was not in fact done in imitation of the universities south of the Canadian border.

In this section we have dealt with, very cautiously indeed, the enrolment, curricula, and operating expenditures of the universities. The information contained here is neither new nor unusual; and it has not shed any guiding light upon the path that leads to the measure of quality of a university. We have reestablished the known factor that regional differences, the infra-structure of the university across Canada is basically similar within a very narrow margin of flexibility determined by the regional mores. This is not altogether peculiar to Canada, elsewhere too this phenomenon is known to have occurred. This difference in fact adds color to the general drabness of the educational system and is known to have intellectually stimulating effect upon the scholars.

England and Continental Europe expend conscious efforts to engender and sustain such differences. As to why in Canada it should be considered as symptom of crisis is not well-argued but often mentioned.

A call for stock-taking seems to be in order. The a priori condition should be reexamination of basic aims of the universities. Thereafter the concept of resource mobilization and utilization should rank high on the list. Then and only then may we have any notion of the extent or dimension of the crisis that is plaguing the Canadian universities.

V. Research Grants to Canadian Universities

Research grants from various organizations including the government has always been the primary source of academic research. Too, this has always been an issue of considerable and continuous dispute.

The Massey Commission as well as the Bladen Commission explicitly recommended that since universities were the greenhouse where the future of society was nurtured, the federal government should carry the major share of responsibility in financing research, and in general, assisting the universities to maintain and exceed their given academic and intellectual excellence.

In the mid 1960's, a special commission was asked to assess the quality of Canadian university libraries insofar as they were necessary for higher standards in academic and graduate research activities.

The Macdonald Study Group conducted a detailed examination of the award granting organizations and came to the conclusion that the Canada Council should, for all practical purposes, be declared redundant.

The Hurtubise-Rowat Commission discussed at length the roles, aims, functions and interrelations of universities, society, government in the context of modern day technological advancement and came to the conclusion that to achieve desired goal of excellence in society and government via universities, it was imperative that the role of alleviating the financial difficulties of universities in sponsoring and encouraging research activities and teaching, the government should bear the major responsibility.

Further, the Macdonald Study Group in the process of delibe-

ration found that "in 1966/67 most of the funds for assisted research went to health sciences (44.0%), the natural sciences (37.2%), and engineering (11.3%) - 92.5% to these three sectors. 6.5% went to the social sciences and less than 1.0% to humanities". This Study Group went further to observe that "this disparity does not reflect differences in numbers of academics or graduate students in the different sectors as there are now more teachers and as many graduate students in the social sciences and humanities in Canadian universities as in the sciences and technologies".

The 1971-72 Annual Report of the National Research Council pointed out that in the past the Atlantic Provinces and Quebec were left without any or many research grants. Since the NRC offered awards solely on the basis of merit, this policy had been relaxed for these two areas. Special awards were earmarked for them thus achieving a sort of equitable distribution plan.

It is our understanding that the Central Mortgage and Housing Corporation also pursues a similar concept in its awards system.

In this genre, we present Table XII (Appendix) showing the formal breakdown of total research grants awarded by various organizations to each region as well as the distribution pattern.

During 1970-71, in Canada there were 57,073 potential research personnel within the university system. Total grants awarded amounted to \$95,127 thousands. Regionally distributed, nearly 42% of those potential researchers were located in Ontario and

about 23% in Quebec and of the total distributed grants resources 41% went to Ontario and about 25% to Quebec. However, on a per capita basis Quebec received \$1719 whereas in Ontario it was \$1617, thus making Ontario per capita receipt second lowest in the list after the Atlantic Provinces.

Similarly, although Ontario has by far the largest number of universities - most of which offer graduate and post graduate program - grant resources per university seemed to be lowest (after the Atlantic Provinces) at \$2418 thousands.

Although it is true that based upon a single year no concise observation can be made, yet the above evidence indicates that any claim that awards are made on the basis of scholastic and/or intellectual excellence must be treated with some reservation. There is indeed a bias, however sublime, for the vague ideal of equitable distribution even at the cost of sacrificing quality.

However, we must absolve the Canada Council of this accusation but reserve our rights to accuse this organization later on a different count of misdemeanour. Table XIII (Appendix) shows the regional distribution of Canada Council awards for the years 1968/69 to 1970/71. Ontario is by far the biggest receiver of grants from this organization. During the three-year period this province accounted for over 50% of total awards granted and received 50%+ of total funds distributed. The second on the list is Quebec.

It must be mentioned here that awards granted to regions in any given year is not to the regions but to the universities located therein. There is no stigma attached if in a given year some university does not apply for any research grant

or alternately if application is rejected. In the main the above figures represent only awards granted and they have not been checked against applications submitted for awards. Year to year fluctuation, therefore, is probably not so significant.

Tables XIV and XV (Appendix) present the university distribution of number of awards and the dollar equivalents respectively. The most striking feature here is that all the universities across Canada seem to have special expertise in two specific areas, namely, Historical studies and Linguistics.

In jest, we pause here now to accuse the Canada Council of its bias toward these two special areas since search as we may, we have been unable to find any justification for all the recipient universities from the Atlantic coast to the Pacific coast to indulge in doctoral and post doctoral research work in these two areas. Granted, there is nothing wrong in the pursuit of knowledge in any area, but looking at these two tables, over the recent three-year period the persistence of the same pattern, invokes in the mind of the researcher some dreadful thoughts, one of them is that possibly Canada indeed does not have the necessary research capability in other areas, and the other is that the Canada Council is deliberately pursuing a policy of turning Canadian universities into Pythagorean societies (Refer to Table V, Appendix).

Table XVI shows the distribution of Canada Council awards as percentage of Canada and the share per 1000 population (aged 20+) in each region.

Table XVII relates Canada Council awards to university enrolment by region.

These two Tables show that Quebec rather than Ontario (despite its largest share, see Tables XII & XIII, Appendix) is the major beneficiary in terms of scholastic support from the Canada Council.

It emerges from the perusal of this section that financial awards in support of research activities in Canadian universities do not afford us with any clearcut objectivity regarding the qualitative status of any university. At best, one may claim that awards are distributed at random and that the Canadian universities across the country do have rather unbalanced research facilities and/or programs in exclusion of other areas in the faculties of Humanities and Social studies. Since this study did not have the opportunity to explore in-depth the areas of pure, applied and other physical sciences, any judgment regarding the pattern of distribution and incidence of distribution of awards (mainly from NRC and MRC) will be tantamount to over-reaching the bounds of freedom of research.

VI. Quality of Universities

The quality or the professional and institutional excellence of a university is at best a subjective evaluation of a given number of observed variables or determinants which may neither conform to the Aristotelian theory of causality nor may they be universally given.

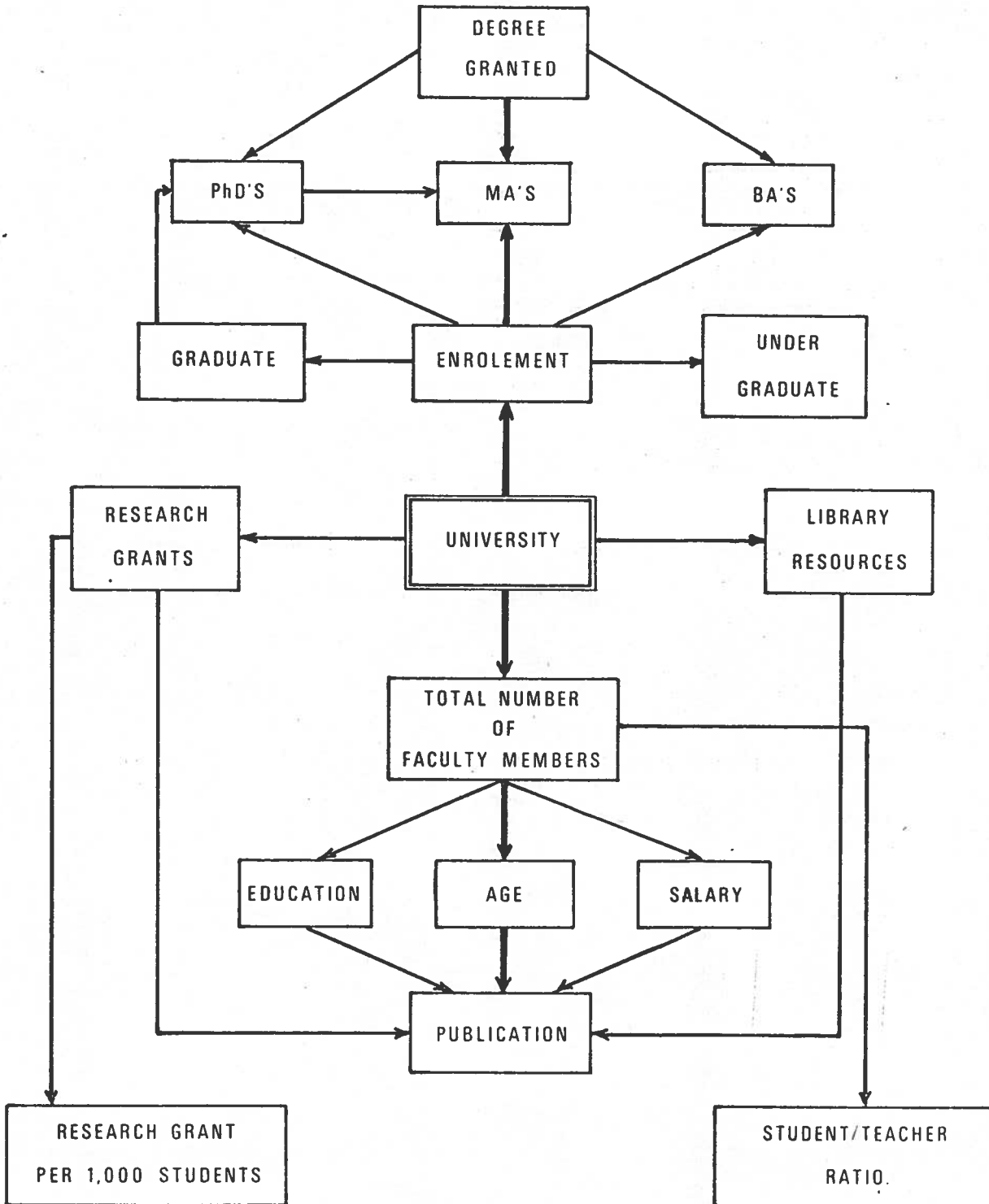
The Cartter Commission in the United States spent over two years conducting opinion poles of a large body of sample across the country only to conclude that a measure of quality is not possible with any degree of scientific objectivity.

The Organigraph presented here (Exhibit IV) is based on assumptions of ideal conditions. It can be adopted only as a guide or a measure of deviation from the charted course. Our attempt to fit the university information against this chart has led us to believe (subjectively of course) that Canadian universities are no better or worse than other universities in that their qualities cannot be measured with any degree of absolute certainty.

Added to this one may indicate, and justifiably so, that if the quality of university is to be measured, this exercise must also involve the school education system since today's school pupils are tomorrow's potential university students.

Exhibit IV.

QUALITY OF UNIVERSITY MODEL.



With due apology to Messrs. Hurtubise and Rowat we present a rather lengthy quotation from their report which, in a way sums up the complex nature of a modern-day university and consequently, the impossibility of measuring its quality with due objectivity and impartiality:

"The uncertainty about the role of universities has been brought to sharp focus by the confluence of two developments. One is the changing nature of the universities. This has both quantitative and qualitative aspects. Quantitatively, the number of high-school graduates has been increasing, and many more of them have been going on to university. This double increase has occurred rapidly, thus adding the dynamic problem of rates of change to an already significant problem of numbers. Also, the composition of the university population has been changing: There has been an equally rapid growth of graduate and professional schools. Finally, the "uses of the University" have changed. For a number of technological, social, political and economic reasons, universities have not only expanded their activities in traditional fields, but have been asked - or undertook of their own accord - to engage in practically any human endeavour that took society's or a university's fancy".

This then is the complex nature of modern universities: within complexity they venture to fulfil their basic responsibility - teaching and other related activities conducive to imparting of knowledge: in the process some institutions succeed exceedingly well, others only partially. Should one say that in one case

it is a "good" quality and in the other "bad"?

It is our considered opinion that before passing such a verdict more detailed and painstaking efforts should be expended. To that extent, this study is only introductory in nature and no firm conclusion should be drawn from the exposé presented in these pages.

Suffice it may be to mention, however, that during the present investigation it was strongly felt that to improve the quality or standard of the Canadian universities, the universities must assume the responsibility of sorting out what is good and what is bad in the fraternity of universities rather than passing such responsibilities on to the government. It is clear that due to greatly expanded demand for the university services the cost in general has been increasing disproportionately, but it must be faced that this is only one of the many others which no one but the universities alone can dissolve.

APPENDIX

NOTE

The subject areas have been condensed as follows:

1. Anthropology
2. Sociology (incl. Criminology, Social Services)
3. Psychology
4. Economics (incl. Public Administration, Business Adm.)
5. Urban & Regional Studies (incl. Environmental Planning)
6. Geography
7. Demography
8. Philosophy
9. Historical (incl. History, Political Science, Archeology)
10. Languages (all Languages, Romantic Studies, Linguishes)
11. Miscellaneous (incl. Fine Arts, Law, Theology, Dance, Drama, Cinema, Theatre, Folklore, Music, etc.)

TABLE I

AGE OF UNIVERSITY TEACHERS BY RANK, FIELD

Teachers Faculty Median age 1975	Teachers			
	Prof.	Ass. Prof.	Asst. Prof.	Lecturers
<u>All fields:</u>				
Median age	48-5	40-1	33-6	30.2
Max. concentration	45-49	35-39	30-34	25-29
<u>Administration:</u>				
Median age	49-0	46-6	35	29-8
Max. concentration	40-44	35-39	30-34	25-29
<u>Humanities:</u>				
Median age	50-7	41-9	35-0	31-0
Max. concentration	45-49	35-39	30-34	25-29
<u>Social Science:</u>				
Median age	48-3	40-2	32-11	29-3
Max. concentration	45-49	35-39	30-34	25-29
<u>Biological Science:</u>				
Median age	49-3	41-3	35-6	32-3
Max. concentration	45-49	35-39	30-34	25-29
<u>Physical Science:</u>				
Median age	46-2	38-3	32-0	29-5
Max. concentration	40-44	35-39	30-34	25-29
<u>Fields Unspecified:</u>				
Median age	50-6	41-5	34-0	34-11
Max. concentration	54-58	35-39	30-34	25-29

SOURCE: Canada Statistics Reports 81-203-204 , Various Years.

TABLE I A

AGE OF UNIVERSITY TEACHER BY SUBJECT 1970-71

	<u>Median Age</u>	<u>Maximum concentration</u>
<u>Pure Social Science:</u>		
Economics	35-0	30-34
Political Science	33-7	30-34
Total Economic & Political Sc.	34-4	30-34
Geography	33-6	30-34
History	36-0	30-34
Psychology	34-2	30-34
Sociology & Anthropology	35-5	30-34
Total Pure Social Science	34-9	30-34
<u>Applied Social Science:</u>		
Commerce, B. Admin.	34-7	30-34
Education	40-6	35-39
Household Science & Home Econ.	39-9	30-34
Law	33-10	25-29
Physical & Health Education	33-0	25-29
Social Work	39-11	30-34
Secretarial Science	42-3	25-29
Total Applied Social Science	37-8	30-34
Total Social Science	36-2	25-29
Total Humanities	37-10	30-34
Total Biological Sciences	38-2	35-39
Pure Science	36-1	30-34
Total Physical Science	36-7	30-34

Source: Canada Statistics Reports 81-203-204. Various Years.

TABLE II

HIGHEST EARNED UNIVERSITY DEGREE OF FACULTY

BY RANK AND REGION, 1970-71

	Professors		Ass. Professors		Asstt. Professors		Lecturers		Total
	No.	% tot.	No.	% tot.	No.	% tot.	No.	% tot.	No.
	1	2	3	4	5	6	7	8	9
Atlantic:									
Ph.D.	225	23.2	315	32.4	407	41.9	24	2.5	971
% sub tot	(61.6)		(58.6)		(39.4)		(4.1)		(38.5)
Masters	83	8.6	104	10.8	430	44.6	348	36.1	965
% sub tot	(22.7)		(19.3)		(41.6)		(59.1)		(38.2)
Others	57	9.7	119	20.2	196	33.3	217	36.8	589
% sub tot	(15.6)		(22.1)		(19.0)		(36.8)		(23.3)
Sub tot.	365	14.4	538	21.3	1033	40.9	589	23.3	2525
%	(100.0)		(100.0)		(100.0)		(100.0)		(100.0)
Quebec:									
Ph.D.	576	23.5	830	33.9	908	37.1	135	5.5	2449
% sub tot	(67.8)		(60.8)		(42.1)		(11.9)		(44.5)
Masters	185	8.4	361	16.4	908	41.2	749	34.0	2203
% sub tot	(21.8)		(26.4)		(42.1)		(66.2)		(40.0)
Others	88	10.4	175	20.6	340	40.0	247	29.1	850
% sub tot	(10.4)		(12.8)		(15.8)		(21.9)		(15.4)
Sub tot.	849	15.4	1366	24.8	2156	39.2	1131	20.6	5502
%	(100.0)		(100.0)		(100.0)		(100.0)		(100.0)
Ontario									
Ph.D.	1470	28.8	1775	34.8	1770	34.7	84	1.6	5099
% sub tot	(75.4)		(71.6)		(55.6)		(6.2)		(56.9)
Masters	280	10.9	455	17.6	1015	39.4	827	32.1	2577
% sub tot	(14.4)		(18.3)		(31.9)		(61.1)		(28.7)
Others	199	15.4	250	19.3	401	31.0	442	34.2	1292
% sub tot	(10.2)		(10.1)		(12.6)		(32.7)		(14.4)
Sub tot.	1949	21.7	2480	27.7	3186	35.5	1353	15.1	8968
%	(100.0)		(100.0)		(100.0)		(100.0)		(100.0)
Western									
Ph.D.	974	26.5	1405	38.2	1261	34.3	36	1.0	3676
% sub tot	(74.3)		(67.4)		(48.5)		(4.6)		(54.2)
Masters	191	9.4	445	21.9	970	47.6	430	21.1	2036
% sub tot	(14.6)		(21.3)		(37.3)		(55.0)		(30.0)
Others	146	13.7	236	22.1	371	34.7	316	29.6	1069
% sub tot	(11.1)		(11.3)		(14.3)		(40.4)		(15.8)
Sub tot.	1311	19.3	2086	30.8	2602	38.4	782	11.5	6781
%	(100.0)		(100.0)		(100.0)		(100.0)		(100.0)
Canada									
Ph.D.	3245	26.6	4325	35.5	4346	35.6	279	2.3	12195
% sub tot	(72.5)		(66.8)		(48.4)		(7.2)		(51.3)
Masters	739	9.4	1435	18.3	3323	42.3	2354	30.0	7851
% sub tot	(16.5)		(22.2)		(37.0)		(61.1)		(33.0)
Others	490	13.1	710	19.0	1308	35.1	1222	32.8	3730
% sub tot	(11.0)		(11.0)		(14.6)		(31.7)		(15.7)
Sub tot.	4474	18.8	6470	27.2	8977	37.8	3855	16.2	23776
%	(100.0)		(100.0)		(100.0)		(100.0)		(100.0)

TABLE II A

DISTRIBUTION OF HIGHEST EARNED UNIVERSITY DEGREE OF FACULTY BY
REGION AS PERCENTAGE OF CANADA TOTAL, 1970-71.

	Professors	Ass. Prof.	Asstt. Prof.	Lecturers	Total
<u>Atlantic:</u>					
Ph.D.	6.9	7.3	9.4	8.6	8.6
Masters	11.2	7.2	12.9	14.8	12.9
Others	11.6	16.8	15.0	17.8	15.0
S.T.	8.2	8.3	11.5	15.3	10.0
<u>Quebec:</u>					
Ph.D.	17.8	19.2	20.9	48.4	20.9
Masters	25.0	25.2	27.3	31.8	28.0
Others	18.0	24.6	26.0	20.2	22.0
S.T.	19.0	21.1	24.0	29.3	23.0
<u>Ontario:</u>					
Ph.D.	45.3	41.0	40.7	30.1	41.0
Masters	37.9	31.7	30.5	35.1	32.0
Others	40.6	35.2	30.7	36.2	34.0
S.T.	43.6	38.3	35.5	35.1	37.0
<u>Western:</u>					
Ph.D.	30.0	32.5	29.0	12.9	30.0
Masters	25.8	31.0	29.2	18.3	25.0
Others	29.8	33.2	28.4	25.9	28.0
S.T.	29.3	32.2	29.0	20.3	28.0
<u>Canada:</u>					
Ph.D.	100.0	100.0	100.0	100.0	100.0
Masters	100.0	100.0	100.0	100.0	100.0
Others	100.0	100.0	100.0	100.0	100.0
S.T.	100.0	100.0	100.0	100.0	100.0

ASS. = Associate
ASSTT. = Assistant

TABLE III

AGE OF UNIVERSITY TEACHER BY RANK HIGHEST EARNED UNIVERSITY DEGREE

	<u>Prof.</u>	<u>Ass. Prof.</u>	<u>Asst. Prof.</u>	<u>Lecturer</u>
<u>Doctorate</u>				
Median Age	47-4	38-10	32-8	30-9
Max. Conc.	45-49	35-39	30-34	25-29
<u>Masters</u>				
Median Age	50-10	43-6	34-3	29-11
Max. Conc.	50-54	40-44	30-34	25-29

TABLE IV

SALARIES OF UNIVERSITY TEACHERS BY RANK & REGION

Teachers Salary Range \$	Prof.	Ass. Prof	Asst. Prof	Lecturers
	<u>Atlantic Provinces</u>			
Median salary	19769	14850	11762	9253
Highest range	35000+	32000-32999	29000-29999	26000-26999
Maximum concentration	18000-18999	14000-14999	11000-11999	9000-9999
<u>Quebec</u>				
Median salary	20350	15696	12618	9986
Highest range	35000+	33000-33999	30000-30999	20000-20999
Maximum concentration	21000-21999	14000-14999	12000-12999	9000-9999
<u>Ontario</u>				
Median salary	22212	16572	13089	10521
Highest range	35000+	34000-34999	30000-30999	23000-23999
Maximum concentration	20000-20999	15000-15999	13000-13999	10000-10999
<u>Western Provinces</u>				
Median salary	21969	16048	12670	9563
Highest range	35000+	34000-34999	30000-30999	25000-25999
Maximum concentration	20000-20999	15000-15999	12000-12999	9000-9999

SOURCE: Canada Statistics Reports 81-203-204. Various Years.

UNIVERSITY		ANTHROPOLOGY	SOCIOLOGY	PSYCHOLOGY	ECONOMICS	URBAN REGIONAL STUDIES	GEOGRAPHY	DEMOGRAPHY	PHILOSOPHY	HISTORICAL ST.	LANGUAGES	FINE ARTS AND MISCELLANEOUS
ONTARIO:	Guelph	B.A.	x	x	x	x	-	x	-	x	x	x
		M.A.	x	x	x	x	x	-	x	x	x	-
		Doctorate	-	-	-	-	-	-	-	x	x	-
	McMaster	B.A.	x	x	x	x	-	x	-	x	x	x
		M.A.	x	x	x	x	x	-	x	x	x	-
		Doctorate	-	x	-	x	-	-	-	x	x	-
	Ottawa	B.A.	-	x	x	x	x	x	x	x	x	x
		M.A.	-	x	x	x	x	-	x	x	x	x
		Doctorate	-	-	x	x	-	x	-	x	x	x
	Queens	B.A.	-	x	x	x	-	x	-	x	x	x
		M.A.	-	x	x	x	x	-	-	x	x	-
		Doctorate	-	x	x	x	x	-	-	x	x	-
Toronto	B.A.	x	x	x	x	-	x	-	x	x	x	
	M.A.	x	x	x	x	-	x	-	x	x	x	
	Doctorate	x	x	x	x	-	x	-	x	x	x	
Trent	B.A.	x	x	x	x	-	-	-	x	x	x	
	M.A.	-	-	-	-	-	-	-	-	x	-	
	Doctorate	-	-	-	-	-	-	-	-	-	-	
Waterloo	B.A.	x	x	x	x	x	x	-	x	x	x	
	M.A.	-	x	x	x	-	x	-	x	x	x	
	Doctorate	-	x	x	-	-	x	-	x	x	-	
Waterloo Luth.	B.A.	-	x	x	x	-	x	-	x	x	x	
	M.A.	-	-	x	x	-	x	-	-	x	-	
	Doctorate	-	-	-	-	-	-	-	-	-	-	
Western	B.A.	-	x	x	x	-	x	-	x	x	x	
	M.A.	-	x	x	x	-	x	-	x	x	-	
	Doctorate	-	-	x	x	-	x	-	x	x	-	
York	B.A.	x	x	x	x	-	x	-	x	x	x	
	M.A.	-	x	x	x	-	x	-	x	x	-	
	Doctorate	-	x	x	-	-	-	-	x	x	-	
Windsor	B.A.	x	x	x	x	-	x	-	x	x	x	
	M.A.	-	x	x	x	-	x	-	x	x	-	
	Doctorate	-	-	x	-	-	-	-	-	-	-	
MANITOBA:	Manitoba	B.A.	x	x	x	x	-	x	-	x	x	x
		M.A.	x	x	x	x	-	x	-	x	x	x
		Doctorate	-	-	x	x	-	x	-	x	x	-
Winnipeg	B.A.	x	x	x	x	x	x	-	x	x	x	
	M.A.	-	-	-	-	-	-	-	-	-	-	
	Ph.D.	-	-	-	-	-	-	-	-	-	-	
SASKATCHEWAN:	Saskatchewan	B.A.	x	x	x	x	-	x	-	x	x	x
		M.A.	x	x	x	x	-	x	-	x	x	-
		Doctorate	-	x	x	x	-	-	-	x	x	-

CONT'D

UNIVERSITY		ANTHROPOLOGY	SOCIOLOGY	PSYCHOLOGY	ECONOMICS	URBAN REGIONAL STUDIES	GEOGRAPHY	DEMOGRAPHY	PHILOSOPHY	HISTORICAL ST.	LANGUAGES	FINE ARTS AND MISCELLANEOUS
ALBERTA:	Alberta	B.A.	X	X	X	X			X	X	X	X
		M.A.	X	X	X	X			X	X	X	X
		Doctorate	X	X	X	X			X	X	X	X
	Calgary	B.A.	X	X	X	X	X		X	X	X	X
		M.A.	X	X	X	X	X		X	X	X	X
		Doctorate	-	-	-	X	-	X	-	X	X	-
BRITISH COLUMBIA:	British Columbia	B.A.	X	X	X	X			X	X	X	X
		M.A.	X	X	X	X			X	X	X	X
		Doctorate	X	X	X	X			X	X	X	X
	Simon Fraser	B.A.	X	X	X	X	X		X	X	X	X
		M.A.	X	X	X	X	X		X	X	X	X
		Doctorate	X	X	X	X	X		-	X	X	X
	Victoria	B.A.	X	X	X	X			X	X	X	X
		M.A.	X	X	X	-			X	X	X	X
		Doctorate	-	-	X	-		X	-	X	X	X

Source: Universities and Colleges of Canada, 1972
Association of Universities and Colleges of Canada.

TABLE VI

FULL TIME UNDERGRADUATE ENROLLMENT BEYOND SENIOR MATRICULATION BY PROVINCE
AND SEX COMPARED WITH POPULATION BY PROVINCE AND SEX AGES 18-21 YEARS INCLUSIVE
1970-71

	Male Students (000)	Male Pop. 18-21 (000)	Enroll- ment Ratio %	Female Students (000)	Female Pop. 18-21 (000)	Enroll- ment Ratio %
NFLD	2378	22.8	10.4	1304	22.7	5.7
PEI	585	4.6	12.7	362	4.6	7.9
N.S.	7173	31.2	23.0	4573	30.3	15.1
N.B.	4369	27.4	15.9	2310	26.7	8.7
TOTAL ATLANTIC	14505	86.0	16.9	8549	84.3	10.1
QUEBEC	30417	236.3	12.9	13839	233.7	5.9
ONTARIO	64196	270.2	23.8	34906	261.9	13.3
MANITOBA	8993	36.8	24.4	4923	36.2	13.6
SASKATCHEWAN	8295	36.5	22.7	5406	35.4	15.3
ALBERTA	14861	57.6	25.8	9686	56.2	17.2
B.C.	11984	75.0	16.0	7398	71.4	10.4
CANADA	153251	799.7	19.2	84707	780.5	10.9

Source: Canada Statistics Reports 81-203-204
Various years

TABLE VII

FULL TIME CANDIDATES FOR MASTERS BY PROVINCE SPECIALIZED
1970-71

	NFLD	N.S.	N.B.	P.Q.	ONT.	MAN.	SASK.	ALTA	B.C.	TOTAL CANADA
Total	280	692	488	4879	8677	1058	481	1691	2428	20674
Education	52	74	55	783	437	29	54	364	375	2223
Fine & Applied Arts	-	-	-	63	86	-	3	33	54	239
Humanities Rel.	51	176	103	983	1911	131	46	218	384	4003
Social Science Rel.	84	219	1115	1516	3404	437	111	464	939	7289
Commerce & Bus. Ad.	-	46	-	475	1084	39	26	53	358	2081
Economics	16	17	22	150	302	43	4	44	63	661
Agric Economics	-	-	-	6	27	22	5	9	11	80
Geography	6	-	-	95	192	28	11	68	72	472
City & Town Planning	-	-	-	-	-	-	-	-	-	-
Pol. Sc.	-	26	6	117	245	21	11	38	23	487
Psychology	21	16	75	206	387	43	27	80	61	916
Sociology	36	33	12	133	310	26	9	57	28	644
Social Work	-	80	-	100	471	130	-	51	143	976
Agric. & Biolog. Sc.	43	64	20	271	474	170	92	142	232	1508
Engineering & Applied Sc.	6	29	129	543	1150	81	72	189	146	2345
Health Prof. & Occup.	-	24	-	262	271	61	23	54	44	739
Mathematics & Phys. Sc.	44	106	66	389	942	149	80	227	254	2257
Management of Environment Studies*	-	-	-	41	137	46	-	17	70	311

* Includes City & Town Planning, Community Development, Environment Studies, Resource Management, Resources & Environment, Urban & Regional Planning.

Source: Canada Statistics Reports 81-203-204. Various Years.

TABLE VIII

CANDIDATES FOR DOCTORALS BY PROV. & SPECIALIZED

	1970-71									
	Nfld.	N.S.	N.B.	P.Q.	Ont.	Man.	Sask.	Alta.	B.C.	Tot.Can.
Total	64	244	106	2728	6271	367	247	1322	1274	12623
Education	-	-	-	139	439	3	8	224	61	874
Fine & Applied Arts	-	-	-	15	56	-	-	1	-	72
Humanities Rel.	16	36	19	641	1494	33	14	191	220	2664
Social science & religion	3	32	1	732	1431	73	32	196	223	2723
Commerce & Bus Adminis.	-	-	-	6	41	-	-	-	17	64
Economics	-	11	1	47	266	11	3	18	46	403
Agri. Economic	-	-	-	-	-	21	1	3	0	25
Geography	-	-	-	36	104	2	5	20	28	195
City & Town planning	-	-	-	5	-	-	-	-	-	5
Urban & regional plan.	-	-	-	-	14	-	-	-	4	18
Pol. Science	-	1	-	49	93	-	2	28	25	198
Psychology	-	19	-	279	488	39	15	55	34	929
Sociology	3	1	-	90	144	-	6	28	36	308
Social work	-	-	-	-	28	-	-	-	-	28
Agriculture & Biological science.	15	55	16	190	434	82	73	156	217	1238
Engineering applied Sc.	-	21	30	286	790	30	35	155	115	1462
Health Professions & occup.	2	14	-	217	322	63	25	103	45	791
Mathematics & physical Scien.	28	86	40	453	1305	83	60	295	393	2743

SOURCE: Canada Statistics Reports 81-203-204
Various Years.

TABLE IX

FULL TIME UNIVERSITY & COLLEGE ENROLLMENT BY PROVINCE
AND FIELD OF STUDY IN ACADEMIC YEARS 1969-70 - 1970-71

	<u>Community Regional & Urban Planning</u>	<u>Environmental Studies</u>	<u>Social Work</u>
Newfoundland:			
1969-70	-	-	123
1970-71	-	-	219
Prince Edward Island:			
1969-70	-	-	-
1970-71	-	-	-
Nova Scotia:			
1969-70	-	-	-
1970-71	-	-	-
New Brunswick:			
1969-70	-	-	92
1970-71	-	-	129
Quebec:			
1969-70	-	-	581
1970-71	-	-	680
Ontario:			
1969-70	200	175	367
1970-71	266	406	732
Manitoba:			
1969-70	-	224	296
1970-71	-	208	439
Saskatchewan:			
1969-70	-	-	-
1970-71	-	-	-
Alberta:			
1969-70	-	-	-
1970-71	-	-	-
British Columbia:			
1969-70	-	-	-
1970-71	-	-	-
Canada:			
1969-70	200	399	1459
1970-71	266	614	2199

Source: Canada Statistics Reports 81-203-204. Various Years.

TABLE X

RATIO OF FULL TIME UNIVERSITY TEACHERS TO FULL
TIME STUDENTS BY REGIONS, 65-66 to 70-71

	<u>Atlantic Provinces</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Western Provinces</u>	<u>Total</u>
1965-66	1:15.4	1:16.0	1:12.3	1:15.4	1:14.5
1967-68	1:15.0	1:19.5	1:12.2	1:14.5	1:14.7
1968-69	1:13.8	1:17.9	1:12.1	1:14.3	1:14.2
1969-70	1:13.3	1:13.6	1:13.6	1:14.5	1:13.5
1970-71	1:13.2	1:10.9	1:12.9	1:12.9	1:12.5

TABLE XI

TOTAL OPERATING EXPENDITURES OF UNIVERSITIES & COLLEGES

INCL. ASSISTED RESEARCH, BY REGION. 1968 - 1971 in \$'000

Oper. cost.	1968-69					1969-70					1970-71 ^P				
	Atl.	Que.	Ont.	West.	Can.	Atl.	Que.	Ont.	West.	Can.	Atl.	Que.	Ont.	West.	Can.
Enrollment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Full-t. enrol.	(10.1) 27203	(23.8) 64401	(34.3) 92589	(31.8) 85900	(100.0) 270093	(10.2) 30642	(22.3) 66830	(36.3) 108825	(31.2) 93592	(100.0) 299889	(10.9) 34533	(19.8) 62941	(38.1) 121115	(31.2) 99192	(100.0) 317781
Wages \$ sal.	44415	130113	247702	165576	587806	56570	158619	299647	202219	717055	64837	182044	352585	232585	832051
% of Can. tot.	7.6	22.1	41.6	28.2	100.0	7.9	22.1	41.8	28.2	100.0	7.8	21.9	42.4	28.0	100.0
% of Reg. tot.	61.6	68.3	65.9	64.1	65.5	62.3	68.5	66.0	65.7	66.1	62.0	70.6	66.7	66.1	60.9
Cost per st.	(1.6)	(2.0)	(2.7)	(1.9)	(2.2)	(1.8)	(2.4)	(2.8)	(2.2)	(2.4)	(1.9)	(2.9)	(2.9)	(2.3)	(2.6)
Library	5201	12032	27676	17967	62876	6461	14084	31740	21094	73379	7605 ^e	15798 ^e	37964 ^e	24695 ^e	86086 ^e
% of Can. tot.	8.3	19.1	44.0	28.6	100.0	8.8	19.2	43.3	28.7	100.0	8.8	18.4	44.1	28.7	100.0
% of Reg. tot.	7.2	6.3	7.4	7.0	9.0	7.1	6.1	7.0	6.9	6.8	7.3	6.1	7.2	7.0	6.9
Cost per st.	(0.2)	(0.2)	(0.3)	(0.2)	(0.2)	(0.2)	(0.2)	(0.3)	(0.2)	(0.2)	(0.2)	(0.3)	(0.3)	(0.2)	(0.3)
Ass. research	5697	28805	56840	36056	127398	7286	32825	64789	38174	143074	7101	36989	57744	40406	142240
% of Can. tot.	4.5	22.6	44.6	28.3	100.0	5.1	22.9	45.3	26.7	100.0	5.0	26.0	40.6	28.4	100.0
% of Reg. tot.	7.9	15.1	15.1	13.9	14.2	8.0	14.2	14.3	12.4	13.2	6.8	14.3	10.9	11.5	11.4
Cost per st.	(0.2)	(0.4)	(0.6)	(0.4)	(0.5)	(0.2)	(0.5)	(0.6)	(0.4)	(0.5)	(0.2)	(0.6)	(0.5)	(0.4)	(0.4)
Others	16750	19678	43451	38894	118773	20526	26115	57854	46194	150689	24977	23184	80391	54373	182901
% of Can. tot.	14.1	16.6	36.6	32.7	100.0	13.6	17.3	38.4	30.7	100.0	13.7	12.7	44.0	29.7	100.0
% of Reg. tot.	23.2	10.3	11.6	15.0	13.2	22.6	11.3	12.7	15.0	13.9	23.9	9.0	15.2	15.4	14.7
Cost per st.	(0.6)	(0.3)	(0.5)	(0.5)	(0.4)	(0.7)	(0.4)	(0.5)	(0.5)	(0.5)	(0.7)	(0.4)	(0.7)	(0.5)	(2.6)
Reg. tot.	72063	190628	375669	258493	896853	90843	231643	454030	307681	1084197	104520	258015	528684	352059	1243278
% of Can. tot.	8.0	21.3	41.9	28.8	100.0	8.4	21.4	41.9	28.4	100.0	8.4	20.8	42.5	28.3	100.0
% of Reg. tot.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cost per st.	(2.6)	(3.0)	(4.0)	(3.0)	(3.3)	(3.0)	(3.5)	(4.2)	(3.3)	(3.6)	(3.0)	(4.1)	(4.4)	(3.5)	(3.9)

P. Preliminary

e. estimate from prel. figures by SHAB and total may not add.

TABLE XII

INCIDENCE OF RESEARCH AWARDS BY REGION, 1970-71.

	No. of Uni- versities	No. of teach- ing staff 1)	Doctoral candidates	Full-time masters candidates	Total Research group (col.2+3+4)	Total amount of research grants, (1000\$) 2)	Grant per research ¹ \$ (col.6÷col.5)	Grant per university \$'000 (col.6÷col.1)
	1	2	3	4	5	6	7	8
<u>Atlantic Provinces:</u>	12 25.5	2525 10.6	414 3.3	1460 7.1	4399 7.7	5246 5.5	1192	437
<u>Quebec Province:</u>	8 17.0	5502 23.2	2728 21.6	4879 23.6	13109 23.0	23488 24.6	1791	2936
<u>Ontario Province:</u>	16 34.1	8968 37.7	6271 49.7	8677 42.0	23916 41.9	38685 40.8	1617	2418
<u>Western Provinces</u>	11 23.4	6781 28.5	3210 25.4	5658 27.3	15649 27.4	27708 29.1	1770	2519
<u>Canada Total:</u>	47 100.0	23776 100.0	12623 100.0	20674 100.0	57073 100.0	95127 100.0	1656	2024

1) incl. Professors, Ass. Professors, Asst. Professors, Lecturers & Instructors.

2) incl. Research grants & fellowships, etc.. given to institutions & Individuals by Canada Council, N.R.C. M.R.C.

SOURCE: Statistics Canada, Canada Council Awards.

TABLE XIII

CANADA COUNCIL RESEARCH GRANTS \$5,000 OR LESS BY REGION.

	No. of Grants	% of Total	Amount of Grants \$	% of Total
<u>1968-69</u>				
Atlantic	27	5.1	52129	4.6
Quebec	75	14.2	148492	13.2
Ontario	292	55.3	615702	54.9
Prairies	66	12.5	147317	13.1
British Columbia	68	12.9	158038	14.1
Total	528	100.0	1121678	100.0
<u>1969-70</u>				
Atlantic	28	4.8	61036	4.4
Quebec	98	16.6	248203	18.1
Ontario	307	52.1	673239	49.1
Prairies	87	14.8	213816	15.6
British Columbia	69	11.7	175874	12.8
Total	589	100.0	1372168	100.0
<u>1970-71</u>				
Atlantic	29	4.6	62945	4.2
Quebec	99	15.8	266727	17.6
Ontario	315	50.2	711125	47.0
Prairies	86	13.7	231728	15.3
British Columbia	98	15.6	241185	15.9
Total	627	100.0	1513510	100.0

Source: Canada Council Annual Reports Various Years.

TABLE XV
CANADA COUNCIL
NO. OF GRANTS, 1968-69

UNIVERSITY	ANTHROPOLOGY	SOCIOLOGY	PSYCHOLOGY	ECONOMICS	URBAN REGIONAL STUDIES	GEOGRAPHY	DEMOGRAPHY	PHILOSOPHY	HISTORICAL ST.	LANGUAGES	MISCELLANEOUS	TOTAL
NFLD Memorial	-	-	-	1	-	-	-	-	2	2	-	5
N.B. New Brunswick	1	-	-	-	-	-	-	-	4	5	-	10
N.S. Dalhousie	-	-	-	1	-	-	-	-	3	3	-	7
St. François Xavier	-	-	-	-	-	-	-	-	1	1	-	2
Mount Allison	-	-	-	-	-	-	-	-	1	1	-	2
Acadia	-	-	-	1	-	-	-	-	-	-	-	1
Region Total	1	-	-	3	-	-	-	-	11	12	-	27
QUEBEC Bishops	-	1	-	-	-	-	-	-	3	-	-	4
Laval	-	1	-	1	-	-	-	-	7	4	-	13
McGill	-	1	1	2	-	-	-	2	7	16	3	32
Montreal	2	-	1	1	1	1	1	-	5	6	1	19
Sir George W. Loyola	-	-	-	1	-	-	-	-	2	-	-	3
Loyola	-	-	-	1	-	-	-	-	2	1	-	4
Region Total	2	3	2	6	1	1	1	2	26	27	3	75
ONTARIO Brock	-	-	-	-	-	-	-	-	1	3	-	4
Carleton	-	-	1	1	-	-	-	-	7	4	-	13
Guelph	-	1	-	2	-	-	-	-	5	6	-	14
McMaster	1	4	-	2	-	1	-	2	3	6	2	21
Ottawa	-	1	-	1	-	-	1	2	13	5	2	25
Queens	-	-	1	3	-	1	-	-	12	8	-	25
RMC	-	-	-	1	-	-	-	-	2	1	-	4
Toronto	4	6	3	5	1	2	1	1	17	37	13	90
Trent	1	1	-	-	-	-	-	1	5	6	-	14
Waterloo	-	2	-	1	-	1	-	-	4	8	-	16
Waterloo Lutheran	-	-	-	-	-	-	-	-	-	1	-	1
Western Ontario	-	-	1	2	1	1	-	3	4	15	-	27
York	-	1	2	1	-	-	-	-	9	14	-	27
Laurentian	-	-	-	-	-	-	-	-	2	1	-	3
Windsor	-	-	-	3	-	-	-	1	2	1	1	8
Region Total	6	16	8	22	2	6	2	10	86	116	18	292
MANITOBA Manitoba	1	-	1	1	-	1	-	-	5	5	1	15
SASKATCHEWAN Saskatchewan	-	1	-	1	-	-	-	-	4	5	-	11
ALBERTA Alberta	1	2	-	-	-	1	1	1	5	7	-	18
Calgary	1	1	2	5	-	2	-	1	-	9	1	22
Region Total	3	4	3	7	-	4	1	2	14	26	2	66
BRITISH COLUMBIA British Columbia	1	2	1	3	1	2	-	-	13	18	-	41
Simon Fraser	-	-	1	5	-	-	-	-	9	5	-	20
Victoria	-	1	-	-	-	-	-	-	1	5	-	7
Region Total	1	3	2	8	1	2	-	-	23	28	-	68
GRAND TOTAL	13	26	15	46	4	13	4	14	160	209	24	528

Source: The Canada Council, 12th Annual Report 1968-69.

CONT'D

CANADA COUNCIL
NO. OF GRANTS, 1969-70

UNIVERSITY	ANTHROPOLOGY	SOCIOLOGY	PSYCHOLOGY	ECONOMICS	URBAN REGIONAL STUDIES	GEOGRAPHY	DEMOGRAPHY	PHILOSOPHY	HISTORICAL ST.	LANGUAGES	FINE ARTS AND MISCELLANEOUS	T O T A L
NFLD Memorial	-	-	2	1	-	-	-	-	1	3	-	7
N.B. Moncton	-	-	-	-	-	-	-	1	-	-	-	1
New Brunswick	-	-	1	1	-	-	-	-	2	4	-	8
N.S. Dalhousie	1	1	1	-	-	-	-	1	1	3	-	8
St. François Xavier	-	-	-	-	-	-	-	1	1	-	-	1
Mount Allison	-	-	-	-	-	-	-	-	-	-	-	1
Acadia	-	-	-	-	-	-	-	-	1	1	-	2
Total	1	1	4	2	-	-	-	3	6	11	-	28
QUEBEC Sherbrooke	-	-	-	-	-	1	-	-	-	2	-	3
Bishops	-	-	-	-	-	1	-	-	1	-	-	2
Laval	-	2	-	-	-	-	-	-	7	4	-	13
McGill	-	1	1	1	-	1	-	2	3	18	7	34
Montreal	-	2	-	-	1	-	-	1	12	11	6	33
St. George W.	-	2	-	2	-	-	-	-	2	1	-	7
Loyola	-	-	-	-	-	-	-	-	-	3	-	3
Quebec	-	-	1	-	-	-	-	-	2	-	-	3
Total	-	7	2	3	1	3	-	3	27	39	13	98
ONTARIO Brock	-	-	-	-	-	-	-	-	1	-	-	1
Carleton	1	2	1	1	-	-	-	-	8	11	1	25
Guelph	-	-	2	-	-	1	-	2	2	9	2	18
McMaster	1	1	-	2	1	-	-	-	5	4	1	15
Ottawa	-	1	-	-	-	2	1	1	9	4	4	22
Queens	-	1	1	2	-	4	-	-	12	4	-	24
RMC	-	-	-	-	-	-	-	-	1	-	-	1
Toronto	3	8	-	7	1	3	-	3	31	50	3	109
Trent	-	1	-	-	-	-	-	-	7	4	-	12
Waterloo	-	3	1	-	-	1	1	-	5	3	1	15
Waterloo Lutheran	-	-	-	-	-	-	-	-	1	2	-	3
Western Ontario	-	2	-	1	-	1	2	2	3	6	2	19
York	-	1	-	-	-	3	-	2	10	13	-	29
Laurentian	-	-	-	-	-	-	-	-	3	2	-	5
Windsor	-	1	1	1	-	-	-	-	4	2	-	9
Total	5	21	6	14	2	15	4	10	102	114	14	307
MANITOBA Manitoba	1	1	1	3	1	3	-	-	7	3	6	26
SASKATCHEWAN Saskatchewan	1	1	-	-	-	2	-	2	3	4	-	13
ALBERTA Alberta	-	2	-	3	-	-	-	2	4	10	1	22
Calgary	4	3	4	-	-	2	-	1	7	5	-	26
Total	6	7	5	6	1	7	-	5	21	22	7	87
BRITISH COLUMBIA British Columbia	4	1	3	3	-	-	-	-	8	10	3	32
Simon Fraser	-	1	-	4	-	2	-	-	5	5	-	17
Victoria	1	1	-	-	-	2	-	-	3	11	2	20
Total	5	3	3	7	-	4	-	-	16	26	5	69
GRAND TOTAL	17	39	20	32	4	29	4	21	172	212	39	589

CANADA COUNCIL
NO. OF GRANTS, 1970-71

UNIVERSITY	ANTHROPOLOGY	SOCIOLOGY	PSYCHOLOGY	ECONOMICS	URBAN REGIONAL STUDIES	GEOGRAPHY	DEMOGRAPHY	PHILOSOPHY	HISTORICAL ST.	LANGUAGES	FINE ARTS AND MISCELLANEOUS	TOTAL
NFLD Memorial	1	-	1	-	-	-	-	-	3	4	-	9
N.B. Moncton New Brunswick	-	-	-	-	-	-	-	-	1	4	-	5
N.S. Dalhousie	1	-	-	2	-	-	-	1	2	3	-	9
St. François Xavier	-	-	-	-	-	-	-	-	2	-	-	2
Mount Allison	-	-	-	1	-	-	-	1	1	-	-	2
Acadia	-	-	-	1	-	-	-	-	-	1	-	2
Total	2	-	1	3	-	-	-	2	9	12	-	29
QUEBEC												
Quebec	-	-	1	2	-	-	-	-	2	2	2	9
Bishops	-	1	-	-	-	1	-	-	-	-	-	2
Laval	-	2	-	-	-	1	-	-	6	3	4	16
McGill	-	1	-	2	-	2	-	2	7	12	1	27
Montreal	6	3	1	1	1	-	-	-	13	10	2	37
St. George W.	-	1	-	-	-	-	-	-	3	1	-	5
Loyola	-	-	-	-	-	-	-	-	1	-	-	2
Sherbrooke	-	-	-	-	-	-	-	-	-	1	-	1
Total	6	8	3	5	1	4	-	2	30	29	9	99
ONTARIO												
Brock	-	-	-	-	-	-	-	1	1	1	-	3
Carleton	1	1	-	-	-	-	-	-	12	12	-	26
Guelph	1	2	1	1	-	1	-	2	6	2	-	16
McMaster	3	1	-	2	-	-	-	-	4	6	1	17
Ottawa	-	1	-	-	-	2	-	1	13	4	1	22
Queens	-	-	2	4	-	-	-	-	6	4	-	16
RMC	-	-	-	-	-	-	-	-	1	-	-	1
Toronto	1	3	3	6	-	2	-	6	32	50	11	114
Trent	1	-	-	-	-	-	-	-	3	1	-	5
Waterloo	2	3	-	1	-	2	-	1	8	7	-	24
Waterloo Lutheran	-	-	-	-	-	-	-	-	1	-	-	1
Western Ontario	-	1	4	4	1	2	1	1	12	8	3	37
York	-	-	2	1	-	2	-	-	12	7	-	24
Laurentian	-	-	-	-	-	-	-	-	3	-	1	4
Windsor	-	-	3	-	-	-	-	-	1	-	1	5
Total	9	12	15	19	1	11	1	12	115	102	18	315
MANITOBA												
Manitoba	4	-	1	-	-	-	-	-	6	1	1	13
SASKATCHEWAN												
Saskatchewan	1	-	3	-	-	1	-	1	7	7	-	20
ALBERTA												
Alberta	-	3	4	-	-	-	-	-	10	4	3	24
Calgary	1	-	4	5	-	-	-	2	11	6	-	29
Total	6	3	12	5	-	1	-	3	34	18	4	36
BRITISH COLUMBIA												
British Columbia	6	2	6	10	-	3	-	1	22	18	3	71
Simon Fraser	-	-	-	2	-	2	-	-	7	1	-	12
Victoria	2	-	-	1	-	-	-	-	5	7	-	15
Total	8	2	6	13	-	5	-	1	34	26	3	98
GRAND TOTAL	33	25	37	45	2	21	1	20	222	187	34	627

Source: The Canada Council, 14th Annual Report, 1970-71

TABLE XV
CANADA COUNCIL
AMOUNT OF GRANTS 1968-69 ('000\$)
\$5,000 or less

UNIVERSITY	ANTHROPOLOGY	SOCIOLOGY	PSYCHOLOGY	ECONOMICS	URBAN REGIONAL STUDIES	GEOGRAPHY	DEMOGRAPHY	PHILOSOPHY	HISTORICAL ST.	LANGUAGES	FINE ARTS AND MISCELLANEOUS	TOTAL
NFLD Memorial	-	-	-	3.1	-	-	-	-	4.1	2.2	-	9.4
N.B. New Brunswick	2.1	-	-	-	-	-	-	-	7.8	6.7	-	16.6
N.S. Dalhousie	-	-	-	3.1	-	-	-	-	7.0	4.9	-	15.0
St. François X.	-	-	-	-	-	-	-	-	3.4	1.0	-	4.4
Mount Allison	-	-	-	-	-	-	-	-	2.4	1.8	-	4.2
Acadia	-	-	-	2.4	-	-	-	-	-	-	-	2.4
Total	2.1	-	-	8.6	-	-	-	-	24.7	16.6	-	52.0
QUEBEC Bishops	-	2.5	-	-	-	-	-	-	6.0	-	-	8.5
Laval	-	0.5	-	2.0	-	-	-	-	11.6	8.2	-	22.3
McGill	-	1.8	4.4	4.0	-	-	-	3.0	19.3	28.8	5.0	66.3
Montreal	2.4	-	2.5	4.5	0.6	0.8	2.0	-	12.4	13.8	0.6	39.6
St. George W.	-	-	-	1.1	-	-	-	-	4.0	-	-	5.1
Loyola	-	-	-	1.5	-	-	-	-	3.2	2.0	-	6.7
Total	2.4	4.8	6.9	13.1	0.6	0.8	2.0	3.0	56.5	52.8	5.6	148.5
ONTARIO Brock	-	-	-	-	-	-	-	-	1.1	5.1	-	6.2
Carleton	-	-	2.8	2.5	-	-	-	-	12.2	5.3	-	22.8
Guelph	-	2.4	-	2.8	-	-	-	-	10.9	10.5	-	26.6
McMaster	6.0	15.0	-	5.2	-	2.3	-	4.9	5.6	12.2	5.6	56.8
Ottawa	-	4.4	-	3.0	-	-	2.5	3.4	28.7	8.8	8.2	59.0
Queens	-	-	0.7	10.2	-	2.5	-	-	21.6	18.3	-	53.3
RMC	-	-	-	1.6	-	-	-	-	4.7	1.8	-	8.1
Toronto	8.6	12.7	7.5	20.5	2.4	3.3	2.5	2.9	21.2	83.8	21.7	187.1
Trent	2.5	2.5	-	-	-	-	-	0.9	9.3	10.3	-	25.5
Waterloo	-	7.0	-	1.9	-	4.0	-	-	16.7	13.6	-	43.2
Waterloo Luth.	-	-	-	-	-	-	-	-	-	1.1	-	1.1
Western Ont.	-	-	2.3	3.9	1.9	2.4	-	5.1	7.8	23.7	-	47.1
York	-	3.5	8.7	4.7	-	-	-	-	17.2	29.4	-	63.5
Laurentian	-	-	-	-	-	-	-	-	1.0	1.7	-	2.7
Windsor	-	-	-	5.6	-	-	-	2.1	2.9	1.6	0.5	12.7
Total	17.1	47.5	22.0	61.9	4.3	14.5	5.0	19.3	160.9	227.2	36.0	615.7
MANITOBA Manitoba	3.7	-	3.5	2.3	-	4.4	-	-	6.5	10.2	1.2	31.8
SASKATCHEWAN Saskatchewan	-	2.0	-	2.0	-	-	-	-	6.3	9.0	-	19.3
ALBERTA Alberta	1.7	1.9	-	-	-	2.9	4.7	1.8	14.9	15.8	-	43.7
Calgary	3.7	1.9	7.1	10.2	-	4.1	2.5	-	-	18.9	3.9	52.3
Total	9.1	5.8	10.6	14.5	-	11.4	7.2	1.8	27.7	53.9	5.1	147.1
BRITISH COLUMBIA British Columbia	4.2	4.0	1.5	7.4	4.2	7.2	-	-	27.4	41.9	-	97.8
Simon Fraser	-	-	5.0	11.7	-	-	-	-	17.9	12.3	-	46.9
Victoria	-	3.0	-	-	-	-	-	-	0.6	9.6	-	13.2
Total	4.2	7.0	6.5	19.1	4.2	7.2	-	-	45.9	63.8	-	157.9
GRAND TOTAL	34.9	65.1	46.0	117.2	9.1	33.9	14.2	24.1	315.7	414.3	46.7	1121.2

Source: The Canada Council, 12th Annual Report, 1968-69.

CONT'D

CANADA COUNCIL
 AMOUNT OF GRANTS 1969-70 ('000\$)
 \$5,000 or less

UNIVERSITY	ANTHROPOLOGY	SOCIOLOGY	PSYCHOLOGY	ECONOMICS	URBAN REGIONAL STUDIES	GEOGRAPHY	DEMOGRAPHY	PHILOSOPHY	HISTORICAL ST.	LANGUAGES	FINE ARTS AND MISCELLANEOUS	TOTAL
NFLD Memorial	-	-	6.0	2.9	-	-	-	-	3.8	4.5	-	17.2
N.B. Moncton	-	-	-	-	-	-	-	1.2	-	-	-	1.2
New Brunswick	-	-	0.5	3.8	-	-	-	-	3.1	8.9	-	16.3
N.S. Dalhousie	4.8	1.3	4.7	-	-	-	-	0.9	0.3	4.8	-	16.8
St. François X.	-	-	-	-	-	-	-	-	1.5	-	-	1.5
Mount Allison	-	-	-	-	-	-	-	1.9	-	-	-	1.9
Acadia	-	-	-	-	-	-	-	-	4.9	1.3	-	6.2
Total	4.8	1.3	11.2	6.7	-	-	-	4.0	13.6	19.5	-	61.1
QUEBEC Quebec	-	-	5.0	-	-	-	-	-	3.2	-	-	8.2
Bishops	-	-	-	-	-	2.0	-	-	1.8	-	-	3.8
Laval	-	6.8	-	-	-	-	-	-	19.4	9.2	-	35.4
McGill	-	2.8	4.6	4.9	-	3.6	-	7.0	3.3	28.4	15.1	69.7
Montreal	-	11.7	-	-	2.0	-	-	7.4	36.6	29.7	10.5	97.9
St. George W.	-	5.2	-	8.3	-	-	-	-	4.1	2.6	-	20.2
Loyola	-	-	-	-	-	-	-	-	-	8.2	-	8.2
Sherbrooke	-	-	-	-	-	2.5	-	-	-	2.3	-	4.8
Total	-	26.5	9.6	13.2	2.0	8.1	-	14.4	68.4	80.4	25.6	248.2
ONTARIO Brock	-	-	-	-	-	-	-	-	0.4	-	-	0.4
Carleton	3.2	5.2	4.7	5.0	-	-	-	-	13.1	21.9	1.1	54.2
Guelph	-	-	-	5.2	-	3.2	-	2.7	4.0	17.5	5.3	37.9
McMaster	2.7	3.2	-	3.5	3.2	-	-	-	8.9	7.7	1.0	30.2
Ottawa	-	4.9	-	-	-	4.8	3.9	3.7	17.9	8.3	20.7	64.3
Queens	-	3.6	3.3	7.4	-	10.1	-	-	25.0	9.1	-	58.5
RMC	-	-	-	-	-	-	-	-	1.0	-	-	1.0
Toronto	9.7	17.7	-	16.4	4.4	8.6	-	4.5	68.6	92.8	8.6	231.3
Trent	-	1.2	-	-	-	-	-	-	14.3	4.7	-	20.2
Waterloo	-	9.8	3.6	-	-	2.5	1.3	-	6.9	7.6	3.3	35.0
Waterloo Luth.	-	-	-	-	-	-	-	-	2.5	2.0	-	4.5
Western Ont.	-	8.4	-	2.0	4.3	-	8.9	3.5	5.2	12.5	2.2	47.0
York	-	1.5	-	-	-	5.8	-	1.7	25.6	22.6	-	57.2
Laurentian	-	-	-	-	-	-	-	-	4.3	3.8	-	8.1
Windsor	-	3.1	2.5	3.7	-	-	-	-	9.8	4.3	-	23.4
Total	15.6	58.6	14.1	43.2	11.9	35.0	14.1	16.1	207.5	214.8	42.2	673.2
MANITOBA Manitoba	4.8	0.5	2.5	9.0	4.7	3.1	-	-	10.6	8.0	13.7	56.9
SASKATCHEWAN Saskatchewan	4.8	2.5	-	-	-	6.4	-	7.5	3.9	9.1	-	34.2
ALBERTA Alberta	-	3.8	-	3.9	-	-	-	3.6	11.1	26.3	4.8	53.5
Calgary	7.8	3.5	15.6	-	-	4.2	-	1.6	24.6	11.9	-	69.2
Total	17.4	10.3	18.1	12.9	4.7	13.7	-	12.7	50.2	55.3	18.5	213.8
BRITISH COLUMBIA British Columbia	7.7	4.6	7.8	9.1	-	-	-	-	18.8	28.4	4.5	80.8
Simon Fraser	-	3.4	-	14.6	-	8.6	-	-	18.0	4.1	-	48.7
Victoria	1.6	2.5	-	-	-	9.2	-	-	2.1	24.0	6.9	46.3
Total	9.3	10.5	7.8	23.7	-	17.8	-	-	38.9	56.5	11.4	175.8
GRAND TOTAL	47.1	107.2	60.8	99.7	18.6	74.6	14.1	47.2	378.6	426.6	97.7	1372.1

Source: The Canada Council, 13th Annual Report, 1969-70

CONT'D

CANADA COUNCIL
 AMOUNT OF GRANTS 1970-71 ('000\$)
 \$5,000 or less

UNIVERSITY	ANTHROPOLOGY	SOCIOLOGY	PSYCHOLOGY	ECONOMICS	URBAN REGIONAL STUDIES	GEOGRAPHY	DEMOGRAPHY	PHILOSOPHY	HISTORICAL ST.	LANGUAGES	FINE ARTS AND MISCELLANEOUS	TOTAL
NFLD Memorial	4.0	-	4.0	-	-	-	-	-	7.2	5.8	-	21.0
N.B. New Brunswick	-	-	-	-	-	-	-	-	1.9	7.4	-	9.3
N.S. Dalhousie	4.1	-	-	6.2	-	-	-	1.0	4.7	3.5	-	19.5
St. François X.	-	-	-	-	-	-	-	-	4.3	-	-	4.3
Mount Allison	-	-	-	-	-	-	-	0.9	2.2	-	-	3.1
Acadia	-	-	-	4.6	-	-	-	-	-	1.1	-	5.7
Total	8.1	-	4.0	10.8	-	-	-	1.9	20.3	17.8	-	62.9
QUEBEC Quebec	-	-	3.0	2.4	-	-	-	-	12.1	6.6	5.9	30.0
Bishops	-	1.1	-	-	-	0.9	-	-	-	-	-	2.0
Laval	-	2.8	-	3.5	-	3.6	-	-	17.8	7.7	4.2	39.6
McGill	-	4.7	-	6.9	-	8.8	-	4.4	17.8	22.5	2.0	67.1
Montreal	11.1	6.6	1.1	1.9	4.9	-	-	-	48.2	26.2	11.1	111.1
St. George W.	-	1.8	-	-	-	-	-	-	6.3	2.8	-	10.9
Loyola	-	-	3.4	-	-	-	-	-	1.2	-	-	4.6
Sherbrooke	-	-	-	-	-	-	-	-	-	1.4	-	1.4
Total	11.1	17.0	7.5	14.7	4.9	13.3	-	4.4	103.4	67.2	23.2	266.7
ONTARIO Lakehead	-	-	-	-	-	-	-	-	1.8	6.5	-	8.3
Brock	-	-	-	-	-	-	-	1.8	4.9	1.7	-	8.4
Carleton	1.0	2.5	-	-	-	-	-	-	27.5	20.3	-	51.3
Guelph	2.5	5.2	4.2	1.2	-	2.8	-	2.2	14.3	4.2	-	36.6
McMaster	7.2	4.9	-	5.9	-	-	-	-	10.4	13.9	2.4	46.7
Ottawa	-	0.2	-	-	-	3.0	-	1.5	32.8	6.5	3.7	47.7
Queens	-	-	6.8	10.9	-	-	-	-	13.5	6.0	-	37.2
RMC	-	-	-	-	-	-	-	-	0.9	-	-	0.9
Toronto	2.3	6.7	9.3	20.4	-	6.7	-	9.2	80.0	96.0	22.1	252.7
Trent	2.9	-	-	-	-	-	-	-	6.4	1.6	-	10.9
Waterloo	5.9	12.7	-	2.5	-	7.4	-	1.9	23.4	11.3	-	65.1
Waterloo Luth.	-	-	-	-	-	-	-	-	2.4	-	-	2.4
Western Ont.	-	0.4	9.9	11.2	1.0	2.8	4.8	0.8	24.0	14.6	6.1	75.6
York	-	-	2.4	4.6	-	5.0	-	-	32.7	9.5	-	54.2
Laurentian	-	-	-	-	-	-	-	-	6.4	-	0.9	7.3
Windsor	-	-	3.4	-	-	-	-	-	0.3	-	2.1	5.8
Total	23.8	32.6	36.0	56.7	1.0	27.7	4.8	17.4	281.7	192.7	37.3	711.1
MANITOBA Winnipeg	-	-	-	-	-	-	-	-	9.5	-	-	9.5
Manitoba	12.3	-	2.4	-	-	-	-	-	17.4	4.9	1.2	38.2
SASKATCHEWAN Saskatchewan	0.9	-	11.1	-	-	0.3	-	3.3	15.1	12.2	-	42.9
ALBERTA Alberta	-	8.6	5.6	2.8	-	-	-	-	27.0	8.5	9.0	61.5
Calgary	4.7	-	10.1	8.6	-	-	-	5.8	33.7	16.7	-	79.6
Total	17.9	8.6	29.2	11.4	-	0.3	-	9.1	102.7	42.3	10.2	231.7
BRITISH COLUMBIA British Columbia	16.9	5.8	14.1	33.3	-	6.2	-	4.1	55.3	35.6	5.2	176.5
Simon Fraser	-	-	-	6.1	-	7.0	-	-	18.8	2.5	-	34.4
Victoria	5.9	-	-	1.4	-	-	-	-	13.1	9.8	-	30.2
Total	22.8	5.8	14.1	40.8	-	13.2	-	4.1	87.2	47.9	5.2	241.1
GRAND TOTAL	83.7	64.0	90.8	134.4	5.9	54.5	4.8	37.3	595.3	367.3	75.9	1513.5

Source: The Canada Council, 14th Annual Report, 1970-71.

TABLE XV

DISTRIBUTION OF TOTAL CANADA COUNCIL GRANTS BY REGION; AS % OF CANADA TOTAL & PER 1000 POPULATION, 20+

Years	Atlantic	Quebec	Ontario	Western	Canada
	1	2	3	4	5
	<u>Total No. of Canada Council Grants</u>				
1968-1969	149	971	1345	945	3410
1969-1970	105	776	1010	686	2577
1970-1971	110	644	850	594	2198
	<u>Total Provincial Awards as % of Canada Total</u>				
1968-1969	4.4	28.5	39.4	27.7	100.0
1969-1970	4.1	30.1	39.2	26.6	100.0
1970-1971	5.0	29.3	38.7	27.0	100.0
	<u>Total Canada Council Awards per 1000 population, 20+</u>				
1968-1969	0.13	0.28	0.30	0.28	0.27
1969-1970	0.09	0.22	0.21	0.20	0.20
1970-1971	0.09	0.18	0.18	0.17	0.17

Source: Canada Council Annual Reports, various years and Statistics Canada Cat. no. 81-202
various years.

TABLE XVII

CANADA COUNCIL GRANTS AS RATIO OF FULL TIME UNIVERSITY ENROLLMENT,
BY REGION, 1968-69 - 1970-71

	Full time Arts Under Grad. Enrolment	Full time Arts Graduate Enrollment	Total Full time Enrollment	No. of Canada Coun- cil Grants of \$5000 or less	Total No. of Canada Council Grants	Cdn. Council Grants of \$5000 or less as ratio of full t. gr. enr. (col.4to2)	Total no. of Cdn. Council Gr. as ratio of total full t. enr. (col. 5 with 3)
	1	2	3	4	5	6	7
<u>1968-69</u>							
Atlantic	9992	941	10933	27	149	2.9	1.4
Quebec	25721	3168	28889	75	971	2.4	3.4
Ontario	38976	5805	44781	292	1345	5.0	3.0
Western	28402	3480	31882	134	945	3.9	3.0
Canada	103091	13434	116525	528	3410	3.9	3.0
<u>1969-70</u>							
Atlantic	11164	1091	12255	28	105	2.6	0.9
Quebec	22853	3725	26578	98	776	2.6	2.9
Ontario	39644	7343	46987	307	1010	4.2	2.1
Western	22870	4031	26901	156	686	3.9	2.6
Canada	96531	16073	112604	589	2577	3.7	2.3
<u>1970-71</u>							
Atlantic	12162	1027	13189	29	110	2.8	0.8
Quebec	17522	4144	21666	99	644	2.4	3.0
Ontario	40833	8445	49278	315	850	3.7	1.7
Western	23680	4640	28320	184	594	4.0	2.1
Canada	94197	18255	112452	627	2198	3.4	2.0

Source: Canada Council Annual Reports, various years.
Statistics Canada, Cat. no. 81-204, various years.