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Mr. D.Z. Beckler
The Director for Science,
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Organization for Economic
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32972

Dear Mr. Beckler:

The Function of Scientific Research in Universities
(DSTI/D/78/November 21, 1978)

The attached notes and statistics pertaining to university research in Canada are in response to your request for information "...relating to existing research policies in respect to universities". Following under a separate cover are selected publications with additional information concerning certain aspects of university research in Canada.

I will be pleased to assist in both stages of the planned study of the function of university research in the OECD countries. I would also appreciate being informed about your progress, plans & requirements, particularly with regard to this country.

H.R. Wynne-Edwards
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Mr. D.Z. Beckler

The Functions of Scientific Research
in the Universities

Selected Reference Material

1. Statistics Canada, Annual Review of Science Statistics - 1977, Cat. No. 13-212, and Chapter 5 - The Universities, to be published in the 1978 Review, forthcoming, May 1979
2. MOSST Working Paper, University Enrolment Projections to 1985-86, (June 1978).
3. MOSST Working Paper, The Aging of the Canadian Professoriate - A Technical Note, (August 1977).
4. MOSST Working Paper, Highly Qualified Manpower Attrition Estimates to 1985, (May 1977).
5. MOSST Working Paper, The Supply of Research Trained Personnel - A Regional Analysis, (October 1978).
6. MOSST, Annual Report 1976-77.
7. MOSST, Federal Science Activities 1978-79.
8. MOSST, Federal Science Expenditure and Manpower, No. 100-4
9. (To Follow) MOSST Report, Federal Funding of University Research, (January 1979). 15.2.79
10. Statistics Canada, University Financial Statistics 1976-77, Cat No. 81-212.

RE: THE FUNCTION OF SCIENTIFIC RESEARCH IN UNIVERSITIES

(OECD DSTI/D/78/664, November 21, 1978)

Notes and Statistics Pertaining to Funding of
University Research in Canada

1. Universities in Canada are provincial institutions whose main source of income are the budgets of provincial governments. The federal government's contribution to financing of post-secondary education, including universities, is through cash payments and tax transfers to provincial governments. In past years such transfers amounted to roughly 50 percent of the universities' budgets.

The federal government is also involved in direct funding of certain scientific activities of the universities by way of its various payments towards costs of university research, research training and other university services or operations. The bulk of these payments is towards the cost of R&D. Indeed the federal government (as shown in the attached Tables A and 1 to 6) is the largest single source of outside funds for financing university research.

2. The continuing efforts to define and clarify the functions and objectives of universities in societies within which they operate, and of the role of university research in particular, have led to distinct changes in the approaches of federal and provincial governments to funding and organization of university research.

In the case of the federal government, the evolution in the approach to funding university research has reached the stage at which the goals and objectives of the policy have been announced, its structural elements put in place, its orientation decided upon and its implementation begun.

3. The stated goal of the federal policy is "the support of balanced development of knowledge and of research capability". The main federal institutions concerned with financing university research and research training are the granting councils who in working towards this goal are expected:
 - i) to support and foster excellence in research;
 - ii) to provide a base of advanced knowledge through encouragement of curiosity-oriented research;

- iii) to encourage research which would contribute to national objectives;
- iv) to encourage interdisciplinary research;
- v) to ensure regional balance in scientific capability;
- vi) to assist in the focus and concentration of research activities and facilities; and
- vii) to maintain a basic capacity for research training.

2. The structural elements put in place include reorganized granting councils for university research:

- The Natural Sciences and Engineering Research Council (NSERC), with responsibilities transferred from the National Research Council;
- The Social Sciences and Humanities Research Council (SSHRC), with responsibilities transferred from the Canada Council;
- The Medical Research Council (MRC), with a mandate no longer excluding health care.

These changes are complemented by the changed compositions of the Councils whereby their members are drawn from industry and public affairs as well as

from the university community and in this way reflect national interests in university research.

A new Inter-Council Coordinating Committee (ICCC) is intended to assist in providing the Ministry of State for Science and Technology (MOSST) and the Government with an overview of the Councils' activities, and provide advice on the allocation of funds. It will also ensure that all disciplines are covered and that the requirements for inter-disciplinary research are met; it will harmonize the granting practices of the Councils, and provide a forum for the discussion of matters of joint interest.

Discussion and information exchange with the provinces is provided regularly through meetings of the Canadian Committee on Financing University Research (CCFUR), established in November 1976. This Committee has representation from the federal government, the provinces and the universities, and is chaired by the Secretary of MOSST. The committee was established to exchange information and to develop recommendations on policies, programs and procedures affecting the financing of research in universities.

Within the federal government the main "agent of change" in matters of policies pertaining to science and technology is the Ministry of State for Science and Technology; the matters related to research and other scientific activities and functions of universities which are of interest to the federal government are attended to by the Ministry's University Branch.

5. The clear intent of the federal government is to bring about a distinct change in the orientation of university research so that more of it is aimed at understanding and solving our national problems; to see that its conduct and organization provide adequate scope for interdisciplinary approaches; and to assure optimum results from government expenditure on relevant scientific activities.
6. The recent federal initiatives in the field of university research include:
 - provision of additional funds to the granting Councils for financing increased research effort of universities in selected areas of national concerns (strategic grants).

- measures and funds to establish Industrial Innovation Centres at selected campuses which would study innovation and entrepreneurship and provide training in both. They would also provide a central access point for industry into the networks of ongoing university research activity and thus help to lower the barriers between these sectors.
 - a decision to assist in the creation of centres of excellence for research across Canada focussed on national and human resources of the regions and responsive to national needs. This is in addition to the announced complementary measures to locate certain federal research activities in the most appropriate regions and to link them with related activities in other neighbouring research establishments including those at universities.
7. In 1978-79 universities' expenditure on R&D may well amount to an estimated total of \$766.9 million and account for one-quarter of all funds spent on R&D in Canada. The attached Table A indicates that the largest portion of this amount is accounted for by the universities own funds with the remainder coming

TABLE A

Overview of Canadian University Research

(1978-79)

	<u>Natural Sciences and Engineering</u>	<u>Human Sciences</u>	<u>Total</u>
		(\$million)	
Sponsored by all sources	262.6	47.4	310.0
by federal sources (1)	181.0	27.6	208.6
by nonfederal sources (2)	81.6	19.8	101.4
Contributions by Universities (3)	292.6	164.3	456.9
Total R&D	555.2	211.7	766.9

(1) Includes contributions from the granting councils and other federal departments and agencies

(2) Includes contributions from provincial governments, industry, and other public and private sources such as non-profit organizations

(3) This is derived through a process of imputation that is based on the amount of time that full-time university teachers spend on R&D in the various fields of study. A detailed description of the method is given in Statistics Canada, Annual Review of Science Statistics, 1978, Catalogue 13-212 Annual, Forthcoming May 1979.

Source: Statistics Canada, Annual Review of Science Statistics, 1978, Catalogue 13-212 Annual, Forthcoming May 1979.

from external sources detailed in Tables 1 to 6. It should be noted that the amount attributed to universities represents the estimated costs of non-sponsored R&D and unfunded costs of sponsored R&D. It should also be noted that Tables A and 1 to 6 are unlike those that follow. They contain estimates and not actually recorded disbursements shown in other tabulations and refer to time periods which may not coincide with fiscal years indicated in Tables 7 to 25.

SELECTED STATISTICS PERTAINING TO UNIVERSITY RESEARCH IN
CANADA

- A. Funding levels and Related Information
- 1. Overview of University Research
- a) University Research by Funder

Table 1 through 6 show the funds supplied to universities for R&D¹ by funder in current and constant 1971 dollars, for natural sciences (which includes engineering and health sciences), social sciences and humanities, and total R&D. The summation of each column represents the R&D performed by universities. It should be noted that these data represent estimates by the Science Statistics Centre, Statistics Canada and exclude related scientific activities such

¹ The concept of R&D conforms to that of the "Frascati Manual" (OECD).

as educational support, testing and standardization and scientific data collection. The estimates of university R&D are prepared according to the methodology, described in the advance copy of the pertinent chapter (included among separately provided selected publications) in a future Statistics Canada publication², and include detailed assumptions for sources of funds for which specific survey data are not available.

b. Federal Funding of University Research

Included in the federal government contributions to university R&D are the payments of the three federal granting councils, the Medical Research Council, the Natural Sciences and Engineering Research Council and the Social Sciences and Humanities Research Council. Also included are the contributions towards costs of university research of other federal departments and agencies; such payments are usually by way of grants and research contracts. Additional information on federal funding of university research and other scientific activities are available through the Ministry of State for Science and Technology in the publication entitled "Federal Scientific Expenditures and Manpower", a copy of which is enclosed. The data

²Statistics Canada, Annual Review of Science Statistics - 1978, to be published about May 1979.

in this annual publication represent the federal science budget covering the current fiscal year and the previous and forecast fiscal years.

c) Other Funders of University Research

Other funders include the provincial governments, industry, private non-profit organizations, foreign funders and the universities themselves. Of these funders, only the provincial governments provide some degree of detail regarding their funding of university research. Provincial science surveys are conducted in several of the provinces but not all, and the surveys vary greatly in quality and detail of information. The surveys are conducted by the provinces themselves and are conceptually identical to the federal government survey.

2. University Funding Activities of the Granting Councils

The following Council data are taken from the annual reports of the Councils, or special tabulations prepared by the Councils. The Councils are major funders of sponsored university research in Canada and the only federal agencies specifically oriented

towards the support of university research. Other federal departments also fund university research which is related to departmental objectives, but such funding is incidental to the activities of the departments rather than specific program objectives as such.

The relationship between the various funders of sponsored university research for recent years is shown in Table 7. It should be noted that the data in Table 7 are taken partly from the Federal Science Survey conducted by Statistics Canada and MOSST and from the financial data of the universities as reported to Statistics Canada by the Canadian Association of University Business Officers (CAUBO). The federal funding shown in Table 7 for the Councils, other federal departments and provincial funders will differ from the national R&D estimates shown in Table 1 and 3 due to the timing of the funders payments, fiscal year differences and the timing of the drawing of payments from the university sponsored research fund by the actual researchers. Even more importantly, the data in Tables 1 and 3 include

estimates of non-sponsored research and overhead costs of sponsored research which are excluded from Table 7. There are problems, as well, in reconciling the Council data which follows with Tables 1, 3 and 7 because the Council data are taken from annual reports of the Councils and include payments to non-university performers whereas Tables 1, 3 and 7 pertain to university performers only.

2. a) The Natural Sciences and Engineering Research Council
(NSERC)
(Formerly The Office of Grants and Scholarships of NRC)

Total Expenditures by Activity

Table 8 shows the distribution of NSERC expenditures by category of grant and other payments. R&D expenditures include peer-adjudicated grants, development grants and senior level awards and, to the extent that these activities are performed at universities in Canada, such expenditures would be included in Table 1. The remaining items in Table 8, education support and other related activities, would be excluded from Table 1.

Distribution of Operating Grants by Selection Committee

The distribution of operating grants by selection committee, 1970-71 to 1975-76, is shown in Table 9. This category of payment represents some 60 percent of total expenditures and is a major source of research support in the natural sciences and engineering. While selection committees are organized on a field of study basis, some research proposals may be considered by more than one committee if multiple fields of study are involved.

Applications for Grants and Awards

Tables 10 and 11 show summary information on the number of applications and the success rates for operating grants and post-graduate and post-doctorate awards during the period 1970-71 to 1975-76.

Funding by Institution

Table 12A shows the distribution of total funding by institution within Canada for the years 1975-76 to 1977-78. The difference between total funding and total Canadian funding represent expenditures outside of Canada. Table 12B shows the concentration of research expenditures by university and the number of researchers supported in the year 1976-77.

2. b) The Social Sciences and Humanities Research Council
(SSHRC)

(Formerly The Humanities and Social Sciences Division
of the Canada Council)

Total Expenditures by Activity

A summary of the granting activities of SSHRC are shown in Table 13. Consistent with the Frascati definition of R&D, the R&D category would include research grants, leave fellowships and negotiated grants representing some 50 percent of total expenditures in 1976-77. To the extent that these R&D activities are performed at Canadian universities, such expenditures would be included in the federally-funded R&D totals shown in Table 3.

Non-R&D activities would include research training and research related activities such as publication grants as shown in Table 13.

Distribution of Research Grants and Leave Fellowships
by Field of Study

Tables 14 and 15 show the distribution of research grants and leave fellowships, respectively, by field of study. These two categories represent about one-third of total SSHRC expenditures in 1976-77.

Applications for Research Support

Tables 16 and 17 show the number of applications and the success rates for research grants and leave fellowships, respectively, these data are shown by field of study for the period 1970-71 through 1976-77.

Funding by Institution.

Table 18A shows the distribution of research grants by institution for the years 1972-73, 1974-75 and 1976-77, respectively. Table 18B shows the concentration representative of a 5 year period ending on March 31, 1977, of research grants and supported researchers by institutions.

2. c) The Medical Research Council (MRC)

Total Expenditures by Activity

Table 19 shows the distribution of funds by category of expenditure for the years 1970-71 to 1976-77. Research and development consists of research grants and awards, the major component of which is grants-in-aid of research (65 percent of total MRC expenditures in 1976-77). In Table 19, Centennial Fellowships and Fellowships were allocated to R&D and to Research Training on the basis of the estimated proportions of PhD recipients (R&D) and MD, DVM and DDS recipients (Research Training).

Applications for Grants and Awards

Tables 20 and 21 show the number of applications and approvals for MRC operating grants (grants-in-aid of research), scholarships, fellowships and studentships. The time period covered is from 1975-76 to 1977-78 with partial-year data for 1978-79.

Funding by Institution

Table 22A shows MRC expenditures towards R&D activities by university for the years 1970-71 through 1975-76. These payments represent approximately 90 percent of the total MRC funds allocated to universities in Canada.

Table 22B shows, by institution, the concentration of grants-in-aid funding and the number of researchers supported for the year 1977-78.

Funding by Field of Study

Tables 23 and 24 show MRC expenditures on operating funds for research through the grants program by ICD³ category and by areas of research for the years 1974-75 and 1977-78. The areas of research table (Table 24) includes multiple assignment of some research projects. Table 25 provides additional expenditure category detail for the areas of research tabulation for the year 1977-78.

³ International Classification of Diseases.

3. Age Distribution of University Teachers

The highly qualified manpower (HQM) data base and model developed at MOSST provides information on the aging of the Canadian professoriate and conditional projections of replacement requirements to 1985 by field of teaching and for certain other selected HQM occupations. MOSST working papers have been prepared on these topics the first being entitled "The Aging of the Canadian Professoriate - A Technical Note" which provides details on the attrition model used in the HQM model data base and "The Highly Qualified Manpower Attrition Estimates to 1985". The latter document provides age distributions and median ages, annual attrition rates and attrition estimates by occupation for selected intervals of time. Conditional forecasts of age distributions by teaching field are also provided covering the years 1971, 1976 and 1985. The initial age distributions for the manpower stocks by teaching field are taken from the Statistics Canada full-time university teacher file for the years 1971-72, 1972-73 and 1973-74.

4. Trends in Post-Graduate Enrolments

A MOSST working paper entitled "University Enrolment Projections in 1985-86" is also attached. This study provides university enrolment projections for three enrolment scenarios based on varying assumptions regarding single year of age participation rates by enrolment programs. These enrolment programs include, by sex, full-time undergraduate, part-time undergraduate, and full-time and part-time graduate studies.

5. Changes in the volume of uncommitted Funds available for new projects

a) NSERC

Uncommitted funds have not been specifically set aside in the past for new projects however, approximately \$700,000 has been allocated for 1979-80 and this amount is likely to increase in the future.

b) SSHRC

In research, the grants program funds have been sufficient each year to cover all projects recommended for support by assessors and academic panel. With new structures and the launching of new programs, conditions may change in the future.

c) MRC

MRC advise that information is not available on this question (see Policy Issues - replies from Councils).

B. Policy Issues and Granting Council Replies

The attached papers were received by MOSST from the Councils in reply to a request for information on the policy issues relevent to the OECD study. These replies are direct and succinct and are included in their entirety.

- APPENDIX A -

Selected Statistics Pertaining to University
Research in Canada

TABLE 1

UNIVERSITY R&D IN THE NATURAL SCIENCES BY SOURCE OF FUNDS
1970 TO 1978

SOURCE OF FUNDS	MILLIONS OF CURRENT DOLLARS								
	1970	1971	1972	1973	1974	1975	1976	1977	1978
FEDERAL GOVERNMENT	115.9	122.1	122.2	127.8	132.6	139.6	148.5	168.7	181.0
PROVINCIAL GOVERNMENTS	24.8	17.1	23.3	28.6	28.4	30.9	37.2	40.9	45.0
TOTAL GOVERNMENT	140.7	139.2	145.5	156.4	161.0	170.5	185.7	209.6	226.0
INDUSTRY	0.6	1.0	1.1	1.0	1.4	1.4	1.5	1.6	1.6
PRIVATE NON-PROFIT ORGS.	10.6	11.3	11.9	12.4	16.9	19.9	22.4	24.7	27.1
UNIVERSITIES	140.5	157.3	149.5	152.2	187.7	240.1	264.4	272.4	292.6
FOREIGN	0.6	0.7	1.4	1.4	2.1	3.8	2.0	5.8	7.9
TOTAL	293.0	309.5	309.4	323.4	369.1	435.7	476.0	514.1	555.2

SOURCE: SCIENCE STATISTICS CENTRE, STATISTICS CANADA, ANNUAL REVIEW OF SCIENCE STATISTICS - 1978, CAT. NO. 13-212, FORTHCOMING ABOUT MAY 1979.

TABLE 2

UNIVERSITY R&D IN THE NATURAL SCIENCES BY SOURCE OF FUNDS
1970 TO 1978

SOURCE OF FUNDS	MILLIONS OF CONSTANT 1971 DOLLARS *								
	1970	1971	1972	1973	1974	1975	1976	1977	1978
FEDERAL GOVERNMENT	119.6	122.1	116.4	111.5	100.4	95.5	92.6	98.4	99.1
PROVINCIAL GOVERNMENTS	25.6	17.1	22.2	25.0	21.5	21.1	23.2	23.2	24.6
TOTAL GOVERNMENT	145.2	139.2	138.6	136.5	121.9	116.6	115.8	122.2	123.8
INDUSTRY	0.6	1.0	1.0	0.9	1.1	1.0	0.9	0.9	0.9
PRIVATE NON-PROFIT ORGS.	10.9	11.3	11.3	10.8	12.8	13.6	14.0	14.4	14.8
UNIVERSITIES	145.0	157.3	142.4	132.8	142.1	164.2	164.8	158.8	160.2
FOREIGN	0.6	0.7	1.3	1.2	1.6	2.6	1.2	3.4	4.3
TOTAL	302.4	309.5	294.7	282.2	279.4	298.0	296.8	299.8	304.1

SOURCE: SCIENCE STATISTICS CENTRE, STATISTICS CANADA, ANNUAL REVIEW OF SCIENCE STATISTICS - 1978, CAT. NO. 13-212, FORTHCOMING ABOUT MAY 1979.

* DEFLATED BY GNE IMPLICIT PRICE DEFLATOR ON A CALENDAR YEAR BASIS

TABLE 3

UNIVERSITY R&D IN THE SOCIAL SCIENCES AND HUMANITIES BY SOURCE OF FUNDS
1970 TO 1978

SOURCE OF FUNDS	MILLIONS OF CURRENT DOLLARS								
	1970	1971	1972	1973	1974	1975	1976	1977	1978
FEDERAL GOVERNMENT	9.8	11.5	12.7	15.0	18.0	19.6	21.4	25.0	27.6
PROVINCIAL GOVERNMENTS	7.4	4.6	6.2	8.6	10.3	13.4	15.9	17.5	19.2
TOTAL GOVERNMENT	17.2	16.1	18.9	23.6	28.3	33.0	37.3	42.5	46.8
INDUSTRY	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
PRIVATE NON-PROFIT ORGS.	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4
UNIVERSITIES	98.0	106.7	101.9	97.8	113.5	130.1	143.6	152.9	164.3
TOTAL	115.4	123.1	121.1	121.8	142.4	163.7	181.5	196.0	211.7

SOURCE: SCIENCE STATISTICS CENTRE, STATISTICS CANADA, ANNUAL REVIEW OF SCIENCE STATISTICS - 1978, CAT. NO. 13-212, FORTHCOMING ABOUT MAY 1979.

TABLE 4

UNIVERSITY R&D IN THE SOCIAL SCIENCES AND HUMANITIES BY SOURCE OF FUNDS
1970 TO 1978

SOURCE OF FUNDS	MILLIONS OF CONSTANT 1971 DOLLARS *								
	1970	1971	1972	1973	1974	1975	1976	1977	1978
FEDERAL GOVERNMENT	10.1	11.5	12.1	13.1	13.6	13.4	13.3	14.6	15.1
PROVINCIAL GOVERNMENTS	7.6	4.6	5.9	7.5	7.8	9.2	9.9	10.2	10.5
TOTAL GOVERNMENT	17.8	16.1	18.0	20.6	21.4	22.6	23.3	24.8	25.6
INDUSTRY	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
PRIVATE NON-PROFIT ORGS.	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2
UNIVERSITIES	101.1	106.7	97.0	85.3	85.9	89.0	89.5	89.2	90.0
TOTAL	119.1	123.1	115.3	106.3	107.8	112.0	113.2	114.3	115.9

SOURCE: SCIENCE STATISTICS CENTRE, STATISTICS CANADA, ANNUAL REVIEW OF SCIENCE STATISTICS - 1978, CAT. NO. 13-212, FORTHCOMING ABOUT MAY 1979.

* DEFLATED BY GNE IMPLICIT PRICE DEFLATOR ON A CALENDAR YEAR BASIS

TABLE 5

TOTAL UNIVERSITY R&D BY SOURCE OF FUNDS
1970 TO 1978

SOURCE OF FUNDS	MILLIONS OF CURRENT DOLLARS								
	1970	1971	1972	1973	1974	1975	1976	1977	1978
FEDERAL GOVERNMENT	125.7	133.6	134.9	142.8	150.6	159.2	169.9	193.7	208.6
PROVINCIAL GOVERNMENTS	32.2	21.7	29.5	37.2	38.7	44.3	53.1	52.4	64.2
TOTAL GOVERNMENT	157.9	155.3	164.4	180.0	189.3	203.5	223.0	252.1	272.8
INDUSTRY	0.7	1.1	1.2	1.1	1.6	1.6	1.7	1.8	1.8
PRIVATE NON-PROFIT ORGS.	10.7	11.5	12.1	12.7	17.3	20.3	22.8	25.1	27.5
UNIVERSITIES	238.5	264.0	251.4	250.0	301.2	370.2	403.0	425.3	456.9
FOREIGN	0.6	0.7	1.4	1.4	2.1	3.8	2.0	5.8	7.9
TOTAL	408.4	432.6	430.5	445.2	511.5	599.4	657.5	710.1	766.9

SOURCE: SCIENCE STATISTICS CENTRE, STATISTICS CANADA, ANNUAL REVIEW OF SCIENCE STATISTICS - 1978, CAT. NO. 13-212, FORTHCOMING ABOUT MAY 1979.

TABLE 6

TOTAL UNIVERSITY R&D BY SOURCE OF FUNDS
1970 TO 1978

SOURCE OF FUNDS	MILLIONS OF CONSTANT 1971 DOLLARS *								
	1970	1971	1972	1973	1974	1975	1976	1977	1978
FEDERAL GOVERNMENT	129.7	133.6	128.5	124.6	114.0	108.9	105.9	112.9	114.2
PROVINCIAL GOVERNMENTS	33.2	21.7	28.1	32.5	29.3	30.3	33.1	34.1	35.2
TOTAL GOVERNMENT	163.0	155.3	156.6	157.1	143.3	139.2	139.0	147.0	149.4
INDUSTRY	0.7	1.1	1.1	1.0	1.2	1.1	1.1	1.0	1.0
PRIVATE NON-PROFIT ORGS.	11.0	11.5	11.5	11.1	13.1	13.9	14.2	14.6	15.1
UNIVERSITIES	246.1	264.0	239.4	218.2	228.0	253.2	254.4	248.0	250.2
FOREIGN	0.6	0.7	1.3	1.2	1.6	2.6	1.2	3.4	4.3
TOTAL	421.5	432.6	410.0	388.5	387.2	410.0	409.9	414.1	420.0

SOURCE: SCIENCE STATISTICS CENTRE, STATISTICS CANADA, ANNUAL REVIEW OF SCIENCE STATISTICS - 1978, CAT. NO. 13-212, FORTHCOMING ABOUT MAY 1979.

* DEFLATED BY ONE IMPLICIT PRICE DEFLATOR ON A CALENDAR YEAR BASIS

TABLE 7

SOURCES OF ASSISTED RESEARCH FUNDS TO CANADIAN UNIVERSITIES

	RESEARCH COUNCILS (1)	FEDERAL DEPARTMENTS (1)	PROVINCIAL GOVERNMENTS (2)	OTHERS (2) (3)	TOTAL	
FUNDS (MIL \$)	1970-71	88.6	30.3	13.2	23.4	155.5
	1971-72	92.9	30.5	12.2	34.2	169.8
	1972-73	98.3	31.3	18.6	37.5	185.7
	1973-74	104.6	33.5	26.1	38.9	203.1
	1974-75	109.1	34.0	31.4	51.7	226.2
	1975-76	124.6	35.7	41.4	53.0	254.7
	1976-77	135.3	27.8	48.1	61.7	272.9
	1977-78	152.2	34.4	-	-	-
PERCENTAGE DISTRIBUTION	1970-71	57.0	19.5	8.5	15.0	100.0
	1971-72	54.7	18.0	7.2	20.1	100.0
	1972-73	52.9	16.9	10.0	20.2	100.0
	1973-74	51.5	16.5	12.9	19.2	100.0
	1974-75	48.2	15.0	13.9	22.9	100.0
	1975-76	48.9	14.0	16.3	20.8	100.0
	1976-77	49.6	10.2	17.6	22.6	100.0
	1977-78	-	-	-	-	-
AVERAGE ANNUAL GROWTH RATE		8.0	-	24.0	17.5	9.8

SOURCE:

(1) DATA OBTAINED FROM STATISTICS CANADA HISTORICAL SERIES (1977 SURVEY); THESE FIGURES REPORTED REFER TO PAYMENTS TO CANADIAN UNIVERSITIES FOR R&D

(2) DATA PROVIDED BY THE CANADIAN ASSOCIATION OF UNIVERSITY BUSINESS OFFICERS (CAUBO)

(3) IN THE LATEST YEAR FOR WHICH DATA WERE AVAILABLE, THE LARGEST COMPONENT OF "OTHER" WAS GIFTS, NON-GOV'T GRANTS (\$54 M); FOLLOWED BY INVESTMENT INCOME (\$3 M); INTERFUND TRANSFERS(\$2.2 M); MISCELLANEOUS (\$2.2 M) AND MUNICIPAL GOV'T GRANTS (\$1.2 M).

NOTE: THE NUMBER OF INSTITUTIONS REPORTING FINANCIAL INFORMATION TO CAUBO IN ANY ONE YEAR IS NOT CONSTANT

ALL PAYMENTS TO TRIUMF HAVE BEEN EXCLUDED

- NOT AVAILABLE

Table 8
Natural Sciences and Engineering Research Council
(formerly Office of Grants and Scholarships, NRC)

LEVEL OF SUPPORT

Year Ending March 31st	1971	1972	1973	1974	1975	1976	1977	1971	1972	1973	1974	1975	1976	1977
PAYMENTS TOWARDS COST OF RESEARCH AND DEVELOPMENT														
	(\$'000)							(Percent Distribution)						
PEER ADJUDICATED GRANTS														
Grants to Individuals														
Operating Grants ¹	35,223	36,899	37,782	40,662	42,036	48,880	52,102 ²	54.4	54.6	56.8	59.3	60.7	61.9	60.5
Computing Grants	3,750	2,378	1,746	258	86	---	---	5.8	3.5	2.6	0.4	0.1	---	---
Equipment Grants	3,461	3,493	2,566	3,209	2,372	3,015	2,516	5.3	5.2	3.9	4.7	3.4	3.8	2.9
Major Equipment Grants	1,088	1,154	1,490	1,493	353	1,152	1,783	1.7	1.7	2.2	2.2	0.5	1.5	2.1
Grants to Groups, etc.														
Nuclear Physics Grants	1,060	1,104	1,075	1,095	1,120	1,219	3,401	1.6	1.6	1.6	1.6	1.6	1.5	4.0
High Energy Physics Grants	717	980	981	989	1,015	1,156	1,160	1.1	1.5	1.5	1.4	1.5	1.5	1.3
Institute Grants	480	451	398	421	379	596	897	0.7	0.7	0.6	0.6	0.5	0.8	1.0
Int'l Biological Program	1,181	1,209	806	235	41	---	---	1.8	1.8	1.2	0.3	0.1	---	---
Intermediate Physics Grants	---	---	---	---	---	---	1,100	---	---	---	---	---	---	1.3
Plasma Physics Grants	---	---	---	---	---	---	351	---	---	---	---	---	---	0.4
DEVELOPMENT GRANTS & SR. AWARDS														
Specific Research Undertaking														
Development Grants	3,853	3,793	3,985	4,087	3,744	4,013	3,645	5.9	5.6	6.0	6.0	5.4	5.1	4.2
Special Study Grants, etc.	123	2	88	100 ³	116	---	---	0.2	---	0.1	0.1 ³	0.2	---	---
Major Installation Grants	300	450	250	---	238	90	477	0.5	0.7	0.4	0.1 ³	0.3	0.1	0.6
Industrially Oriented Grants														
PRAI Grants				821	967	609	282				1.2	1.4	0.8	0.3
Special Project Grants ⁴	46	673	1,076	378	433	199	42	0.1	1.0	1.6	0.6	0.6	0.3	0.0
General Development & Assistance														
Regional Development Grants	---	995	1,097	1,197	1,603	1,609	1,484	---	1.5	1.6	1.7	2.3	2.0	1.7
Special Assistance - Small U.	---	---	---	333	265	258	266	---	---	---	0.5	0.4	0.3	0.3
Gen. Res. Grants - Major U. ⁵	2,944	3,049	3,041	2,862	3,517	3,543	3,710	4.5	4.5	4.6	4.2	5.1	4.5	4.3
Postdoctoral Level Awards														
Fellowships: University ⁶	1,079	1,070	1,158	1,252	1,378	1,421	1,255	1.7	1.6	1.7	1.8	2.0	1.8	1.5
Industrial	56	195	417	687	770	772	831	0.1	0.3	0.6	1.0	1.1	1.0	1.0
PIER	182	188	103	36	---	---	---	0.3	0.3	0.2	0.1	---	---	---
Senior Level Awards														
Fellowships: Travel	---	258	212	294	357	660	395	---	0.4	0.3	0.4	0.5	0.8	0.5
E.W.R. Steacie	50	59	58	72	66	69	122	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Sr. Industrial	---	---	63	86	133	101	96	---	---	0.1	0.1	0.2	0.1	0.1
Ind. Cooperative	---	---	---	20	23	21	---	---	---	---	---	---	---	---
Sr. Research	11	---	---	---	---	---	---	---	---	---	---	---	---	---
SUB-TOTAL R&D	55,604	58,400	58,390	60,567	61,009	69,385	75,936	85.8	86.5	87.6	88.3	88.0	87.9	83.1
EDUCATION SUPPORT														
Post-Graduate Level Awards														
Scholarships: Regular ⁶	6,078	5,948	5,304	5,747	6,172	7,629*	8,249	9.4	8.8	8.0	8.4	8.9	9.7	9.6
1977 Sciences	819	990	816	768	747	624	608	1.3	1.3	1.2	1.1	1.1	0.8	0.7
Bursaries	1,114	1,058	855	317	83	68	59	1.7	1.6	1.3	0.5	0.1	0.1	0.1
Librarianships	35	31	25	30	21	*	---	0.1	---	---	---	---	---	---
SUB-TOTAL EDUCATION SUPPORT	8,046	7,917	7,000	6,863	7,023	8,321	8,916	12.5	11.7	10.5	10.0	10.1	10.5	10.4
OTHER RELATED SCIENTIFIC ACTIVITIES														
National Activities														
Publication Grants	183	214	226	276	335	375	380	0.3	0.3	0.3	0.4	0.5	0.5	0.4
General Promotion Grants	531	549	439	408	402	349	282	0.8	0.8	0.7	0.6	0.6	0.4	0.3
Conference Grants	57	141	151	167	240	271	171	0.1	0.2	0.2	0.2	0.3	0.3	0.2
International Activities														
International: Affiliations	109	120	138	148	159	185	193	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Exchange Program	140	169	173	134	106	85	155	0.2	0.3	0.3	0.2	0.2	0.1	0.2
Delegations	26	34	27	29	16	23	30	---	0.1	---	---	---	---	0.0
Associate Cttees. Expenses	99	---	---	---	---	---	---	0.2	---	---	---	---	---	---
SUB-TOTAL EDUCATION SUPPORT AND OTHER RRA	9,191	9,144	8,154	8,025	8,281	9,609	10,127	14.2	13.5	12.2	11.6	11.9	12.0	11.7
TOTAL R&D, EDUCATION SUPPORT AND OTHER RSA	64,795	67,544	66,544	68,592	69,290	78,994	86,063	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ See also Tables 9, 10, and 12B.

² Operating Grants includes Team, CO-OP and CORE Grants.

³ It was not possible to sub-divide these amounts based on available information at MOSST.

⁴ NRC would prefer to have this category of payments included among the Peer-Adjudicated Grants.

⁶ See Table 11.

Source: National Research Council, Annual Reports.

National Research Council, Analysis of Some Aspects of the Program of Scholarships and Grants-in-Aid of Research, August 1971

Distribution of Operating Grant Funds by Selection Committee

	<u>1970-71</u>		<u>1971-72</u>		<u>1972-73</u>		<u>1973-74</u>		<u>1974-75</u>		<u>1975-76</u>	
	Awards ¹⁾	%	Awards	%	Awards	%	Awards	%	Awards	%	Awards	%
Animal Biology	1,905.5	5.4	2,039.4	5.5	2,104.9	5.6	2,229.1	5.5	2,399.3	5.7	2,854.3	5.8
Cellular Biology	2,560.3	7.3	2,491.9	6.8	2,705.8	7.2	3,100.5	7.6	3,129.9	7.4	3,665.3	7.5
Plant Biology	1,684.8	4.8	1,946.3	5.3	1,961.4	5.2	1,997.6	4.9	2,181.7	5.2	2,493.7	5.1
Population Biology	2,024.6	5.7	2,221.6	6.0	2,294.6	6.1	2,288.8	5.6	2,390.4	5.7	2,911.9	6.0
All Biology	8,175.2	23.2	8,699.2	23.6	9,066.7	24.0	9,616.0	23.6	10,101.3	24.0	11,925.2	24.4
Psychology	1,751.4	5.0	1,637.8	4.4	1,745.1	4.6	1,909.1	4.7	2,030.6	4.8	2,241.9	4.6
Chemistry	6,338.7	18.0	6,093.2	16.5	6,026.1	16.0	6,487.0	16.0	6,515.6	15.5	7,542.7	15.4
Physics	3,390.5	9.6	3,723.9	10.1	3,689.4	9.8	3,661.6	9.0	3,836.4	9.1	4,364.8	8.9
Nuclear Physics	0.0	0.0	0.0	0.0	0.0	0.0	458.3	1.1	487.2	1.2	471.9	1.0
All Physics	3,390.5	9.6	3,723.9	10.1	3,689.4	9.8	4,119.9	10.1	4,323.6	10.3	4,836.7	9.9
Space Research	1,539.2	4.4	1,497.4	4.1	1,465.0	3.9	1,583.5	3.9	1,595.5	3.8	1,956.7	4.0
Chem/Metall. Eng.	2,525.9	7.2	2,707.0	7.3	2,654.0	7.0	2,762.1	6.8	2,861.9	6.8	3,330.5	6.8
Civil Eng.	1,308.0	3.7	1,386.1	3.8	1,497.9	4.0	1,677.6	4.1	1,856.4	4.4	2,138.4	4.4
Electrical Eng.	2,307.0	6.5	2,403.3	6.5	2,479.1	6.6	2,666.5	6.6	2,655.6	6.3	3,074.7	6.3
Mechanical Eng.	2,063.6	5.9	2,247.2	6.1	2,265.8	6.0	2,322.9	5.7	2,411.3	5.7	2,748.6	5.6
Industrial Eng.	0.0	0.0	0.0	0.0	103.7	0.3	174.4	0.4	258.0	0.6	306.3	0.6
All Engineering	8,204.5	23.3	8,743.6	23.7	9,000.5	23.8	9,603.5	23.6	10,043.2	23.9	11,598.5	23.7
Earth Sciences	2,950.7	8.4	3,228.6	8.7	3,353.9	8.9	3,469.0	8.5	3,560.7	8.5	4,067.1	8.3
Computer/Info Sci.	796.3	2.3	905.4	2.5	966.4	2.6	1,250.9	3.1	1,301.0	3.1	1,663.3	3.4
Pure/Applied Maths	2,076.2	5.9	2,221.9	6.0	2,232.4	5.9	2,420.0	6.0	2,382.6	5.7	2,834.7	5.8
All Mathematics	2,872.5	8.2	3,127.3	8.5	3,198.8	8.5	3,670.9	9.0	3,683.6	8.8	4,498.0	9.2
Global Atmosp.	0.0	0.0	147.7	0.4	170.0	0.5	125.0	0.3	158.7	0.4	189.9	0.4
Interdisciplinary	0.0	0.0	0.0	0.0	36.8	0.1	78.0	0.2	23.0	0.1	23.9	0.0
Total	35,222.7	100.0	36,898.7	100.0	37,752.3	100.0	40,661.9	100.0	42,035.8	100.0	48,880.6	100.0

SOURCE: NRC's Office of Grants and Scholarships.

1) Awards are in \$ thousands.

TABLE 10

Number of Applications and Success Rates for Operating Grants
by Selection Committee

	No. of Application							Success Rate (in percentages)						
	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Animal Biology	303	303	316	317	328	354	351	83.8	87.8	88.0	91.2	93.0	89.3	87.7
Cellular Biology	380	337	346	395	377	362	371	78.7	84.3	82.7	79.5	80.6	89.8	85.3
Plant Biology	246	279	278	291	289	283	283	82.1	83.5	86.7	84.5	85.8	85.2	84.1
Population Biology	338	361	359	355	360	392	389	82.5	87.5	87.7	88.5	92.2	91.6	90.7
All Biology	1,267	1,280	1,299	1,358	1,354	1,391	1,294	81.6	85.9	86.2	85.6	87.8	89.2	87.4
Psychology	288	274	271	271	286	265	264	80.2	74.5	83.0	85.6	83.2	85.3	89.4
Chemistry	691	693	668	640	595	599	611	91.8	87.3	84.1	86.3	90.8	90.7	98.4
Physics	478	502	490	450	455	447	448	88.3	88.4	91.0	91.6	93.0	93.5	95.1
Nuclear Physics				38	43	33	29	0.0	0.0	0.0	100.0	93.0	100.0	100.0
All Physics	478	502	490	488	498	480	477	88.3	88.4	91.0	92.2	93.0	94.0	95.4
Space Research	151	147	149	153	150	154	156	92.7	98.0	94.6	94.8	7.3	99.4	94.9
Chem/Metall. Eng.	323	339	326	319	319	324	332	92.3	92.3	92.0	92.2	97.5	98.5	94.9
Civil Eng.	210	223	228	222	252	259	258	86.7	84.8	90.4	93.7	94.8	95.8	93.0
Electrical Eng.	307	339	334	333	316	329	328	94.1	88.8	91.3	90.1	92.7	92.1	91.8
Mechanical Eng.	301	327	295	297	278	275	275	88.7	88.7	95.3	89.2	94.2	93.8	95.3
Industrial Eng.			28	34	50	52	65	0.0	0.0	78.6	85.3	84.0	86.5	90.8
All Engineering	1,141	1,228	1,211	1,205	1,215	1,239	1,258	90.8	89.0	92.0	91.0	94.4	94.7	93.6
Earth Sciences	486	495	510	507	507	499	496	89.9	93.1	93.9	89.0	86.2	85.2	87.5
Computer/Info. Sci.	158	201	206	224	224	240	269	77.8	76.1	81.1	82.6	88.4	84.2	82.9
Pure/Applied Maths.	600	707	710	745	758	754	772	94.7	91.8	88.0	91.3	92.2	91.9	93.1
All Mathematics	758	908	916	969	982	994	1,041	91.2	88.3	86.5	89.3	91.3	90.0	90.5
Global Atmosp.		13	17	13	11	14	13	0.0	100.0	94.1	92.3	100.0	100.0	100.0
Interdisciplinary			9	14	7	3	13	0.0	0.0	66.7	78.6	28.6	100.0	76.9
TOTAL	5,260	5,540	5,540	5,618	5,605	5,638	5,623	87.9	87.8	88.5	88.6	88.0	90.9	90.4

Source: NRC's Office of Grants and Scholarships.

TABLE 11

Summary of the Success Rates of NRC's Regular Post-graduate and Post-doctorate Awards Programmes

	Post-graduate Awards ¹⁾					Post-doctorate Awards ²⁾				
	Applications Received	Awards Offered	% Awarded	Awards Accepted	% Accepted	Applications Received	Awards Offered	% Awarded	Awards Accepted	% Accepted
1970-71	4,750	2,072	43.6	1,772	85.5	561	218	38.9	182	83.5
1971-72	4,839	1,977	40.9	1,620	81.9	578	226	39.1	170	75.2
1972-73	4,185	1,933	46.2	1,554	80.4	629	230	36.6	183	79.6
1973-74	4,066	1,923	47.3	1,548	80.5	667	225	33.7	177	78.7
1974-75	3,926	1,959	49.4	1,572	80.2	637	232	36.4	188	81.0
1975-76	4,102	1,985	48.4	1,625	81.9	511	191	37.4	143	74.9

Source: NRC's Annual Reports

- 1) Post-graduate awards in this table include only the regular NRC scholarships.
- 2) Post-doctorate awards in this table include only those fellowships held in universities.

TABLE 12 A

NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL (A)
PROGRAM FUNDING BY INSTITUTION

INSTITUTION	(THOUSANDS OF DOLLARS)					
	1975-76		1976-77		1977-78	
	AMOUNT \$	(%)	AMOUNT \$	(%)	AMOUNT \$	(%)
MEMORIAL	1,304	1.7	1,337	1.6	1,465	1.5
PRINCE EDWARD ISLAND	58	0.1	58	0.1	55	0.1
ACADIA	154	0.2	174	0.2	217	0.2
DALHOUSIE	1,709	2.2	1,997	2.4	2,274	2.4
MT. ST. VINCENT	22	0.0	31	0.0	25	0.0
NOVA SCOTIA TECH.	312	0.4	179	0.2	207	0.2
ST. FRANCIS XAVIER	219	0.3	200	0.2	317	0.3
ST. MARY'S	71	0.1	69	0.1	109	0.1
MONCTON	201	0.3	149	0.2	209	0.2
MT. ALLISON	130	0.2	134	0.2	145	0.2
NEW BRUNSWICK	1,260	1.6	1,213	1.4	1,535	1.6
BISHOP'S	33	0.0	16	0.0	12	0.0
CONCORDIA	886	1.1	1,184	1.4	1,473	1.5
ECOLE POLYTECH	1,227	1.6	1,355	1.6	1,709	1.8
LAVAL	2,415	3.1	2,977	3.5	2,934	3.1
MCGILL	4,545	5.9	5,208	6.2	5,867	6.1
MONTREAL	3,421	4.4	3,433	4.1	4,051	4.2
QUEBEC	1,363	1.8	1,461	1.7	1,965	2.1
SHERBROOKE	1,143	1.5	1,186	1.4	1,365	1.4
INST. MICROBIAL	1	0.0	-	-	-	-
BROCK	256	0.3	446	0.5	392	0.4
CARLETON	1,711	2.2	1,772	2.1	2,070	2.2
GUELPH	2,391	3.1	2,612	3.1	3,303	3.4
LAKEHEAD	305	0.4	357	0.4	328	0.3
LAURENTIAN	180	0.2	204	0.2	187	0.2
MCMASTER	4,301	5.5	4,773	5.7	5,801	6.1
OTTAWA	1,436	1.8	1,513	1.8	1,799	1.9
QUEEN'S	2,575	3.3	2,650	3.1	2,683	2.8
TORONTO	9,555	12.3	9,922	11.7	11,131	11.6
TRENT	117	0.2	133	0.2	158	0.2
WATERLOO	4,673	6.0	4,587	5.4	4,969	5.2
WESTERN ONTARIO	3,037	3.9	2,811	3.3	3,144	3.3
WILFRED LAURIER	11	0.0	17	0.0	51	0.1
WINDSOR	1,197	1.5	1,442	1.7	1,357	1.4
YORK	1,438	1.9	1,497	1.8	1,752	1.8
MANITOBA	2,974	3.8	3,441	4.1	3,192	3.3
BRANDON	25	0.0	34	0.0	41	0.0
WINNIPEG	134	0.2	155	0.2	167	0.2
SASKATCHEWAN	1,868	2.4	2,628	3.1	3,023	3.2
REGINA	317	0.4	363	0.4	327	0.3
ALBERTA	4,996	6.4	5,785	6.8	6,793	7.1
CALGARY	2,636	3.4	2,629	3.1	2,914	3.0
LETHBRIDGE	118	0.2	110	0.1	123	0.1
BRITISH COLUMBIA	6,839	8.8	7,076	8.4	7,952	8.3
NOTRE DAME	10	0.0	8	0.0	5	0.0
SIMON FRASER	1,061	1.4	1,146	1.4	1,572	1.6
VICTORIA	705	0.9	800	1.0	834	0.9
OTHER IN CANADA	2,347	3.0	2,189	2.6	3,740	3.9
TOTAL IN CANADA	77,686	100.0	84,467	100.0	95,742	100.0

SOURCE: SPECIAL TABULATION BY NSERC.

(A) FORMERLY THE OFFICE OF GRANTS AND SCHOLARSHIPS, NATIONAL RESEARCH COUNCIL.

Table 12B

Concentration of University Research
Funded by the Granting Councils

1976-77

Funding Institutions:		National Research Council				
Universities	Researchers			Expenditures ¹		
	Rank	No	% of Total	Rank	\$'000	% of Total
Toronto	1	495	9.47	1	6207	12.03
U.B.C.	2	405	7.67	2	4907	9.51
Alberta	3	334	6.39	3	3676	7.12
Waterloo	4	334	6.39	4	3365	6.52
McGill	5	275	5.26	5	3108	6.02
First 5		1839	35.18		21,263	41.21
Guelph	6	230	4.40	8	2117	4.10
McMaster	7	216	4.13	7	2990	5.79
Manitoba	8	214	4.09	10	1963	3.80
Calgary	9	195	3.73	12	1908	3.70
Western	10	183	3.50	9	2052	3.98
First 10		2877	55.03		32,293	62.58
Laval	11	181	3.46	6	3108	6.02
Queen's	12	179	3.42	11	1692	3.80
Montreal	13	159	3.04	14	1399	2.71
Saskatchewan	14	148	2.83	13	1495	2.90
Quebec	15	129	2.47	20	716	1.39
First 15		3673	70.26		40,703	78.88
Memorial	16	128	2.45	18	952	1.84
Carleton	17	121	2.31	16	1088	2.11
Dalhousie	18	121	2.31	15	1134	2.20
Ottawa	19	113	2.16	17	1087	2.11
New Brunswick	20	111	2.12	19	931	1.80
First 20		4267	81.62		45,894	88.90
York						
Victoria						
Simon Fraser						
Cumulative Total		5228	100.00		51,599	100.00

¹Operating Grants Only.

SOURCE: University Branch - based on data supplied by the
Office of Grants and Scholarships,
National Research Council, May 1978

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TABLE 13

SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL
(formerly the Canada Council)

YEAR ENDING MARCH 31	LEVEL OF SUPPORT													
	1971	1972	1973	1974	1975	1976	1977	1971	1972	1973	1974	1975	1976	1977
<u>PAYMENTS TOWARD COSTS OF RESEARCH AND DEVELOPMENT¹</u>	(\$'000)							(PERCENTAGE DISTRIBUTION)						
Research Grants ³	4,345	3,662	4,171	4,862	5,352	5,695	5,246	23.8	19.9	21.7	23.4	24.0	22.5	18.9
General Research Grants	--	--	--	--	289	1,244	998	--	--	--	--	1.3	4.9	3.6
Research Collections	15	15	15	--	--	--	--	0.1	0.1	0.1	--	--	--	--
Special Grants & Studies	228	107	403	279	430	572	358	1.3	0.6	2.1	1.3	1.9	2.3	1.3
Negotiated Grants	--	--	--	--	--	629	1,109	--	--	--	--	--	2.5	4.0
Major Editorial Program Grants	--	--	--	--	--	609	2,190	--	--	--	--	--	2.4	7.9
Explorations Program ²	--	339	619	500 ²	513 ²	616 ²	647	--	1.8	3.2	2.4	2.3	2.4	2.3
Sub-total	4,588	4,123	5,208	5,641	6,584	9,366	10,548	25.2	22.4	27.1	27.1	29.5	37.0	37.9
Leave Fellowships ⁴		1,712	2,382	2,930	3,267	3,780	3,813		9.2	12.4	14.1	14.6	15.0	13.7
Post-doctoral Research Fellowships	1,269	240	250	270	233	--	--	7.0	1.3	1.3	1.3	1.0	--	--
Sub-total R&D	5,857	6,075	7,840	8,841	10,084	13,146	14,361	32.1	32.9	40.8	42.5	45.1	52.0	51.6
<u>RESEARCH TRAINING</u>														
Doctoral Fellowships	11,316	10,949	8,800	9,125	8,740	8,800	9,736	62.0	59.4	45.8	43.8	39.1	34.8	35.0
Special M.A. Scholarships	--	--	400	502	573	650	750	--	--	2.1	2.4	2.6	2.6	2.7
Sub-total	11,316	10,949	9,200	9,627	9,313	9,450	10,486	62.0	59.4	47.9	46.2	41.7	37.4	37.7
<u>RESEARCH RELATED ACTIVITIES</u>														
Publication Grants	496	745	1,220	1,299	1,785	1,617	1,870	2.6	4.0	6.5	6.2	8.0	6.4	6.7
Conferences and Travel	397	364	470	740	669	517	597	2.2	2.0	2.4	3.6	3.0	2.0	2.1
Research Support Serv.	172	309	467	312	487	559	489	0.1	1.7	2.4	1.5	2.2	2.2	1.8
Sub-total	1,065	1,418	2,157	2,351	2,941	2,693	2,956	4.9	7.7	11.3	11.3	13.2	10.6	10.6
T O T A L	18,238	18,442	19,197	20,819	22,338	25,289	27,803	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note 1: Excludes Payments from Special Funds such as Killam and other bequests.

Note 2: Figures represent half of the amount granted under the Explorations Program since 1973-74 and the total amount granted under the Canadian Horizons Program in previous years. (The other half expended is included under the Arts Program)

Note 3: See also Tables 14, 16, 18A and 18B.

Note 4: See also Tables 15 and 17.

31/05/78

SOURCE: Canada Council Annual Reports

TABLE 14

CANADA COUNCIL - DISTRIBUTION OF RESEARCH GRANTS BY DISCIPLINE

	AWARDS (in Thousands of Dollars)							PERCENTAGE DISTRIBUTION						
	70-71	71-72	72-73	73-74	74-75	75-76	76-77	70-71	71-72	72-73	73-74	74-75	75-76	76-77
HUMANITIES														
Classics	37.6	17.9	37.3	62.8	115.8	85.7	99.1	0.9	0.5	0.9	1.3	2.2	1.5	1.9
English Language	233.1	220.4	203.9	281.3	387.5	314.6	232.1	5.4	6.0	4.9	5.8	7.2	5.5	4.4
Fine Arts	86.0	49.4	151.8	86.0	185.1	214.9	168.3	2.0	1.3	3.6	1.8	3.5	3.8	3.2
French Language	160.6	88.2	93.5	204.6	131.5	235.4	169.1	3.7	2.4	2.2	4.2	2.5	4.1	3.2
History	551.9	512.3	657.0	609.4	776.3	863.5	656.0	12.7	14.0	15.8	12.5	14.5	15.2	12.5
Other Modern Languages	109.0	143.6	215.1	83.1	85.3	181.6	78.0	2.5	3.9	5.2	1.7	1.6	3.2	1.5
Philosophy	37.5	79.7	78.8	43.6	142.3	67.6	70.5	0.9	2.2	1.9	0.9	2.7	1.2	1.3
Religious Studies	25.4	22.6	28.5	21.4	26.4	70.2	11.1	0.6	0.6	0.7	0.4	0.5	1.2	0.2
Other Humanities	23.5	0.0	1.5	0.0	0.0	0.0	61.6	0.5	0.0	0.0	0.0	0.0	0.0	1.2
SUB-TOTAL	1,264.1	1,134.1	1,467.5	1,392.3	1,850.2	2,033.4	1,545.5	29.1	31.0	35.2	28.6	34.6	35.7	29.5
SOCIAL SCIENCES														
Anthropology	284.9	184.8	337.8	309.9	202.1	198.0	224.2	6.6	5.0	8.1	6.4	3.8	3.3	4.3
Archaeology	326.2	229.3	183.8	272.1	465.6	478.7	379.5	7.5	6.3	4.4	5.6	8.7	8.4	7.2
Economics	356.2	266.0	204.3	386.1	353.0	249.7	407.5	8.2	7.3	4.9	7.9	6.6	4.4	7.8
Geography	114.7	151.9	171.9	183.7	161.6	169.0	114.5	2.6	4.1	4.1	3.8	3.0	3.0	2.2
Linguistics	263.5	237.4	408.2	291.1	485.9	474.3	536.9	6.1	6.5	9.8	6.0	9.1	8.3	10.2
Physical Education	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Political Science	309.9	207.3	284.2	478.9	244.2	427.8	283.4	7.1	5.7	6.8	9.8	4.6	7.5	5.4
Psychology	590.6	568.8	476.0	702.4	682.4	702.3	581.0	13.6	15.5	11.4	14.4	12.8	12.3	11.1
Social Work	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sociology	382.9	324.5	352.4	273.1	321.8	350.5	443.9	8.8	8.9	8.4	5.6	6.0	6.2	8.5
Urban and Regional Studies	5.9	12.3	2.9	5.7	0.8	67.2	77.4	0.1	0.3	0.1	0.1	0.0	1.2	1.5
SUB-TOTAL	2,634.8	2,182.4	2,421.6	2,902.8	2,917.4	3,117.4	3,050.1	60.6	59.6	58.1	59.7	54.5	54.7	59.1
OTHER SOCIAL SCIENCES														
Communication Studies	2.7	12.6	5.4	23.6	88.4	0.0	22.6	0.1	0.3	0.1	0.5	1.7	0.0	0.4
Criminology	70.0	28.9	33.8	120.7	6.1	50.8	80.4	1.6	0.8	0.8	2.5	0.1	0.9	1.5
Demography	78.0	3.2	25.6	68.2	48.2	70.3	20.6	1.8	0.1	0.6	1.4	0.9	1.2	0.4
Other Social Sciences	8.4	14.3	18.1	28.3	1.6	5.3	0.0	0.2	0.4	0.4	0.6	0.0	0.1	0.0
SUB-TOTAL	159.1	59.0	82.7	240.9	144.3	126.4	123.6	3.7	1.6	2.0	5.0	2.7	2.2	2.4
EDUCATION														
Education - Admin.	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Education	49.8	97.3	64.8	150.1	198.4	87.4	166.6	1.1	2.7	1.6	3.1	3.7	1.5	3.2
Education - Psychology	0.0	0.0	0.0	0.0	0.0	0.0	57.2	0.0	0.0	0.0	0.0	0.0	0.0	1.1
SUB-TOTAL	49.8	97.3	64.8	154.8	198.4	87.4	223.9	1.1	2.7	1.6	3.2	3.7	1.5	4.3
OTHER														
Administration	54.3	76.7	52.1	36.0	19.0	152.6	176.7	1.2	2.1	1.2	0.7	0.4	2.7	3.4
Industrial Relations	27.0	3.0	6.5	25.6	20.9	6.0	17.7	0.6	0.1	0.2	0.5	3.4	0.1	0.3
Information Science	9.0	0.0	4.7	8.3	84.8	60.7	71.4	0.2	0.0	0.1	0.2	1.6	1.1	1.4
Law	92.6	102.1	60.6	57.6	95.4	91.1	35.8	2.1	2.8	1.5	1.2	1.8	1.6	0.7
Library Science	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mathematics	8.4	0.0	0.0	0.0	1.7	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Architecture	47.7	7.7	10.3	44.0	19.4	4.0	0.8	1.1	0.2	0.2	0.9	0.4	0.1	0.0
SUB-TOTAL	238.9	189.5	134.1	171.4	241.1	314.3	302.5	5.5	5.2	3.2	3.5	4.5	5.5	5.8
INTERDISCIPLINARY	0.0	0.0	0.0	0.0	0.0	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
T O T A L	4,346.6	3,662.3	4,170.7	4,862.2	5,351.5	5,695.7	5,245.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 15

CANADA COUNCIL

DISTRIBUTION OF LEAVE FELLOWSHIPS BY DISCIPLINE

	AWARDS (in Thousands of Dollars)							PERCENTAGE DISTRIBUTION						
	70-71	71-72	72-73	73-74	74-75	75-76	76-77	70-71	71-72	72-73	73-74	74-75	75-76	76-77
HUMANITIES														
Classics	38.7	53.0	119.1	61.9	79.9	98.3	40.3	3.0	2.7	4.5	1.9	2.3	2.6	1.1
English Language	170.3	275.0	395.3	468.1	427.5	404.2	383.3	13.4	14.1	15.0	14.6	12.2	10.7	10.1
Fine Arts	15.4	59.1	85.4	96.4	62.2	131.1	80.7	1.2	3.0	3.2	3.0	1.8	3.5	2.1
French Language	123.9	110.3	99.4	227.4	159.8	218.5	232.0	9.8	5.7	3.8	7.1	6.6	5.8	6.1
History	162.5	276.4	302.1	464.9	370.8	513.5	293.3	12.8	14.2	11.5	14.5	10.6	13.6	10.3
Other Modern Languages	23.2	93.4	137.1	103.7	168.7	131.2	171.4	1.8	4.8	5.2	3.2	4.8	3.5	4.5
Philosophy	85.1	156.1	170.9	210.2	207.6	240.3	221.9	6.7	8.0	6.5	6.6	5.9	6.4	5.8
Religious Studies	23.2	7.2	63.5	43.2	53.3	142.0	100.9	1.8	0.4	2.4	1.4	1.5	3.8	2.6
Other Humanities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SUB-TOTAL	642.3	1,030.5	1,372.8	1,675.0	1,529.8	1,879.1	1,623.8	50.6	52.8	52.2	52.4	43.7	49.7	42.6
SOCIAL SCIENCES														
Anthropology	23.2	63.0	49.7	80.5	79.9	87.4	100.9	1.8	3.2	1.9	2.5	2.3	2.3	2.6
Archaeology	15.5	7.2	7.9	27.3	26.6	76.5	0.0	1.2	0.4	0.3	0.9	0.8	2.0	0.0
Economics	123.9	136.1	202.6	220.2	170.4	131.1	302.6	9.8	7.0	7.7	6.9	4.9	3.5	7.9
Geography	54.2	91.6	145.0	129.7	115.4	87.4	100.9	4.3	4.7	5.5	4.1	3.3	2.3	2.6
Linguistics	15.5	30.5	47.7	87.8	97.7	131.1	90.8	1.2	1.6	1.8	2.7	2.8	3.5	2.4
Physical Education	0.0	0.0	0.0	0.0	0.0	10.9	20.2	0.0	0.0	0.0	0.0	0.0	0.3	0.5
Political Science	85.1	137.4	165.0	220.2	179.2	240.3	312.7	6.7	7.0	6.3	6.9	5.1	6.4	8.2
Psychology	85.1	88.8	200.6	182.9	197.0	262.2	423.6	6.7	4.5	7.6	5.7	5.6	6.1	11.1
Social Work	7.7	0.0	7.9	8.6	26.6	10.9	10.1	0.6	0.0	0.3	0.3	0.8	0.3	0.3
Sociology	69.6	78.8	103.3	158.3	170.4	174.8	292.5	5.5	4.0	3.9	4.9	4.9	4.6	7.7
Urban and Regional Studies	7.7	24.3	15.9	25.9	28.4	21.9	60.5	0.6	1.2	0.6	0.8	0.8	0.5	1.6
SUB-TOTAL	487.5	657.7	945.6	1,141.4	1,091.6	1,234.5	1,714.8	38.4	33.7	35.9	35.7	31.2	32.7	45.0
OTHER SOCIAL SCIENCES														
Communication Studies	0.0	7.2	7.9	0.0	26.6	0.0	0.0	0.0	0.4	0.3	0.0	0.8	0.0	0.0
Criminology	0.0	7.2	0.0	0.0	17.8	21.9	10.1	0.0	0.4	0.0	0.0	0.5	0.6	0.3
Demography	7.7	7.2	0.0	8.6	17.8	0.0	0.0	0.6	0.4	0.0	0.3	0.5	0.0	0.0
Other Social Sciences	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SUB-TOTAL	7.7	21.6	7.9	8.6	62.2	21.9	10.1	0.6	1.1	0.3	0.3	1.8	0.6	0.3
EDUCATION														
Education - Admin.	0.0	0.0	7.9	8.6	17.8	0.0	0.0	0.0	0.0	0.3	0.3	0.5	0.0	0.0
Education	7.7	45.8	81.5	103.7	186.4	174.8	171.5	0.6	2.3	3.1	3.2	5.3	4.6	4.5
Education - Psychology	0.0	0.0	0.0	0.0	0.0	0.0	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3
SUB-TOTAL	7.7	45.8	89.4	112.3	204.2	174.8	181.6	0.6	2.3	3.4	3.5	5.8	4.6	4.8
OTHER														
Administration	15.4	7.2	7.9	61.8	133.1	65.5	70.6	1.2	0.4	0.3	1.9	3.8	1.7	1.9
Industrial Relations	15.5	7.2	0.0	8.6	0.0	54.6	10.1	1.2	0.4	0.0	0.3	0.0	1.4	0.3
Information Science	0.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Law	54.2	110.3	119.1	95.1	90.5	142.0	121.0	4.3	5.7	4.5	3.0	2.6	3.8	3.2
Library Science	0.0	0.0	0.0	0.0	0.0	0.0	30.3	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Mathematics	31.0	64.5	73.5	86.4	142.0	163.9	40.3	2.4	3.3	2.8	2.7	4.1	4.3	1.1
Architecture	7.7	7.2	7.9	10.0	8.9	32.8	10.1	0.6	0.4	0.3	0.3	0.3	0.9	0.3
SUB-TOTAL	123.8	196.4	216.3	261.9	374.5	458.8	282.4	9.8	10.1	8.2	8.2	10.7	12.1	7.4
INTERDISCIPLINARY														
	0.0	0.0	0.0	0.0	237.7	10.9	0.0	0.0	0.0	0.0	0.0	6.8	0.3	0.0
T O T A L	1,269.0	1,952.0	2,632.0	3,200.0	3,500.0	3,780.0	3,812.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0

31/05/78

SOURCE: Canada Council Annual Reports.

CANADA COUNCIL - APPLICATIONS AND SUCCESS RATE - RESEARCH GRANTS

	APPLICATIONS							SUCCESS RATE						
	70-71	71-72	72-73	73-74	74-75	75-76	76-77	70-71	71-72	72-73	73-74	74-75	75-76	76-77
HUMANITIES														
Classics	18	15	18	12	24	15	15	94.4	66.7	77.8	100.0	79.2	100.0	73.3
English Language	94	94	81	77	95	69	47	93.6	92.6	87.7	89.6	86.3	81.2	80.9
Fine Arts	39	28	49	41	45	37	22	76.9	78.6	77.6	75.6	62.2	73.0	77.3
French Language	58	34	43	43	40	41	20	84.5	76.5	86.0	83.7	90.0	65.9	75.0
History	193	179	195	174	202	156	145	88.1	88.8	82.8	82.8	78.7	85.3	74.5
Other Modern Languages	59	65	74	58	54	49	23	69.5	87.7	82.4	72.4	63.0	81.6	87.0
Philosophy	26	37	31	23	42	27	19	84.6	89.2	77.4	73.9	73.8	63.0	63.2
Religious Studies	6	15	15	7	15	18	10	83.3	73.3	66.7	71.4	53.3	66.7	60.0
Other Humanities	6	0	1	0	1	1	3	100.0	--	100.0	--	0.0	0.0	100.0
SUB-TOTAL	499	467	507	435	518	413	304	85.8	86.7	84.4	81.8	76.6	76.2	75.7
SOCIAL SCIENCES														
Anthropology	45	39	37	36	34	35	34	93.3	84.6	89.2	88.9	82.4	80.0	88.2
Archaeology	43	41	26	49	52	45	31	88.4	90.2	88.5	87.8	84.6	82.2	87.1
Economics	64	69	51	71	76	52	57	87.5	78.3	84.3	71.8	65.8	57.7	73.7
Geography	36	38	40	44	44	38	25	77.8	92.1	70.0	75.0	65.9	63.2	68.0
Linguistics	35	29	42	54	38	45	32	85.7	86.2	73.8	66.7	84.2	77.8	81.3
Physical Education	0	0	0	0	0	0	0	--	--	--	--	--	--	--
Political Science	75	49	60	68	69	62	43	88.0	85.7	65.0	64.7	59.4	64.5	72.1
Psychology	94	94	94	114	143	112	88	81.9	84.0	69.1	70.2	53.8	58.9	60.2
Social Work	0	0	0	1	1	1	1	--	--	--	0.0	0.0	0.0	100.0
Sociology	62	50	42	59	66	50	44	71.0	80.0	61.9	57.6	54.5	70.0	61.4
Urban and Regional Studies	6	6	4	5	5	4	8	33.3	50.0	25.0	40.0	20.0	50.0	75.0
SUB-TOTAL	460	415	396	501	528	444	363	83.3	83.9	73.0	70.9	64.0	66.9	71.6
OTHER SOCIAL SCIENCES														
Communication Studies	4	2	4	10	8	2	4	25.0	50.0	50.0	30.0	25.0	0.0	50.0
Criminology	6	4	9	6	2	7	3	83.3	50.0	66.7	83.3	100.0	14.3	66.7
Demography	6	1	2	5	2	3	2	100.0	100.0	100.0	80.0	50.0	100.0	100.0
Other Social Sciences	2	7	1	12	1	3	3	100.0	57.1	100.0	83.3	100.0	33.3	--
SUB-TOTAL	18	14	16	33	13	15	12	77.8	57.1	68.8	66.7	46.2	33.3	50.0
EDUCATION														
Education - Admin.	0	0	0	6	1	1	0	--	--	--	16.7	0.0	0.0	--
Education	17	16	30	22	32	29	33	52.9	43.8	43.3	59.1	53.1	48.3	36.4
Education - Psychology	0	0	0	0	0	0	7	--	--	--	--	--	--	57.1
SUB-TOTAL	17	16	30	28	33	30	39	52.9	43.8	43.3	50.0	53.1	48.3	40.0
OTHER														
Administrative Studies	11	20	12	12	16	42	37	72.7	75.0	75.0	50.0	25.0	52.4	51.4
Industrial Relations	6	2	2	4	8	3	4	66.7	50.0	50.0	50.0	75.0	66.7	75.0
Information Science	5	0	1	5	7	7	2	60.0	--	100.0	40.0	57.1	57.1	75.0
Law	25	19	17	16	16	11	11	80.0	89.5	82.4	93.8	68.8	72.7	81.8
Library Science	0	0	0	0	0	0	0	--	--	--	--	--	--	--
Mathematics	1	0	1	0	2	1	1	100.0	--	0.0	--	50.0	0.0	0.0
Architecture	12	7	5	8	13	4	5	91.7	57.1	60.0	37.5	38.5	25.0	40.0
SUB-TOTAL	60	48	38	45	62	68	66	78.3	77.1	73.7	62.2	50.0	54.4	59.1
INTERDISCIPLINARY														
	0	0	0	0	6	9	0	--	--	--	--	0.0	11.1	--
T O T A L	1,054	960	987	1,042	1,160	979	785	83.5	83.9	77.9	74.4	68.0	69.6	70.2

10/8/78

SOURCE: Canada Council Annual Reports

TABLE 17

CANADA COUNCIL - APPLICATIONS AND SUCCESS RATE - LEAVE FELLOWSHIPS

	APPLICATIONS							SUCCESS RATE						
	70-71	71-72	72-73	73-74	74-75	75-76	76-77	70-71	71-72	72-73	73-74	74-75	75-76	76-77
HUMANITIES														
Classics	8	10	23	16	18	21	9	62.5	70.0	65.2	43.8	50.0	42.9	44.4
English Language and Literature	28	67	71	94	102	93	79	78.6	56.7	69.0	57.4	46.1	39.8	48.1
Fine Arts	6	12	13	20	20	35	25	33.3	66.7	76.9	55.0	35.0	34.3	32.0
French Language and Literature	25	21	20	39	40	44	49	64.0	71.4	60.0	66.7	45.0	45.5	46.9
History	36	60	64	87	86	91	82	58.3	61.7	57.8	60.9	47.7	51.6	47.6
Other Modern Languages and Literatures	14	20	26	27	38	33	35	21.4	60.0	65.4	44.4	50.0	36.4	48.6
Philosophy	20	33	31	43	44	52	46	55.0	63.6	67.7	55.8	52.3	42.3	47.8
Religious Studies	7	5	12	16	15	26	24	42.9	20.0	66.7	31.3	40.0	50.0	41.7
Other Humanities	0	0	0	0	0	0	0	--	--	--	--	--	--	0.0
SUB-TOTAL	144	228	260	342	363	395	349	57.6	61.0	65.0	56.1	46.8	46.1	45.1
SOCIAL SCIENCES														
Anthropology	4	11	9	10	19	18	18	75.0	72.7	66.7	90.0	47.4	44.4	55.6
Archaeology	2	2	1	3	5	11	2	100.0	50.0	100.0	100.0	60.0	63.6	0.0
Economics	24	26	46	54	36	32	63	66.7	73.1	54.3	46.3	52.8	37.5	47.6
Geography	9	18	21	20	20	33	21	77.8	66.7	85.7	75.0	65.0	24.2	50.0
Linguistics	2	10	13	16	21	25	18	100.0	40.0	46.2	62.5	52.4	48.0	50.0
Physical Education	0	0	0	0	0	1	3	0.0	0.0	0.0	0.0	0.0	100.0	66.7
Political Science	18	31	39	48	40	41	56	61.1	58.1	51.3	52.1	50.0	53.7	55.4
Psychology	20	19	37	35	43	58	69	55.0	63.2	67.6	60.0	51.2	41.4	60.9
Social Work	1	3	2	5	7	5	11	100.0	0.0	50.0	20.0	42.9	20.0	9.1
Sociology	16	15	24	37	41	56	65	56.3	73.3	54.2	48.6	42.3	28.6	44.6
Urban and Regional Studies	2	3	4	7	8	5	12	50.0	100.0	50.0	42.9	37.5	40.0	50.0
Other Social Sciences	0	1	0	1	1	0	0	--	0.0	--	0.0	0.0	--	--
SUB-TOTAL	98	139	196	236	241	285	338	64.3	63.3	59.7	55.1	52.7	39.6	50.3
OTHER SOCIAL SCIENCES														
Communication Studies	1	3	1	0	4	0	1	0.0	33.3	100.0	--	75.0	--	0.0
Criminology	0	3	1	2	3	2	2	0.0	33.3	0.0	0.0	66.7	100.0	50.0
Demography	2	4	1	2	3	3	0	50.0	25.0	0.0	50.0	66.7	0.0	--
SUB-TOTAL	3	10	3	4	10	5	3	33.3	30.0	33.3	25.0	70.0	40.0	33.3
EDUCATION														
Education	2	15	21	27	57	50	48	50.0	40.0	47.6	44.4	36.8	32.0	35.4
Educational Psychology	0	0	0	0	0	5	5	--	--	--	--	--	0.0	20.0
Education/Admin.	0	1	2	7	5	0	0	0.0	0.0	50.0	14.3	40.0	0.0	0.0
SUB-TOTAL	2	16	23	34	62	55	53	50.0	37.5	47.8	38.2	37.1	29.1	34.0
OTHER														
Administrative Studies	5	4	3	15	28	26	21	40.0	25.0	33.3	46.7	53.6	23.1	33.3
Hospital Admin	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Architecture	1	4	2	1	1	7	4	100.0	25.0	50.0	100.0	100.0	42.9	25.0
Industrial Relations	2	1	0	1	0	8	6	100.0	100.0	0.0	100.0	0.0	62.5	16.7
Information Sciences	0	0	1	2	1	5	0	--	--	100.0	0.0	0.0	0.0	--
Law	9	19	16	25	23	26	18	77.8	78.9	93.8	44.0	43.5	50.0	66.7
Library Science	0	0	0	0	0	0	3	--	--	--	--	--	--	100.0
Mathematics	6	12	15	16	26	29	5	66.7	75.0	60.0	62.5	61.5	51.7	80.0
Studies of Science	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SUB-TOTAL	23	40	37	60	79	101	57	69.6	67.5	73.0	50.0	53.2	41.6	49.1
INTERDISCIPLINARY														
	0	0	0	0	43	2	8	--	--	--	--	60.5	50.0	0.0
TOTAL	270	433	519	676	798	843	808	60.7	60.7	62.6	54.1	48.9	41.0	46.7

10/8/78

SOURCE: Canada Council Annual Reports

SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL
RESEARCH GRANTS BY UNIVERSITY

	1972/73		1974/75		1976/77	
	\$ VALUE	% DIST'N	\$ VALUE	% DIST'N	\$ VALUE	% DIST'N
MEMORIAL	87,809	2.1	169,041	3.2	143,496	2.7
PRINCE ED. ISLAND	3,240	0.1	5,162	0.1	9,186	0.2
ACADIA	12,118	0.3	10,078	0.2	2,345	0.0
DALHOUSIE	63,680	1.5	54,380	1.0	90,893	1.7
MT. ST. VINCENT	2,245	0.1	11,729	0.2	22,165	0.4
ST. FRANCIS XAVIER	21,395	0.5	9,960	0.2	2,399	0.0
SAINT MARY'S	800	0.0	11,155	0.2	10,601	0.2
MONCTON	132	0.0	7,100	0.1	15,905	0.3
MOUNT ALLISON	-	-	4,251	0.1	3,920	0.1
NEW BRUNSWICK	50,166	1.2	116,702	2.2	71,728	1.4
ST. THOMAS	-	-	-	-	6,430	0.1
BISHOP'S	800	0.0	9,220	0.2	11,444	0.2
CONCORDIA	68,175	1.6	95,686	1.8	54,005	1.0
LAVAL	517,337	12.4	454,146	8.5	344,461	6.6
MCGILL	149,197	3.6	167,231	3.1	182,695	3.5
MONTREAL	327,642	7.9	641,360	12.0	463,744	8.9
QUEBEC	164,580	3.9	333,460	6.2	283,249	5.4
SHERBROOKE	36,643	0.9	69,571	1.3	14,866	0.3
BROCK	23,311	0.6	20,583	0.4	10,000	0.2
CARLETON	81,459	2.0	112,202	2.1	231,217	4.4
GUELPH	59,610	1.4	34,652	0.6	27,169	0.5
LAKEHEAD	1,975	0.0	4,476	0.1	-	-
LAURENTIAN	15,839	0.4	4,765	0.1	36,680	0.7
MCMASTER	298,588	7.2	151,636	2.8	92,212	1.8
O.I.S.E.	-	-	69,420	1.3	13,421	0.3
OTTAWA	158,994	3.8	100,985	1.9	139,938	2.7
QUEEN'S	52,675	1.3	47,711	0.9	112,157	2.1
R.M.C.	-	-	12,428	0.3	-	-
TORONTO	530,272	12.7	629,357	11.8	665,784	12.7
TRENT	43,286	1.0	20,918	0.4	68,120	1.3
WATERLOO	155,691	3.7	237,049	4.4	129,263	3.6
WESTERN ONTARIO	104,753	2.5	163,222	3.1	303,494	5.8
WILFRED LAURIER	3,627	0.1	4,250	0.1	11,670	0.2
WINDSOR	44,082	1.1	57,062	1.1	48,136	0.9
YORK	126,766	3.0	181,125	3.4	295,857	5.6
BRANDON	9,538	0.2	1,495	0.0	-	-
MANITOBA	74,569	1.8	133,257	2.5	90,850	1.7
WINNIPEG	6,734	0.2	15,552	0.3	8,118	0.2
REGINA	17,882	0.4	6,364	0.1	-	-
SASKATCHEWAN	52,489	1.3	38,879	0.7	40,772	0.8
ALBERTA	119,830	2.9	108,215	2.0	180,068	3.4
CALGARY	105,688	2.5	160,694	3.0	83,828	1.6
LETHBRIDGE	12,459	0.3	6,278	0.1	7,194	0.1
BRITISH COLUMBIA	238,580	5.7	378,420	7.1	334,883	6.4
SIMON FRASER	76,263	1.8	147,998	2.8	143,830	2.7
VICTORIA	53,422	1.3	45,298	0.9	159,832	3.0
OTHER POST SECONDARY	8,081	0.2	12,959	0.2	22,020	0.4
PRIVATE (NON-UNIVERSITY)	187,754	4.5	261,437	4.9	158,615	3.0
OTHER (FOREIGN)	500	0.0	9,100	0.2	31,724	0.6
TOTAL	4,170,676	100.0	5,351,479	100.0	5,245,504	100.0

SOURCE: SSHRC ANNUAL REPORTS

TABLE 18 B

Concentration of University Research
Funded by the Granting Councils

Averages for a 5 years period
ending March 31, 1977

Funding Institutions:	The Canada Council 2. (a)					
	Grants			Expenditures (1)		
Universities	Rank	Number	Percent of Total	Rank	\$ Value	Percent of Total
Toronto	1	92	13.2	1	612,852	12.1
British Columbia	2	48	6.9	4	321,466	6.4
Western	3	33	4.7	7	185,115	3.7
York	4	32	4.6	5	223,892	4.4
Montreal	5	31	4.5	3	478,208	9.4
First 5		236	33.9		1,821,533	36.0
Laval	6	30	4.3	2	497,685	9.8
Carleton	7	30	4.3	11	158,113	3.1
McGill	8	30	4.3	8	173,784	3.4
Waterloo	9	27	3.9	6	188,887	3.7
Alberta	10	24	3.4	10	158,665	3.1
First 10		377	54.2		2,998,667	59.2
Ottawa	11	20	2.9	13	118,252	2.3
Queen's	12	20	2.9	19	75,033	1.5
McMaster	13	18	2.6	9	165,569	3.3
Calgary	14	17	2.4	15	108,800	2.1
Manorial	15	17	2.4	12	128,398	2.5
First 15		469	67.4		3,594,719	71.0
Manitoba	16	16	2.3	17	78,359	1.5
Dalhousie	17	15	2.2	20	72,331	1.4
Simon Fraser	18	14	2.0	14	113,860	2.2
Victoria	19	13	1.9	16	80,695	1.6
New Brunswick	20	12	1.7	18	75,871	1.5
First 20		539	77.4		4,015,843	79.3
All other universities		157	22.6		1,045,600	20.7
Total		696	100.0		5,061,443	100.0

1. Total for Research Grants.

2. Social Sciences and Humanities Program.

Source: University Branch - based on

(a) Canada Council, Annual Reports, 1972-73 to 1976-77

TABLE 19

MEDICAL RESEARCH COUNCIL
LEVEL OF SUPPORT

	THOUSANDS OF DOLLARS							PERCENT DISTRIBUTION						
	1971	1972	1973	1974	1975	1976	1977	1971	1972	1973	1974	1975	1976	1977
GRANTS	22,479	23,568	23,837	26,242	27,733	30,318	32,841	66.2	66.1	63.6	65.2	63.7	63.9	64.6
GRANTS-IN-AID OF RESEARCH (3)														
DEVELOPMENT GRANTS	1,230	1,113	988	762	957	1,003	1,245	3.6	3.1	2.6	1.9	2.2	2.1	2.4
MRC GROUP GRANTS	544	681	1,941	2,499	3,626	4,002	4,937	1.6	1.9	5.2	6.2	8.5	8.5	9.7
SPECIAL PROJECTS	254	460	511	422	615	664	565	0.8	1.3	1.4	1.0	1.4	1.4	1.1
GENERAL RESEARCH GRANTS	1,215	815	820	820	624	624	703	3.6	2.3	2.2	2.0	1.5	1.3	1.4
TRAVEL GRANTS	15	10	20	15	11	19	18	-	-	-	-	-	-	-
TRAINING GRANTS	-	-	-	53	65	77	57	-	-	-	0.1	0.2	0.2	0.1
PROGRAMS GRANTS	-	-	-	-	-	-	472	-	-	-	-	-	-	0.9
SUB-TOTAL GRANTS (6)	25,747	26,647	28,117	30,813	33,231	36,707	40,838	75.8	74.7	75.0	76.4	77.5	77.4	80.3
AWARDS														
ASSOCIATESHIPS	1,661	1,674	1,723	1,871	1,951	2,215	2,338	4.9	4.7	4.6	4.6	4.6	4.7	4.6
SCHOLARSHIPS	1,776	2,016	2,175	2,372	2,351	2,634	2,486	5.3	5.7	5.9	5.9	5.5	5.5	4.9
CENTENNIAL FELLOWSHIPS & FELLOWSHIPS (1)(4)	1,578	1,637	1,736	1,607	1,651	1,761	1,615	4.6	4.6	4.6	4.0	3.9	3.7	3.2
VISITING SCIENTISTS	202	145	163	206	89	83	-	0.6	0.4	0.4	0.5	0.2	0.2	-
SUB-TOTAL AWARDS	5,217	5,472	5,797	6,056	6,042	6,693	6,439	15.4	15.4	15.5	15.0	14.2	14.1	12.7
TOTAL RESEARCH & DEVELOPMENT (5)	30,964	32,119	33,914	36,869	39,273	43,400	47,277	91.2	90.1	90.5	91.4	91.7	91.5	93.0
RESEARCH TRAINING														
STUDENTSHIPS (4)	1,033	1,086	1,013	963	919	972	970	3.0	3.0	2.7	2.4	2.1	2.0	1.9
SUMMER SCHOLARSHIPS	260	410	312	308	210	215	-	0.8	1.2	0.8	0.8	0.5	0.5	-
CENTENNIAL FELLOWSHIPS & FELLOWSHIPS (2)(4)	1,578	1,773	2,037	2,046	2,280	2,642	2,422	4.6	5.0	5.5	5.0	5.3	5.6	4.8
SUB-TOTAL EDUC. SUPPORT	2,871	3,269	3,362	3,317	3,409	3,829	3,392	8.4	9.2	9.0	8.2	7.9	8.1	6.7
RESEARCH RELATED ACTIVITIES														
SYMPOSIA	-	-	47	49	24	37	7	-	-	0.1	0.1	0.1	0.1	-
OTHER ACTIVITIES	128	244	123	112	145	157	157	0.4	0.7	0.5	0.3	0.3	0.3	0.3
VISITING PROFESSORS	-	11	14	11	10	10	15	-	-	-	-	-	-	-
TOTAL RELATED ACTIVITIES	2,999	3,524	3,546	3,489	3,588	4,033	3,571	8.8	9.9	9.5	8.6	8.3	8.5	7.0
TOTAL (7)	33,963	35,643	37,460	40,358	42,861	47,433	50,848	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE:

- (1) ESTIMATED FELLOWSHIPS AND CENTENNIAL FELLOWSHIPS AWARDED TO PHD'S
- (2) ESTIMATED FELLOWSHIPS AND CENTENNIAL FELLOWSHIPS AWARDED TO MD'S, DDS'S, DVM'S
- (3) SEE ALSO TABLE 20 and 22 B
- (4) SEE ALSO TABLE 21
- (5) SEE ALSO TABLE 22 A
- (6) SEE ALSO TABLES 23 AND 24
- (7) SEE ALSO TABLE 25

NOTE: DETAILS OF ESTIMATES FOR FOOTNOTES 1 AND 2 SUGGESTED BY THE MEDICAL RESEARCH COUNCIL

Table 20

Applications and Awards in Selected Categories of MRC Payments

MRC Operating Grants¹
Subventions de recherche CRM

Year Année	On-going commitments (no.) Engagements (nombre)	Applications considered (no.) Demandes examinées (nombre)	Grants approved		Total no. projects supported (no.) Nombre des projets subventionnés (nombre)
			Unconditional (no.) Sans condition (nombre)	Terminal (no.) Terminale (nombre)	
1975-76	381	1,033	729	100	1,210
1976-77	393	1,125	662	143	1,198
1977-78	399	1,207	821	85	1,305
1978-79 (to date) (à date)	545	1,160	640	100	1,285

¹Grants in Aid of Research

MRC Scholarships
Scholarships du CRM

Year Année	On-going commitments (no.) Engagements (nombre)	Applications considered (no.) Demandes examinées (nombre)	New awards offered (no.) Nouvelles bourses offertes (nombre)	Total offered (no.) Nombre de bourses offertes (nombre)
1975-76	112	78	25	137
1976-77	116	77	15	131
1977-78	99	70	25	124
1978-79 (to date) (à date)	91	69	22	113

Table 21

Applications and Awards in Selected Categories of MRC Payments

MRC Fellowships
Bourses de recherche du CRM

Year Année	Renewals Renouvellements		New Awards Nouvelles Bourses				Total offered Nombre de bourses offertes
	Applications considered Demandes examinées	Awards offered Bourses offertes	Post-MD, -DDS -DVM Après-MD, -DDS -DVM		Post-PhD Après-PhD		
			Applications considered Demandes examinées	Awards offered Bourses offertes	Applications considered Demandes examinées	Awards offered Bourses offertes	
1975-76	158	154	120	75	191	55	284
1976-77	153	152	169	50	166	44	246
1977-78	132	130	167	70	181	50	250
1978-79 (to date) (à date)	110	106	181	84	142	52	242

MRC Studentships
Bourses de stagiaire de recherche du CRM

Year Année	Renewals Renouvellements		New Awards Nouvelles Bourses		Total offered Nombre de bourses offertes
	Applications considered Demandes examinées	Awards offered Bourses offertes	Applications considered Demandes examinées	Awards offered Bourses offertes	
1975-76	142	138	400	65	203
1976-77	134	132	464	60	192
1977-78	129	129	447	70	199
1978-79 (to date) (à date)	142	138	395	85	223

TABLE 22A

MRC Expenditures on Scientific ActivitiesPayments towards R&D by University^{a)}

(in \$ thousands)

University	1971(%)	1972(%)	1973(%)	1974(%)	1975(%)	1976(%)
McGill	5,665(20.3)	6,009(21.0)	6,380(20.8)	6,351(19.0)	6,881(19.5)	7,307(18.7)
Toronto	5,050(18.1)	5,366(18.7)	5,824(19.0)	6,266(18.8)	6,845(19.4)	8,014(20.5)
Montreal	2,875(10.3)	2,985(10.4)	3,469(11.3)	4,132(12.4)	3,890(11.0)	4,666(11.9)
Manitoba	2,300(8.3)	2,071(7.2)	2,260(7.4)	2,701(8.1)	2,578(7.3)	2,561(6.5)
B.C.	2,241(8.1)	2,272(7.9)	2,295(7.5)	2,306(6.9)	2,552(7.2)	2,503(6.4)
Alberta	1,914(6.9)	1,810(6.3)	1,929(6.3)	2,026(6.1)	2,560(7.2)	2,715(6.9)
Western	1,319(4.7)	1,508(5.3)	1,452(4.7)	1,714(5.1)	1,809(5.1)	2,081(5.3)
Saskatchewan	1,265(4.5)	882(3.1)	841(2.7)	1,071(3.2)	1,178(3.3)	1,023(2.6)
McMaster	1,257(4.5)	1,565(5.5)	1,877(6.2)	1,843(5.5)	1,894(5.4)	2,355(6.0)
Queen's	1,104(4.0)	1,120(3.9)	1,169(3.8)	1,353(4.1)	1,246(3.5)	1,283(3.3)
Ottawa	1,025(3.7)	1,099(3.8)	1,273(4.2)	1,336(4.0)	1,446(4.1)	1,450(3.7)
Laval	988(3.5)	1,051(3.7)	1,000(3.3)	1,314(3.9)	1,401(4.0)	1,703(4.4)
Dalhousie	839(3.1)	928(3.2)	867(2.8)	975(2.9)	1,082(3.1)	1,493(3.8)
	<u>27,842(100.0)</u>	<u>28,666(100.0)</u>	<u>30,636(100.0)</u>	<u>33,388(100.0)</u>	<u>35,362(100.0)</u>	<u>39,154(100.0)</u>

a) Those universities which receive approximately 90% of MRC's payments towards R&D programs.

SOURCE: based on Medical Research Council Tabulations

Table 22B
 Concentration of University Research
 Funding by the Granting Councils
 1977-78

Funding Institutions:		Medical Research Council ^{a)}				
Universities	Researchers ¹			Expenditures ¹		
	Rank	No.	% of Total	Rank	\$'000	% of Total
Toronto	1	303		1	8101	
McGill	2	223		2	6664	
U.B.C.	3	108		3	2794	
Montreal	4	100		4	2408	
Manitoba	5	86		5	2374	
First 5		820	56.13		22341	60.26
Western	6	86		6	2203	
McMaster	7	73		7	1927	
Alberta	8	68		8	1656	
Laval	9	67		12	1142	
Queen's	10	66		9	1546	
First 10		1180	80.77		30815	83.11
Dalhousie	11	66		10	1333	
Ottawa	12	53		11	1220	
Saskatchewan	13	50		15	978	
Sherbrooke	14	47		13	1132	
Calgary	15	36		14	1000	
Memorial	16	29		16	599	
Other						
Cumulative Total		1461	100.00		37077	100.00

¹Fiscal Year 1975-76

Source: University Branch - based on data contained in
 a) Medical Research Council of Canada, Special
 Tabulations, Grants in Aid received by
 Medical Schools.

Table 23

MRC expenditures through Grants Programs, by ICD category
(single assignment only)

<u>ICD category</u>	<u>1974-75</u> \$000's	<u>1977-78</u> \$000's	<u>Inv.</u> <u>%</u>
1. Infective & parasitic diseases	1,140	1,789	57
2. Neoplasms	3,231	4,572	42
3. Endocrine, nutritional & metabolic dis.			
A - Endocrine disease	2,395	4,193	75
B - Thyroid disease	394	532	35
C - Diabetes and insulin research	637	1,078	69
D - Metabolic & nutritional diseases, including arthritis	2,316	3,200	38
4. Diseases of blood and blood-forming organs	1,230	1,536	25
5. Mental disorders			
A - Mental and behavioural disorders	742	996	34
B - non-medical use of drugs	354	437	23
6. Diseases of nervous system & sense organs			
A - Organic disease of nervous system	3,507	4,982	42
B - Diseases affecting speech, vision and hearing	544	753	38
7. Diseases of circulatory system	2,411	3,692	53
8. Diseases of respiratory system	1,019	1,987	95
9. Diseases of digestive system			
A - Diseases of digestive system	1,469	2,017	37
B - Dental and related diseases	812	844	4
10. Diseases of genito-urinary system	1,527	1,714	12
11. Complications of pregnancy, childbirth, puerperium	5	225	
12. Disease of skin and subcutaneous tissue	81	66	(23)
13. Disease of musculoskeletal system & connective tissues	453	846	87
14. Congenital anomalies	710	1,029	45
15. Certain causes of perinatal morbidity and mortality	570	398	(43)
16. Symptoms & ill-defined conditions	-	-	
17. Accidents, poisonings and violence	263	262	
18. Supplementary classifications	-	-	
19. Not classified	<u>6,152</u>	<u>7,717</u>	<u>25</u>
Total expenditures on Grants Programs	31,962	44,865 *	40

* Includes costs of Groups prepaid in 1976-77. Does not include investigators' salaries component of Group and Development Grants.

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Table 24

MRC Expenditures through Grants Programs, by Areas of Research
(Multiple assignment, if appropriate)

<u>Area</u>	<u>1974-75</u> \$000's	<u>1977-78</u> \$000's	<u>Inc.</u> %
1. Cellular biology	8,784	11,921	36
2. Genetics	2,728	4,599	69
3. Immunology	4,794	5,596	17
4. Endocrinology	5,094	3,262	62
5. Nutrition and metabolism	4,866	7,198	48
6. Developmental biology - paediatrics	2,152	3,024	45
7. Reproductive biology	1,248	2,135	70
8. Cancer	3,826	5,626	47
9. Neurosciences	5,396	8,074	50
10. Behavioural sciences	669	913	36
11. Cardiology	3,817	5,149	35
12. Respiriology	1,332	2,355	77
13. Haematology	2,390	3,306	38
14. Gastro-enterology	1,855	2,778	50
15. Dentistry	1,283	969	(35)
16. Nephrology	1,700	1,754	3
17. Dermatology	141	231	64
18. Connective tissue disorders	1,321	1,949	45
19. Infection	1,393	2,844	97
20. Drugs and their effects	2,517	3,639	45
21. Environmental and occupational health	413	782	89
22. Ophthalmology	421	593	41
23. Otolaryngology	300	315	5
24. Other areas	<u>335</u>	<u>633</u>	<u>79</u>
Total assignments	58,775	84,615	44
Actual expenditures on Grants Programs	31,962	44,865*	40

* Includes expenditures on Groups prepaid in 1976-77. Does not include investigators' salaries component of Groups or Development Grants

TABLE 25

MRC Expenditures, 1977-78, by Areas of Research

(Multiple assignment when appropriate)

Area	Grants ^{a)}	Groups, DG's & Spec. Proj. ^{b)}	Inv. Salaries ^{c)}	Training ^{d)}	Total
	(\$000's)				
1. Cell and molecular biology	11,224	697	1,115	606	13,642
2. Genetics	4,201	398	477	207	5,283
3. Immunology	4,661	915	722	475	6,793
4. Endocrinology	7,157	1,105	1,283	484	10,029
5. Nutrition and metabolism	7,076	122	1,184	251	8,633
6. Developmental biology	2,599	425	548	18	3,590
7. Reproductive biology	1,831	304	279	71	2,485
8. Cancer	5,401	225	564	111	6,301
9. Neurosciences	7,183	891	1,500	637	10,211
10. Behavioural sciences	913	-	123	156	1,192
11. Cardiology	4,418	731	648	172	5,969
12. Respiratory	2,046	309	335	157	2,847
13. Haematology	3,270	36	427	162	3,895
14. Gastro-enterology	2,760	18	293	97	3,168
15. Dental Sciences	591	378	258	98	1,325
16. Nephrology	1,605	149	188	132	2,074
17. Dermatology	231	-	-	-	231
18. Arthritis and other connective tissue disorders	1,949	-	162	82	2,193
19. Infection	2,669	175	272	315	3,431
20. Drugs and their effects	3,509	130	390	354	4,383
21. Environmental and occupational health (including accidents)	750	32	56	34	872
22. Ophthalmology	593	-	40	86	719
23. Otolaryngology	315	-	115	6	436
24. Other areas	597	1	26	56	680
	77,569	7,041	11,005	4,767	100,382
Actual expenditures for these categories:	40,139	4,726 ^{e)}	5,981	4,643	55,489
Less prepayment from 1976-77					- 540
Unassigned ^{f)}					54,949
					+ 1,769
					56,718

a) Includes Grants-in-aid, Major Equipment and Program Grants

b) Operating and equipment components only

c) Associates, Scholars, Research Professors & salary component of Groups and Development Grants

d) Direct awards (Centennial Fellows, Fellows & Students) Value of stipend for the award; Allowances and transportation not assigned

e) Includes \$540,000 paid from 1976-77 funds

f) Summer Scholarships, Visiting Scientists, Visiting Professors, Symposia, Travel grants, Gen. Res. Grants, President's Fund, CCAC, International affiliations and Advisory Committees.

- APPENDIX B -

Council Replies to Policy Questions Pertaining
to Funding of University Research

SSHRC

OECD Study

The Function of Scientific Research in the Universities

Policies of the SSHRC.

- 1 - What, if any, disciplines or research areas have been selected as of particular importance for special stimulation?
 - a) Implications of an aging population, a theme which is expected to attract scholars in many disciplines, principally in the social sciences, but also in the humanities.
 - b) Development of Canadian research resources
 - c) Compilation of the Dictionary of Canadian Biography.
- 2 - Are other aspects of research policy now receiving particular emphasis - e.g. university-industry links, regional development; manpower needs, institutional concentration of research, etc.
 - a) We hope in the near future to initiate plans for reduction of regional disparities mainly through offering assistance to small universities. While we are not placing emphasis on university-industry links, an analysis of the projects we have funded over the past few years shows that many are related to economic problems and economic expansion.
 - b) Because of the manpower difficulties in the field of business administration we are launching a study into the problems of that particular discipline.
- 3 - What proportion of the budget is "earmarked" for any of these "social policies"?

Roughly 10% of the budget is earmarked for so-called strategic grants. However, it should be noted that the SSHRCC has been in existence only since April 1, 1978 and is at present in a period of transition. All of its programs and budgetary allocations are under review.

- 4 - Has policy on the payment of overheads on research grants, or contracts changed in recent years?

There has been no change in policy with respect to payment of overheads; however, since 1974 the Council, in making program grants and major editorial grants has taken into consideration the cost of overhead in negotiating the amount of grant payable to the universities. The SSHRCC does not fund contract research.

ANNEXE TO OECD STUDY

POLICIES OF THE SSHRCC.

2. c) We do encourage institutional concentration of research by making substantial grants to groups at universities for long term research in areas of importance.

NSERC

Question: (1) "What, if any, disciplines or research areas have been selected as of particular importance for special stimulation"?

The Natural Sciences and Engineering Research Council started, in 1977, a program of support to university scientists for research in areas of national concern. The program, referred to as the Strategic Grants program, initially supported research in three areas: Energy, Oceanography and Environmental Toxicology. This program will be expanded in 1979 to include two additional areas: Food and Agriculture, and Communications.

Questions: (2) "Are other aspects of research policy now receiving particular emphasis - e.g. university-industry links, regional development; manpower needs, institutional concentration of research, etc."

and

(3) "What proportion of the budget is "earmarked" for any of these "special policies"?"

Between 1970 and 1976 peer-adjudicated grants to individuals for disciplinary-oriented research accounted for roughly 70% of the total expenditures,

(\$97.7 million in 1977-78). Of the remaining funds about 14% (\$11.8 million in 1977-78) of the budget was distributed for highly qualified training and development, mostly at the post-graduate level. In addition some \$2 million was allocated for the promotion of a regional balance of scientific capability; \$2.4 million for Strategic Grants (this has been increased to \$7 million in 1978-79); roughly \$3.5 million for the development of specific research groups (the major program in this category is now being phased out); and roughly \$250 thousand for the promotion of university research with industrial application (programs under this category are now being reviewed with the purpose of strengthening them).

Question: (4) "Has policy on the payment of overheads on research grants, or contracts changed in recent years"?

No.

Response to Questions Raised by OECD

FUNDING

1. MRC does not allocate research grant funds to subject areas. All applications for grants-in-aid regardless of subject matter are in competition with one another, with the merit of the research being the over-riding criterion. In only one subject, cardiovascular disease, has Council endeavoured to encourage research through a special program of Heart Research Development Grants. For 1978-79, three-quarters of a million dollars was allocated to this new program. (This is in addition to the \$5 million already spent on research in the cardiovascular field through Council's regular grants programs).
2. MRC funds 1966 to 1979 in terms of current and constant (1966) dollars are set out in Appendix A, attached. The deflator used is the Implicit Price Index of GNE.
3. Not available; not considered useful.
4. The changes in MRC funding in universities with health science schools (medicine, dentistry, and pharmacy) are set out in Appendix B, attached, at three-year intervals. I have indicated the number of health professional schools in each of the universities in question since all of them do not have Schools of Dentistry and/or Pharmacy.
5. Information not available.

POLICY

1. In 1976, MRC approved in principle a new program of Subject Research Development Grants for the special stimulation of research in areas of national concern. Thus far, because of budgetary constraints, heart research has been the only subject designated; special funds were made available this year for the first time for up to 3 Heart Research Development Grants, of which two have thus far been approved. This special stimulation is of course additional to the substantial funds provided in this area through Council's regular programs.

For a number of years, a certain degree of preference has been given by MRC to Fellowship candidates well rated by the Committee who are proposing to take advanced research training in one of the following areas: anaesthesiology, behavioural sciences, dental sciences, drug toxicology, environmental pollution, infectious diseases, medical bacteriology, medical genetics, neuropathology, obstetrics, ophthalmology, otolaryngology, population control, radiology,

rehabilitation medicine, surgery, and the oncology of major solid tumours.

2. Regional development has since 1966 been a major concern of the Medical Research Council. Through its Development Grant Program, it endeavours to assist local initiative in the recruitment of additional faculty members to those schools in which the research effort is considered by Council to be insufficiently strong to provide the necessary back-up to high quality professional education and patient care. The program provides salary support for the investigator concerned for a 5-year period (renewable once on review) as well as special grant support during the initial phase of his research program. This program is of such high priority to Council that it has thus far funded all proposals put to it which were considered likely to meet Council's objective.

University-industry links have had MRC attention through its Special Projects Program. (The recent formation of a Canadian firm to produce synthetic antigens to be used in blood-typing for transfusion purposes is a consequence of research supported as a Special Project of MRC. Council's attempts to interest industry in the production of an artificial kidney developed by one of Council's grantees were less successful despite the admitted value of the device.)

Manpower needs in the health sciences are obviously of concern to Council if its objectives are to be achieved. MRC has periodically carried out surveys of research trainees in the health sciences with a view to adjusting the intake to Council's training programs if this seems advisable. As noted above some special encouragement is given trainees in the more barren fields of Canadian medical research.

At the present time, the prime concern is the inability fully to utilize well-trained researchers. MRC provides salary support to highly qualified researchers through its Development Grants and Groups, and by Scholarships and Associateships for the salary support of university faculty.

Institutional concentration of research has for over 10 years been encouraged by the MRC through its Group program for collaborative research (which provides salary support where needed, as well as research funding) and more recently through its Program Grants for interdisciplinary research by teams of researchers with complementary interests in a certain program. The Heart Research Development Grant Program is a major new initiative in this category.

3. Approximately 15% of MRC's budget is "ear marked" for these areas of emphasis in 1978-79.
4. MRC does not provide overhead costs related to the research it supports.

Year	MRC budget in current dollars (\$000's)	MRC budget in constant (1966) dollars (\$000's) *
66-67	12,350	12,350
67-68	20,500	19,712
68-69	26,943	25,087
69-70	20,891	27,557
70-71	33,962	28,953
71-72	35,642	29,432
72-73	37,460	29,473
73-74	40,360	29,099
74-75	42,860	26,804
75-76	47,434	26,799
76-77	50,848	26,183
77-78	56,718	27,321
78-79	63,002	28,354

* Deflator: Implicit Price Index of GNE.

MRC Expenditures in Canadian Universities with Health Professional Schools*
(\$000's)

Universities with health professional schools	No. of Health Professional schools	71-72	74-75	77-78
Alberta	3	1,990	2,703	3,207
British Columbia	3	2,514	2,724	3,750
Calgary	1	456	802	1,401
Dalhousie	3	976	1,119	1,879
Laval	3	1,161	1,495	2,185
Manitoba	3	2,191	2,701	3,654
McGill	2	6,471	7,214	9,096
McMaster	1	1,645	1,925	2,698
Memorial	1	376	551	660
Montreal	3	3,340	4,170	5,031
Ottawa	1	1,142	1,478	1,724
Queen's	1	1,198	1,310	1,885
Saskatchewan	3	965	1,262	1,535
Sherbrooke	1	1,314	1,304	1,640
Toronto	3	5,834	7,252	10,482
Western Ontario	2	<u>1,621</u>	<u>1,906</u>	<u>2,986</u>
Sub Total		33,194	39,916	53,813
<u>In Other Canadian Institutions</u>		652	607	843
<u>Outside Canada</u>		<u>1,796</u>	<u>2,337</u>	<u>2,062</u>
Total		35,642	42,860	56,718

* Grants to investigators who may be in other faculties of the university in question are included.

