

UNIVERSITY NEWS

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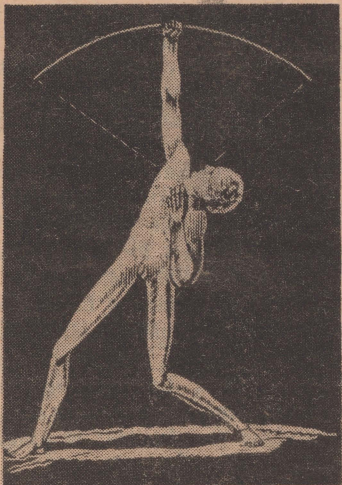
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Plus: *The year's second issue of ALUMNI NEWS*

Plus: *INTRODAL '77 Supplement / Program*

The Killam Lectures



THE IMAGE OF MAN IN MODERN THOUGHT

A series of lectures dealing with the reality that men and women go out of their way to develop knowledge in particular areas, often at the expense of other areas and that the results often have an effect on the meaning of humanity.

The first, with **DAVID SUZUKI**, is tomorrow. Details: Page 3.

Higher education in the Maritimes

Whither higher education in the Maritimes?

The Maritime Provinces Higher Education Commission has invited groups and individuals to submit briefs on the subject; the briefs will be discussed at a series of public meetings in Nova Scotia, New Brunswick and Prince Edward Island in April.

In October last year, the MPHEC issued an "overview" of the higher education situation. Text of that report appears on Pages 4 and 5.



Focus Photography Ltd., Halifax

Oyez! Oyez!

Come one, come all to IntroDal '77, Dalhousie's Open House

Feb. 11, 12 & 13

Where the action will be Feb. 11-13: IntroDal, of course.

Follow the Town Crier, who cordially invites one and all to view the displays, exhibits and demonstrations in the Arts Centre, SUB, Life Sciences Centre, the Dunn, Arts and Administration and Tupper buildings.

The event opens at 2 p.m. on Friday, Feb. 11, with the official send-off by Premier Gerald Regan at 8 p.m.

Dalhousie faculty in the community:

The unsung heroes

By Roseann Runte

Dr. Runte is a member of the Department of French and secretary of the DFA's Community Relations Committee.

Participation by Dalhousie faculty in community activities has been the subject of an informal study completed by the Community Relations Committee, of the Dalhousie Faculty Association.

The purpose of the study was to discover the areas in which faculty contribute to community life in general and which specific activities might be supported or augmented by the committee through its work as liaison, helping the local community to contact individual members of faculty and vice-versa.

Questionnaires were distributed to all members of the faculty in the fall of 1976. A total of 85 forms were returned, 57 from Arts and Science, 25 from Medicine, and three from Law. This report cannot therefore be used to gauge the extent of interest, but to indicate trends reflected in the sample.

Of those who returned the forms, approximately 11 per cent were not involved in any activity at present, 29 per cent were involved in one activity, 25 per cent in two, 16 per cent in three, and the remaining 30 per cent listed from four to eleven activities. (Only one per cent had eleven activities.) Seventy-seven per cent of those with no present activity and 93 per cent of those with one activity were from the Faculty of Arts and Science, and 40 per cent of those listing three or more activities were from the Faculty of Medicine. Twenty-three per cent of all forms revealed that the faculty member intended to increase his or her activities, six per cent to decrease the number of activities, 37 per cent expected to continue as at present, and 34 per cent were either uncertain about the future or made no reply to the question.

Of the various departments in Arts and Science, the French Department returned approximately twice as many forms as any other department. The next highest ranking departments, in order, were Education, Biology, Philosophy, Music and Sociology.

The sorts of activities to which the members of all faculties contributed are as follows (The percentages do not add up to 100 as each activity listed in a different category was counted separately. If a single professor participated in four activities in any one category, this was only counted as one. If the activity were related to the professor's field, it was counted once in this category and not again under a separate heading.

(Continued on page 6)

PUBLISHED ANY BOOKS, JOURNALS REPORTS LATELY?

By Norman Horrocks

Has your department published a book, issued a report or started a journal recently?

If so the National Library of Canada wants to know about it. Not just to ensure that you are complying with the law that requires two copies to be deposited at the National Library in Ottawa, but also to see that it is listed in the Canadian National Bibliography, **Canadiana**.

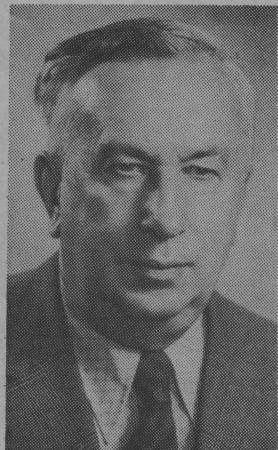
Canadiana is distributed to libraries across Canada and all over the world, thus alerting your colleagues in other places to your work. Allied with

(Continued on page 6)

Seven awarded Canada Council leave fellowships



R. Puccetti



J.M. Beck



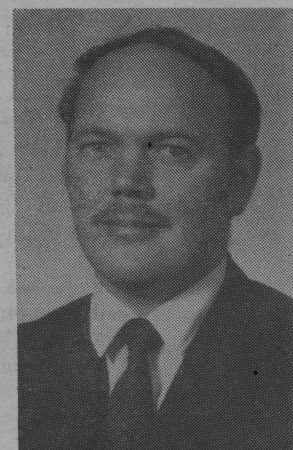
D.M. Cameron



Chris Field



C. Marfels



Bruce Roald

Canada Council leave fellowships for 1977-78 have been awarded to seven Dalhousie University professors. Following is a brief explanation of their research projects while they are on leave.

Dr. Roland Puccetti, Philosophy:

Dr. Puccetti will travel extensively in the United Kingdom and will be associated with Balliol College, Oxford.

He will be writing a book, tentatively entitled: **Brain and Mind: Philosophical Implications of the Relation between Cerebral Function and Conscious Experience**. It will attempt to make accessible to philosophers the new data coming from the neurosciences that appear relevant to long-standing philosophical issues such as perception, the mind-brain relation and personal identity. At the same time, Dr. Puccetti's book will attempt to make clear to neuroscientists the conceptual issues in such problems and suggest how their own work has philosophical importance.

"Thus it is primarily an effort at bridge-building between humanistic and scientific disciplines!"

Dr. Christian Marfels, Economics:

While on leave, Dr. Marfels will conduct research on industrial concentration.

"This research," he reports, "is a direct continuation of a study currently being done for the Royal Commission on Corporate Concentration to be published as a research monograph with the title 'Concentration Levels and Trends in the Canadian Economy, 1965-1973' by Printing and Publishing Canada."

Dr. Marfels recently finished his book on the subject of statistical problems on concentration measurement.

Dr. Chris Fields, Mathematics:

Two of the leading researchers in robustness are at the Eidgenossische Technische Hochschule in Zurich, Switzerland. "Robust" means procedure works well even if all the standard statistical assumptions for a procedure are not met, and this is Dr. Field's general area of interest: Robust Statistical Methods.

He will leave for Zurich to work with the experts in July, and hopes to make substantial progress during the 12 months there on two problems, which he explains below.

1. To determine the small sample size behavior of robust estimates, it is necessary to obtain good approximations to the distribution of these statistics. Even with the simple location estimate of the alpha-trimmed mean, the problem of computing the exact distribution appears intractable. Recently, there has been work done on small sample size approximations, but there remains much to be done, and I hope to make contributions in this area. If good quality approximations can be found, it will be possible to use robust procedures accurately with small sample sizes. Such approximations, along with the generalization of the influence curve, can be used to evaluate the stability and power of some competing confidence interval procedures. Results from this problem will aid the next.

2. In the Canadian criminal justice system, considerable data on numbers of individuals processed and expenditures has been obtained for various components over the past 15 years. From this data, it is hoped to obtain some ideas as to the direction of casuality within the system. My interest is developed in robust techniques to handle this longitudinal data. The critical points for the robust testing or estimation procedures developed, will be determined by using the results from the first problem (see above). It is expected that the robust analysis of the Justice data will yield conclusion with significant planning implications for the Department of the Solicitor-General.

Dr. J. Bruce Roald, Education:

Quebec City will be Dr. Roald's base during his leave; he will be attached to Laval University.

During the year he intends to examine curricular issues that arise from various conceptions of "civic education". This includes an analysis of numerous variations of "civic education", such as civics, citizenship education, and political education, as well as an analysis of the curricular patterns or specifications and design procedures currently practised or proposed in the field.

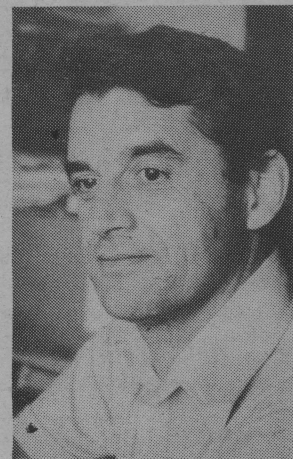
"Data for the study," said Dr. Roald, "will be drawn from contemporary literature, current and proposed curricula, and the experience of curriculum development projects such as the Canada Studies Foundation."

Dr. Roald's interest in this area developed from his experience working with the Canada Studies Foundation over the past five years, during which time he came to recognize the many conceptual and design issues and problems that are involved in curricula for civic education.

Dr. John Farley, Biology:

For the past few years, Dr. Farley has been writing a book on the question that has perplexed biologists and others for over 300 years: Need living beings have parents? The book, **The Spontaneous Generation Controversy from Descartes to Oparin**, will be published this spring by John Hopkins University Press.

"From this I am now turning to looking at organisms with parents and particularly the problem 19th century



John Farley

naturalists had with the nature and significance of sexual and asexual reproduction," said Dr. Farley.

The realization that both parents contributed equal material to the next generation was not accepted until the early 20th century. "In the 19th century naturalists argued at length on the role of such things as eggs, sperm, spores, and pollen grains and became bewildered by the complex life-cycles of animals and plants that were discovered in the first half of the century."

Dr. Farley will concentrate initially on the botanists as they attempted to understand plant reproduction and life-cycles. "The history of 19th century botany is a virgin field!"

Dr. Farley has accepted an appointment as Research Fellow in the Department of the History of Science at Harvard University which will enable him to work in "some of the world's best libraries for 19th century studies in biology". The Library of the Museum of Comparative Zoology, the Gray Botanical Library and the Farlow Botanical Library will undoubtedly have a host of materials on Dr. Farley's main interest area—the historical study of reproductive and developmental biology in the 19th and 20th centuries which, he says, is "surely the most mysterious and fascinating area of biology".

Dr. J. Murray Beck, Political Science and History:

During his sabbatical year, Dr. Beck hopes to complete a biography of Joseph Howe. In addition, he will be working on a political history of Nova Scotia for which he has been gathering material for many years.

Since the great bulk of the material on both projects is housed in the Public Archives of Nova Scotia, Dr. Beck will continue to be a familiar figure around campus, taking an occasional trip to Ottawa to consult the Public Archives of Canada.

Dr. David M. Cameron, Director, School of Public Administration:

The two studies Dr. Cameron will be undertaking during his year on leave fellowship, allow him to remain at Dalhousie.

The first project involves a detailed study of the Council of Maritime Premiers.

The other subject he'll be investigating is research in public administration — an area he is well versed in. This study is for the Institute of Public Administration of Canada.

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13	March 8	March 17
14	March 22	March 31
15	April 5	April 14
16	April 19	April 28

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Commonly a pain-killer — now researcher studies...

How morphine changes nerve cell function

One of the common reasons for administering an opium-like drug is to alleviate pain. But how these narcotics affect the brain is just now beginning to be understood.

One researcher who has been attracted to this field of endeavour is Dalhousie physiologist John Szerb.

Scientists to date have been able to localize a special protein in which these drugs act in the brain's nerve cells. They have also been able to establish the fact that these opium-like drugs imitate the effect of substances which occur naturally in the brain, both being able to alleviate pain.

Dr. Szerb has gone one step further with his research work. He has studied how morphine, the drug he works with, alters the function of the nerve cell. Working on simple nervous networks in the intestine and vas deferens of experimental animals (they respond to morphine in the same way as networks in the human system), he has learned that the drug acts as a depressant only on cells which are normally highly excitable and which release a chemical substance called acetylcholine much more readily than other cells do.

In his tests he has exposed the nerve networks to a radioactive precursor (choline) and measured how fast the radioactive acetylcholine is produced and then released. In those highly excitable cells which are sensitive to morphine it appears that the drug serves as a

stabilizing factor, reducing their excitability to the level of other cells which are insensitive to morphine.

This observation has relevance to the understanding of the phenomenon of addiction to opium-like drugs such as heroin: after repeated exposure to these drugs, morphine sensitive cells regain their greater excitability in spite of the presence of the drug, thus the individual will become tolerant to the drug and will require greater and greater doses to obtain an effect. When the drug is withdrawn, these drug-sensitive cells will become even more excitable than before and are probably responsible for producing the well-known symptoms of drug withdrawal. These changes are likely to occur in the cell membrane and the understanding of the properties of the cell membrane of these excitable cells will help in producing pain-killing drugs which do not lead to addiction.

Dr. Szerb, who has been conducting his research under a grant from the federal Department of Health and Welfare's drug directorate division, plans to continue work on the effect of opiates in the release of other substances than acetylcholine. When he retires in June as head of the Physiology and Biophysics Department he also plans to devote his energies to another area that has a special interest for him — the relationship between behavior and the release of chemical substances from the brain.



Dr. John Szerb

New med school admission test emphasizes problem solving

The Medical Colleges Admission Test used by most medical schools as part of their student selection process has taken on a new look. Students applying for admission in 1977 to a Faculty of Medicine, such as Dalhousie's will take the revamped version.

The new test, developed over several years, has different objectives, different criteria for assessing a candidate's strengths and weaknesses and different

scoring methods. It will take a whole day to write instead of half a day, and will cost \$10 more than the old test.

It has been designed to measure not only a student's knowledge but his ability to confront and solve the kinds of problems a physician might encounter in practice. Those who have worked to put the new test together say the emphasis is definitely on problem-solving skills. Candidates will have to know how to take given facts and apply them.

The test is broken down into six parts. Because each segment is scored separately, it can indicate a student's performance in the various testing areas:

- science knowledge in biology, chemistry and physics;
- science problems;
- skills analysis: reading and
- skills analysis: quantitative

The last three indicate the candidate's skills in analysing and using information including the problem-solving level of the particular student.

The six scores are reported on a scale ranging from one (lowest) to 15 (highest), raw scores being converted to a score on the 15-point scale.

For admission committees, separate scores help to identify a student's areas of strength and weakness.

Dalhousie's assistant dean of medicine, Dr. Fraser Nicholson, who is in charge of admissions, feels the new test has many advantages. It is more factual and equally based — it will provide a better profile of a potential candidate for medical studies — and it's a better discriminator.

1976 medical class: High averages

Of the 96 students who entered Dalhousie medical school last fall, only three had academic averages below 80 per cent for the preceding two years.

Sixty-seven had bachelors' degrees or higher, and 29 had no degree. The average performance in the Medical College Admission Test was well above the 50th percentile for the whole group.

Of the 96 admitted, 55 were from Nova Scotia, 26 from New Brunswick and seven from Prince Edward Island. Twenty-two of the class are women.

\$1,000 prize for research in mental health

Clinical or basic scientists who published a report or dissertation on outstanding research within the field of mental health during the preceding year are eligible for the 1977 annual \$1,000 prize awarded by the Clarke Institute of Psychiatry Research Fund.

The award emphasizes the importance of mental health research, acknowledges Canadian contributions, and stimulates research.

Nominations and applications postmarked on or before May 1 will be considered. Further information: Secretary, Clarke Institute of Psychiatry Research Fund, 250 College Street, Toronto, Ontario M5T 1R8.

The 1977 Killam Memorial Lectures:

The Image of Man in Modern Thought

Men and women go out of their way to develop knowledge in particular areas, often at the expense of other areas. The resulting knowledge, or speculative hypotheses, often have an effect on the definition, or meaning of humanity and, especially, of what it is to be a human being.

This changing definition affects not only the individual in his most private existence, but also affects the society, often by way of the University, the central purveyor of ideas in which he lives now and in which his children will live in the future.

Feb. 11: RICHARD HOGGART

Richard Hoggart, a man who claims he is not a specialist or a philosopher but one who is interested in making connections between the intellectual and lay community, will deliver the second in the 1977 Killam Memorial series at Dalhousie on Feb. 11.

His talk, to be given at 8:30 p.m., in the Weldon Law Building, is one of four in the university's Killam Memorial series dealing with the **Image of Man In Modern Thought**.

In his address, Dr. Hoggart will examine commonly held views of the individual and of society under the general title, **Gamekeepers or Poachers: values and action in intellectual-professional life**.

Dr. Hoggart, at present Warden of Goldsmiths' College at the University of London, brings to the Killam series a wealth of insights drawn from diverse responsibilities held during his career. He was professor of English and Director of the Centre for Contemporary Cultural Studies at Birmingham University; assistant director-general of UNESCO; a representative on the Albemarle Committee on Youth Services; a member of the BBC General Advisory Council and a governor of the Royal Shakespeare Theatre.

His academic and civic achievements have been recognized by the Open University and the University of Bordeaux with honorary doctorates.

A synthesizer of ideas, a communicator and educator, he has published such well-known books as **The Uses of Literacy**, **Speaking to Each Other and Only Connect**, his most recent work.

Feb. 4: DAVID SUZUKI

The series will lead off on Feb. 4 with **David Suzuki**, a geneticist who has done much to demystify science

through the electronic media. His talk will deal with science in the modern age with special reference to genetic engineering.

March 3: HENRI PEYRE

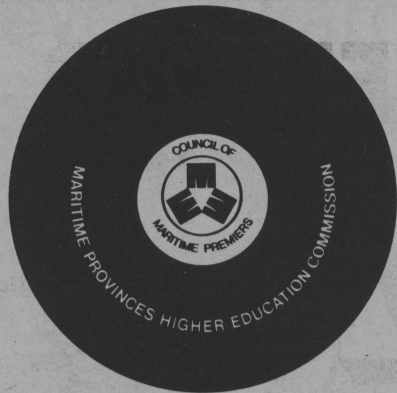
On March 3, **Henri Peyre**, who served for more than two decades as chairman of the Department of Romance Languages at Yale, will be the featured guest in the distinguished lecture series. An author of works touching on literary topics, education and political thought, he will look at the broad issues of human liberty and the need for imaginative and ethical solutions.

March 11: ALAN C. WALKER

The series will conclude on March 11 with an address by **Alan C. Walker** whose major research interest is in early humans. A recognized paleontologist, anthropologist and anatomist, the Harvard professor will discuss current inquiries into the origin of species and their implication for the image of man.

The visiting speakers represent a group of leading thinkers who will show how their particular field of endeavour defines or redefines the meaning of being a person within the general theme of the series: **The Image of Man in Modern Thought**.

Higher Education in the Mar



Introduction

The MPHEC, established in 1974 by the Council of Maritime Premiers, following the enactment of similar legislation by the Provinces of New Brunswick, Nova Scotia and Prince Edward Island, has as its purpose

"to assist the Provinces and the institutions in attaining a more efficient and effective utilization and allocation of resources in the field of higher education in the region."

The commission provides a mechanism for assessing existing needs, formulating independent and objective advice to institutions and governments, and planning, co-operatively, the future structure and development of higher education in the region.

The MPHEC functions as an agency of the Council of Premiers, reporting to the Council and, through the Council, to the three Legislatures.

The Commission is composed of a full-time Chairman and 15 other members appointed by the Council of Premiers. The Chairman is the chief executive officer. Five members are appointed from nominees submitted by a committee of executive heads of universities and representatives of Senates or equivalent university bodies; five are appointed from among senior public officials and the executive heads of non-university institutions and five are appointed from the public-at-large. At least one member from each group is drawn from each of the three provinces.

The MPHEC is, then, a broadly representative body with continuing responsibilities to institutions, governments, and the public to assist and encourage efficient, effective, creative and responsive development in higher education in the Maritimes.

One of the broad objectives of the Commission since its inception has been to foster the progressive development of multi-year planning. In this context, the institutions have provided annually five-year projections to the MPHEC. As the Commission progresses toward the development of multi-year plans, it appears timely to prepare and provide an overview of higher education in the region. As planning for higher education matures, the MPHEC intends to avail itself of a broad range of views.

The institutional setting

Post-secondary education is carried on by a variety of institutions throughout the region. The responsibilities of the MPHEC extend, by legislation, to universities and other post-secondary institutions at 25 locations in the Maritimes. A list of these appears below.

Co-operative efforts

Prior to the establishment of the MPHEC, a regional perspective already existed in higher education in the Maritimes. Among the universities, this expressed itself in the formation of the Association of Atlantic Universities (AAU). The AAU regularly brings together the executive heads and other constituencies of institutions for consultation and planning. There also exist provincial and regional organizations of faculty associations and student groups.

Co-operative efforts by both institutions and governments provide for region-wide educational services by such institutions as the medical, dental, and health science faculties of Dalhousie University, Nova Scotia Land Survey Institute, Nova Scotia Agricultural College, Nova Scotia College of Art and Design, the Atlantic Police Academy at Holland College, the School of Forestry at the University of New Brunswick, the Maritime Forest Ranger School, and other facilities wherein there are specialized programmes offered in only one of the Maritime provinces.

Regional level co-operative arrangements involving the MPHEC include planning activities such as institutional five-year projections, a space study, and programme inventories; inter-institutional arrangements such as the operation of two computer networks, co-operative library developments and the advancement of a regional financial reporting system and programme development and rationalization activities such as preparation of a master plan for physical education and recreation programmes and studies of several programme areas.

In addition to the co-operative activities, there are in progress, or planned, committees studying and recommending in such areas as admissions, accessibility, bilingualism, Canadian studies, centres of excellence, articulation between secondary and post-secondary education and among post-secondary institutions, summer school and extension, and other matters.

Following a review of factors such as the interprovincial mobility of students, the location of regional institutions, and the development of regional planning, the Commission is involved in developing a regional approach to operating assistance. Such an approach is essential to eliminate interprovincial differences in support levels, to provide regional equity in post-secondary education, and to ensure the extension and effectiveness of regional co-operative planning.

Service to the region

In these times of restraint and shifting priorities, it may be timely to reassess post-secondary institutions as regional resources.

The most obvious activity of the region's institutions is teaching. They provide an extensive range of educational opportunities to

students of all ages. Their graduates provide the area with an educated citizenry and meet many of the region's needs for professionally-trained people.

Many research activities carried on by institutions relate directly to the interests of the region. Institutional faculty represent a valuable source of expertise. They are called on by private enterprise and government to conduct studies, to provide advice and to act as consultants.

Post-secondary institutions perform an important service in researching, preserving and enriching the culture and heritage in the region.

By educating students from other Canadian regions and abroad the institutions forge valuable links between the region and other areas, bring richness and diversity to large and smaller centres in the region, and provide contacts with other lifestyles and cultures.

The institutions enhance the cultural life of the area by maintaining art galleries and by sponsoring performing artists, concert series and visiting lectures.

Institutional libraries, provide rich sources of knowledge to the interested public. Increasingly, other facilities such as meeting and classroom space and athletic and recreational facilities are available for public use.

A trend is clearly discernible for post-secondary institutions to reach out and expand their service to their communities.

Post-secondary institutions in the Maritimes also have a significant economic impact locally, provincially and regionally. The total operating expenditures of Maritime post-secondary institutions associated with the MPHEC in 1976-77 will exceed \$170 million. Post-secondary education is a labour intensive activity as approximately 75 percent of expenditures are in the form of salaries which are spent and circulated within the region.

The 33,000 post-secondary students of the above institutions in the region will each spend in the region approximately \$3,000 annually, for an annual total of \$99 million. The Maritime provinces will recover an estimated \$103 million from the federal government in 1976-77 in respect of eligible operating expenditures under the Federal-Provincial Fiscal Arrangements Act. Maritime institutions in 1974-75 received \$8.3 million primarily from the federal government for the purposes of research activities, a figure which will probably be higher in 1976-77.

Enrolment

In 1975-76, full-time university level enrolment in the Maritimes was 30,914. Post-secondary enrolment at other institutions under the MPHEC was 1,995.

The Canadian proportion of university to other post-secondary enrolment has remained stable at a 75% to 25% relationship in recent years; for the Maritimes, the proportion has been approximately 86% to 14%.

Part-time enrolments, mostly age 24 plus, are currently showing stronger growth patterns as this age group is swelled by the effects of the post-war baby-boom. A trend in recent years for older and retired persons to enrol in credit and non-credit courses is being observed. Its impact on enrolment patterns has not yet been fully assessed. Another phenomenon - professional development and upgrading short-programmes - is also accelerating.

The post-war years have witnessed a phenomenal growth of full-time enrolment in post-secondary educational institutions. This growth was due to two basic factors: 1) a net increase in the general participation rate of the Canadian population in post-secondary education due to favourable socio-economic attitudes toward more advanced education, and 2) an increase in the traditional post-secondary level age group of the population due to the sharp increase in births after 1945.

The participation rate (that is, the percentage of a given population group in post-secondary educational institutions), which rose dramatically between 1960 and 1970, has remained fairly stable in recent years despite some creative and responsive programming within the institutions.

The birth rate began to decelerate by 1958-62; this is making itself felt in a general leveling of the growth in post-secondary enrolment at this time. The present immigration pattern does not substantially effect this leveling. Modest growth or leveling in enrolment at post-secondary institutions may continue for another few years, followed by a sharp decline beginning in the early 1980s reflecting the decrease in births in Canada which commenced in the early 1960s.

Although a host of other factors are not easily predictable - participation rates, educational alternatives, economic factors,

1975-76 Full-time Equivalent Enrolment*

Acadia University	3021
Atlantic Institute of Education	48
Atlantic School of Theology	79
College of Cape Breton**	1387
Collège Jésus-Marie	110
Collège Sainte-Anne	240
Collège Saint-Louis-Maillet	573
Dalhousie University	7657
Holland College	627
Maritime Forest Ranger School	76
Mount Allison University	1564
Mount Saint Vincent University	1580
Nova Scotia Agricultural College**	384
Nova Scotia College of Art and Design	580
Nova Scotia Land Survey Institute	120
Nova Scotia Teachers College	739
Nova Scotia Technical College	506
Saint Francis Xavier University	2573
St. Mary's University	3068
St. Thomas University	849
l'Université de Moncton	3616
University of King's College	331
University of New Brunswick	7054
University of Prince Edward Island	1863

(* Includes full-time equivalent of part-time enrolment.

** Includes students in both degree-programmes and technology programmes.)

institutional responses to new challenges - demographic factors can be forecast with relatively good reliability. The decreasing number of people in the traditional age group for post-secondary students (as indicated in the accompanying graph) is an evident and fundamental factor which will have a profound impact on post-secondary education in the foreseeable future.

Multi-year planning

Soon after commencing operations, the MPHEC recognized the need for multi-year planning. Institutions have emphasized that if they are to operate effectively and efficiently they require indicated levels of funding for periods in excess of one year as well as advance programme approval information. Receiving five-year projections from institutions was the Commission's first step towards the formulation of three-year operating, capital assistance and programme plans, for the benefit of both governments and institutions. The Commission has recommended the adoption of this concept to the Council of Premiers and expects to implement it as part of its 1977-78 financial recommendations and three-year plan.

Academic programmes

The MPHEC has prepared a comprehensive Maritime University Programme Profile including existing programmes and those under consideration for the 1976-81 planning period. The compilation of this document should permit the MPHEC to work more effectively in co-operation with the institutions on its schedule, to assess and rationalize current resources, and to plan for future programme needs.

In preliminary assessment of the profile, the Commission made three initial observations. First, present programme offerings in Maritime universities are still well-stratified. Duplication of offerings are not extensive if general core and support courses commonly found within a university are discounted. Secondly, much of the projected expansion of undergraduate offerings represents a logical development of existing programmes. However, in the light of projected decreased enrolment, new programmes will be viable only if there is a revision, curtailment, or phasing out of some of the programmes presently in existence. In addition, some projected growth patterns were identified which could lead to duplication and possible inter-institutional conflicts in the absence of co-ordination and/or rationalization of development. Thirdly, major developments are projected in graduate work.

As one effect of the profile, the Commission has initiated or sponsored studies in several programme areas including engineering, law, and teacher education to assess need and potential, and to rationalize development.

Space study

In order to evaluate projected capital activity, to plan effectively on a regional basis for capital projects, and to establish priorities, the MPHEC authorized an inventory of existing space at higher education institutions in the region.

The study is providing the Commission with:

- a) an accurate, up-to-date regional inventory of existing non-residential physical resources, according to
 - i) type and amount of space
 - ii) institutional unit responsible
 - iii) physical condition
 - iv) use characteristics;
- b) the background necessary to develop a long-range regional plan for capital needs and priorities for
 - i) new construction
 - ii) rehabilitation and modification of existing resources
 - iii) preventive maintenance;
- c) information to assist in related decisions, such as programme approval.

Institutional projections, indicating proposed capital developments costing over \$200 million, will be scrutinized carefully by the Commission in light of the results of the space study. Requests where there is clearly a space need, despite the projected decrease in enrolment, will be considered; construction which will have to be funded regionally, will be closely studied; requests for facilities which would enhance institutional activity, but which are not absolutely essential, will be a last priority.

Post-secondary finances

A variety of statistical time series shows that post-secondary expenditures have increased dramatically within the past decade.

From \$34 million in 1971-72, post-secondary expenditures in New Brunswick (eligible for cost-sharing under the Fiscal Arrangements Act) grew to \$63 million in 1976-77, an increase of 86 per cent. Within the same period, Nova Scotia's expenditures grew from \$68 million to \$116 million, an increase of 71 per cent; and Prince Edward Island's grew from \$5 million to nearly \$9 million, an increase of 65 per cent. However, post-secondary operating expenditures for Canada as a whole for the same period of time increased from \$1842 million to \$3572 million, an increase of 94 per cent (Secretary of State estimates).

Government operating grants to universities and colleges in the Maritimes increased from \$57 million in 1971-72 to over \$120 million in 1976-77. Grants per full-time student increased from just under \$2000 to approximately \$3800 within the same period.

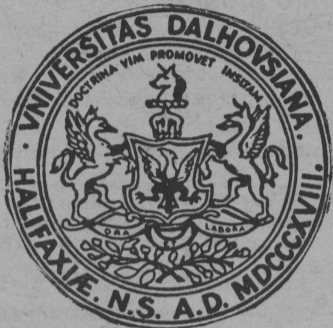
Various measures (the latest available) indicate that in absolute terms, the Maritime provinces are below the Canadian average in post-secondary expenditures (on the basis of per capita spending) but in relation to the ability to pay (based on percentage of personal income and gross provincial product) the Maritime provinces are at least equal to the Canadian average.

High rates of inflation and substantial enrolment increases in the past several years have contributed significantly to the growth in expenditures. Nevertheless, there has been an increase in real terms of nearly 30 per cent in the grant per full-time student in the last six years. There has not been the same real gain in institutional

WE CAN DO IT... TOGETHER

INTRO DAL '77

FEBRUARY 11 - 13



Friday, February 11
Saturday, February 12
Sunday, February 13

2:00 - 8:00 p.m.
12:00 - 8:00 p.m.
1:00 - 6:00 p.m.

Welcome to Dalhousie

It is with great pleasure, and on behalf of the students, faculty and staff of Dalhousie University, that I welcome you to IntroDal '77, the seventh open house at the university since 1965.

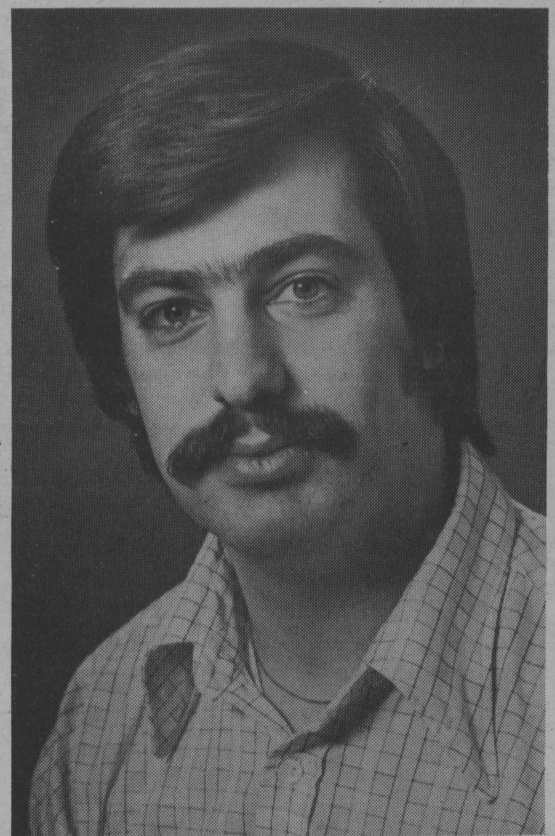
Like its predecessors, IntroDal '77 is designed to show off the Dalhousie community to the community at large.

This year's theme — We Can Do It...Together — is intended to mean that Dalhousie is not purely academically-oriented, but that it is also community-minded.

I think the various departments of the university have done an excellent job in providing some interesting exhibits and I urge you to see as many of the displays as possible.

Thank you for visiting us.

— Joseph S. Roza,
Chairman.



Chairman Roza



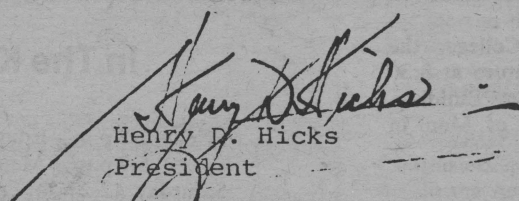
President Hicks

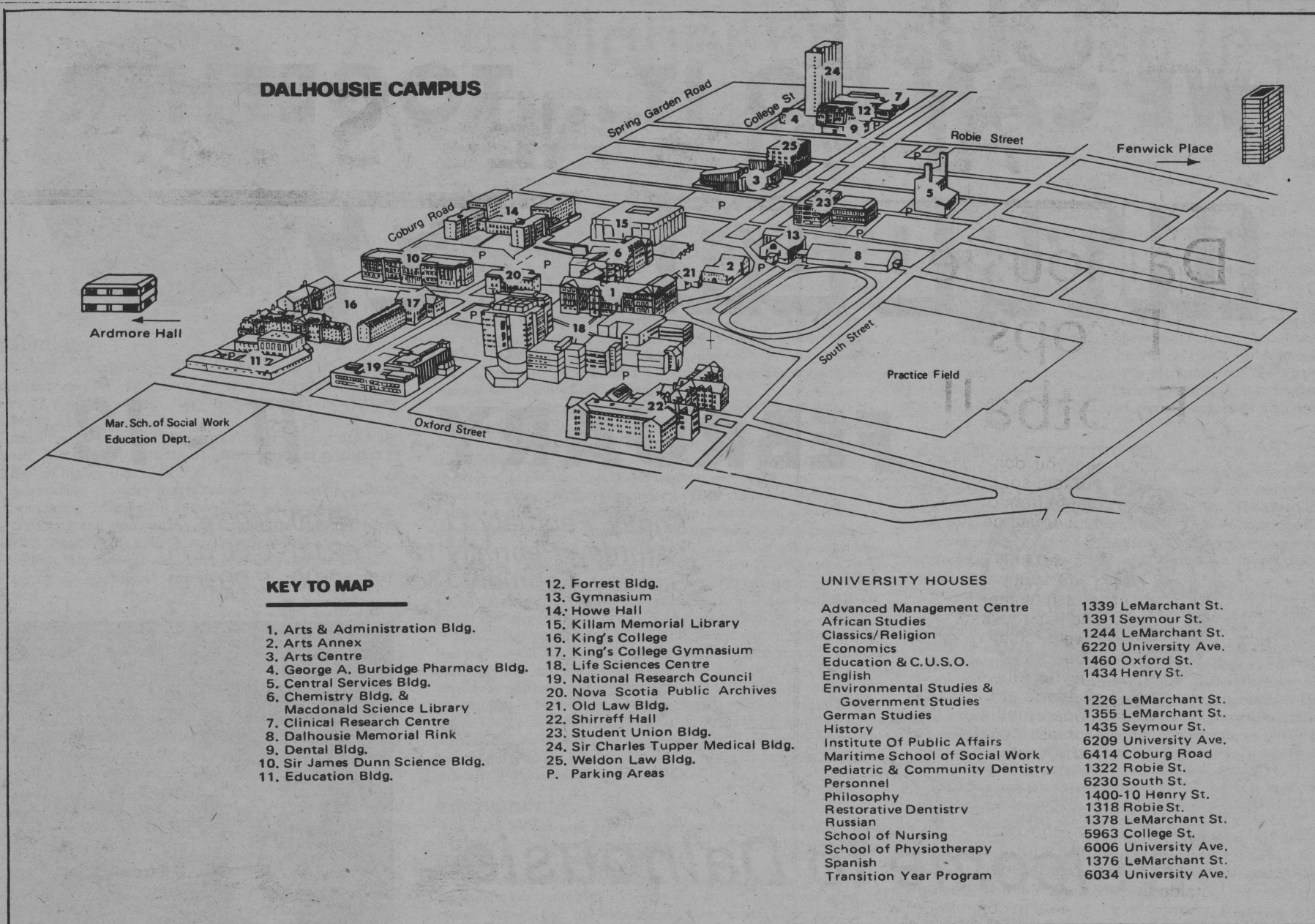
Only the tip of the iceberg...

Welcome to the Dalhousie campus for our seventh open house - IntroDal '77. As always this biennial event has been organized by a committee of students with the co-operation of the faculty and students in practically every department which has something that can be displayed.

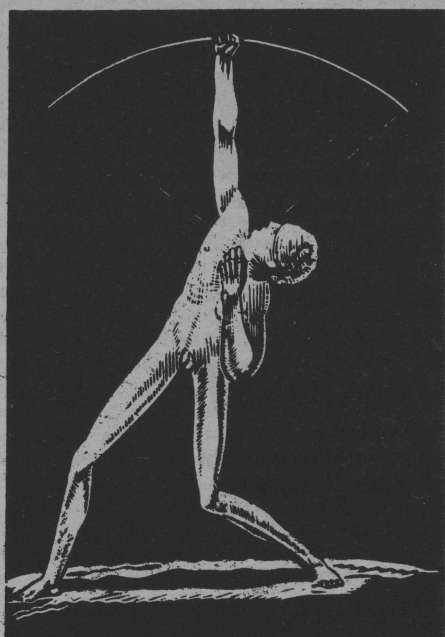
What you will see this weekend, extensive as it may appear, is only the tip of the iceberg when measured against all the resources available for study and research at this university. Thanks to the support of government and our alumni and friends, we have managed to bring together at Dalhousie good opportunities for study and research in as great a variety of subjects as can be found in much larger centres across the continent. In addition our schools for doctors, dentists, lawyers, etc., turn out professionals who can hold their own anywhere in the world.

Whether you make a quick tour of all the displays or concentrate on a few that attract your attention, I hope you have an interesting and profitable day. Please write to me if you leave with questions unanswered, and I shall see that a reply is forthcoming.


Henry D. Hicks
President



The Image of Man in Modern Thought



The Killam Lectures

The second in the 1977 Dorothy J. Killam Memorial Lecture series, which began last week, will feature **RICHARD HOGGART**, whose topic will be **Gamekeepers or Poachers: Values and action in intellectual-professional life.**

Hoggart, Warden of Goldsmiths' College, the University of London, will begin his lecture at 8:30 p.m. on Friday, Feb. 11, in the Weldon Law Building.

Theme of the series is **The Image of Man in Modern Thought.**

INTRODAL: What it is

Open House, a concept initiated in 1965 by a Dalhousie student, Khoo Teng Lek, has become a bi-annual event.

Mr. Khoo, who also served as open house chairman that year, described it as a time when the university community introduced itself to the public.

IntroDal '77 plans to do just that — under the banner of **WE CAN DO IT...TOGETHER.** The committee has put its best foot forward to produce a visual profile of Dalhousie not only as a centre for learning but as a viable entity within the community.

A prospectus on university teaching and research has been assembled for the visiting public and in particular for those who will be making the transition from high school to university.

Services

Guided tours leave the SUB lobby every hour on the hour during IntroDal except on Friday, when they will leave at 3 p.m. and 4:30 p.m.

Food services will be available throughout IntroDal in the cafeteria of the Student Union Building.

Free parking is available on all campus lots for IntroDal visitors.

In The Killam

- Friday, 2-5 p.m. - Education.
- 5-7 p.m. - Alumni Association.
- Saturday, 12-2 p.m. - Alumni Association.
- 2-5 p.m. - Education.
- 5-6 p.m. - Alumni Association.
- Sunday, 1-5 p.m. - Alumni Association.

Sports

The Dalhousie hockey Tigers play their last two home games of the season in the Rink during IntroDal weekend.

Everyone is welcome.

The Tigers play the University of Moncton Blue Eagles on Friday at 7:30 and the University of New Brunswick Red Devils on Saturday, at 2 p.m.

The IntroDal '77 Committee

David Bell, Susan Creaser, Scott Fowler, Chris Fullerton, Robert Gray, Rod Hawkins, Wendy Hayward, David Lyons, Brian MacDonald, John McLeod, Lisa Menchions, Gerry Parsons, Roy Sampson, Al 'Hack' Scott, Marc Simard, Diana Reid and Joseph Roza, chairman.

Registration at Dalhousie

After a student has applied to and been accepted by Dalhousie, that student is invited to discuss with an adviser from the appropriate school or with the Dean of Freshmen, classes for the next year. As early as mid-March, a timetable of classes for the following year is published. At any time after that it is possible to select specific classes and create a schedule for the coming year.

In order to take a class at Dalhousie, students must seek the approval of the department offering that class. New students may do this at a special session on June 27 or by visiting departmental offices in the summer during regular office hours. The device used for this is a class approval form. When completed, the form should be turned in at the Registrar's Office.

In July, a registration kit will be sent to new students. By following the simple instructions, it will be possible for a student, who has submitted a completed class approval form, to register by mail during the summer. On the other hand, if one prefers, registration can be accomplished at the formal session in September.

How do you want to spend your first day at Dal., at registration or enjoying the orientation activities?

Getting to know US...

Alumni

This distinguished association will present its new documentary film, **THERE STANDS DALHOUSIE**.

The 30-minute documentary, all about Dalhousie people in its last 100 years, was directed by alumni of the university. It was commissioned by the association to mark the 100th anniversary with a special premiere showing last November. It will be screened in the Killam Library Auditorium on Friday, 5-7 p.m.; Saturday, 12-2 p.m. and 5-6 p.m.; Sunday, 1-5 p.m.

Biology

We aim to prove that the science of life is really the liveliest science. You will be able to participate in audio visual instruction; take in a variety of research projects, ranging from growing plants without soil to genetic engineering; view underwater divers, biological photography, live lobsters, electron microscopy; learn about forest and salt-marsh ecology.

The Herbarium will have a wild flowers of Nova Scotia display on loan from the Nova Scotia Museum. Our own museum will have information about the Halifax Field Naturalists and Canada Nature Federation.

Look for us in the **Biology wing of the Life Sciences Centre**.

Chemistry

LABORATORY RETRIEVERS? The labs of the chemistry department will be in action on Friday afternoon with some interesting displays. Saturday and Sunday students will be working on various experiments. There will be experimental demonstrations involving liquid nitrogen and other wordly chemicals. Do venture to the **Chemistry Building** to witness these and other exciting exhibits.

Chinese Student Society

Our display will consist of a movie, a Chinese cooking demonstration, Chinese drawings and dance. Look for us in the **2nd floor foyer area of the Life Sciences Centre**.

Classics

WE DON'T FIDDLE WITH FIRES AROUND HERE...The Classics Department has arranged an interesting series of slides depicting ancient Greek and Roman civilization to be accompanied by a book display and posters. All combine to provide insight into the culture of these early civilizations. Visit us in the **Classics House, 1244 LeMarchant Street**.

Commerce

\$\$\$...DEBITS AND CREDITS. If you are interested in a commerce career, talk with our student representatives at the **Commerce House, Seymour Street**.

Computer Centre

X=Y Y(A)=X

If X Y: DOES THAT MEAN THAT Y (A) X? Find out by taking a tour through the Centre in the **basement of the Killam Library**. There will be films and demonstrations concerning programming and the basic theory behind computers and their operation. You will be able to observe the actual running of the computer and will be able to try your hand at a program.

Conflict and Simulation

Are we really at war or is it all a figment of the imagination? Come and find out as we have our weekly war (?) on Sunday in the **Student Union Building**. War begins at 12:00 noon and hopefully the peace treaty will be signed at 9:00 p.m. All interested persons are welcome to partake.

Dental Hygiene and Dentistry

Dental Hygiene and Dentistry

A display of equipment and techniques used in the restoration of teeth and fabrication of prosthodontics will be presented by second-year Dentistry students in **Room 108, Dentistry Building**.

First-year dental hygiene students will demonstrate techniques used in dental prophylaxis, and in the use of x-rays in **Rooms 101 and 212**.

Education

LIVE AND LEARN. A film on education will be screened in the Killam Auditorium, Friday and Saturday from 2-5 p.m. There will also be a panel discussion led by members of the faculty. The theme is **An Examination As a Process**.

Engineering

ENERGY, CONSERVATION AND THE WORLD AROUND US...Are high fuel costs your problem? They come and see how to construct your own wood burning fuel saver...see what happens when you heat your glass house by solar energy. We'll also have a demonstration on stress analysis; a display of technical models and equipment used by students in their lab experiments. We'll be in the **Dunn Building**.

English

THE ENGLISH ARE COMING...THE ENGLISH ARE COMING...In the **Reading Room of the Student Union Building**, you can hear brief oral presentations on Geoffrey Chaucer, Christopher Marlow, John Donne, Henry Fielding, William Blake, Charles Dickens, Mordecai Richler, Margaret Atwood...Come and listen.

Geology

GET RICH QUICK? Find out how to explore for your own oil well. See a volcano in action. There'll be minerals, fossils and rocks as well. We'll be waiting for you in the **Dunn Building**.

German

Achtung...you vil come undt you vil enjoy...The German department will present a German type cafe in the **downstairs corridor of the Life Sciences Building** for your enjoyment. There'll be information, posters, films, pamphlets to show the German culture.

Kellogg Library

The human body does exist in print. Find out for yourself by visiting us in the **Tupper Medical Building**.

Latterday Saint Student Association

GOD SQUAD...archeological findings in South America and how they relate to the Book of Mormon; a reproduction of an Aztec calendar; posters showing ancient America...all of this in Room 220 of the SUB.

Law School

Visit the **Weldon Law Building** during IntroDal. Students and faculty will be there to talk with you about law as a profession.

Business and Public Administration

THE WORLD AWAITS YOU...THAT IS, IF YOU WANT TO BE A MANAGER. Although not everybody can join the managerial ranks we can perhaps help you get on the right road. For information on our programs, come and visit us on the **4th floor of the Killam Library**.

Mathematics

$\pi R^2 E=Mc$

R — BUT CAKES ARE ROUND...come and test your wits against the computer or watch films on computer games. Find out about careers for math majors in the present and future job market...in **B507, Killam Library**.

Music

If your timing is on you will hear the sound of music echoing through the **Arts Centre**. Look for our posters and brochures.

Newman Club

THE SOCIAL LIGHT ON CAMPUS...look for their information table in the **SUB lobby**.

Nursing

You've heard about nurses. Here's your chance to find out what they're all about. See their program presented in a slide presentation format, hear about the Nursing Society, get some insight into the kinds of equipment used by this group of health professionals. You can find us on the **3rd floor of the Life Sciences Building**.

Oceanography

The department, located in the **Life Sciences Centre**, will carry out research experiments involving the biological, chemical, geological and physical aspects which make up oceanography as a discipline. Graduate students will be on hand to explain our experiments and displays. Look for something interesting in the pool tank, in addition to zooplankton experiments in the tower tank.

Sport Parachute Club

Is it easy or difficult to jump from a plane and land on your feet?...our display will tell you something about the art of jumping and how to pack a parachute. We'll also have a film for you on **The Man In Free Flight**. It will be shown in the **Green Room, SUB**.

Pharmacy

The College of Pharmacy displays will focus on the research activities of the college and the career opportunities available for graduates. The career theme will be developed by emphasizing how our curriculum trains students so they may enter the community, institutional, clinical or industrial areas of the profession. We'll also have something on the pharmacists' expanding role in patient care. It's all in the **Burbidge Building on College Street**.

Physics

E=Mc

No need to fear, Einstein failed Grade 10 math. Our department will show you what happens when you immerse an object in a sub-zero temperature chamber. We'll have some games, some educational displays revolving around the formula $E=Mc$...you'll also find out why you cannot push on a string. Visit us in the **Dunn Building**.

Political Science

Everyone has a **PARTY...**Our exhibit will deal with politics in Canada and Canada's position in international affairs. The display, replete with films, books, audio-visual aids used in classroom teaching, will be on view in the **foyer, Arts and Administration Building**.

Psychology

MIND OVER MATTER...There will be experiments on response conditioning, simulations and animal trained responses as well as visual computer displays. You can see them all on the 2nd and 3rd floor of the **Life Sciences Centre**. Be sure and look for seals in the water tank.

Religion

Dr. Wilfred Cantwell Smith, chairman of the department, will talk with persons interested in the department's activities. A tape presentation on Religion in Canada has been arranged. It's all at **1244 LeMarchant Street** on Friday and Saturday.

Russian Club

Super Siberian Safari...No! But there will be a slide presentation and posters on the club's activities...on view in the **Art Gallery**.

Maritime School of Social Work

PEOPLE WHO NEED PEOPLE...see it through posters, photos, brochures and other printed matter in the **Arts-Centre foyer**.

(Continued on page 4)

Dalhousie in the Community

Without the historical, social, educational, recreational and cultural amenities of Halifax and Nova Scotia, the university would not be as wealthy as it is; conversely, Dalhousie's people, programmes and facilities combine to play a considerable role in enriching the life of the wider community.

The Dalhousie Arts Centre provides an excellent entertainment menu featuring classical and popular music, theatre and art, and is open to everyone. Each season is augmented with home-grown talent blossoming under the guidance of the Departments of Music and Theatre.

Education, too, goes to the public. The School of Dentistry's mobile clinic takes dental care and education to children in remote areas of the province. Lawyers and doctors supervise students operating legal aid services and family medicine clinics. Physical education faculty and students help children with disabilities to develop motor skills. Future librarians, like education students, serve internships.

On campus, athletic and recreational facilities, for long overcrowded but soon to be improved, are shared with the public and continuing education programmes keep class and lecture rooms open in the evenings. The Computer Centre and the library system have arrangements with other universities, various professionals, industry and the wider community.

The university's Speakers Bureau has 100 faculty members, all experts in their own field, who lecture or will comment on request; they are available to service clubs, schools and other groups.

The University

Dalhousie University, named after the ninth Earl of Dalhousie, was founded in 1818 with money collected as custom duties at Castine, Maine—a small port of entry captured by the British during the war of 1812-14. When the British withdrew, the Earl of Dalhousie and the then Lieutenant-Governor gave the Castine fund to establish a college modelled after Edinburgh University.

The university is a non-sectarian co-educational university with a total population of 9,000 students, 1,200 professors and 2,000 administrative and support staff.

The university is located in a residential area of the south end of the city and occupies about 65 acres.

Twelve major teaching and research units, the Student Union Building, two residence halls, gymnasium and skating rink, one affiliated university and the provincial archives are located on campus. Adjoining are the Atlantic Research Laboratories, the provincially-operated Pathology Institute and the teaching hospitals.

Through the seven faculties of Arts and Science, Graduate Studies, Health Professions, Law, Medicine, Dentistry and Administrative Studies, programs are offered leading to undergraduate degrees in Arts, Science, Physical Education, Engineering-Physics, Nursing, Pharmacy, and Dental Hygiene; Masters degrees in Arts, Science, Business and Public Administration, Law, Library Service, Education, Oceanography, Oral Surgery and Physical Education; doctoral studies in 15 disciplines; as well as professional degrees in Law, Medicine and Dentistry.

(Continued from page 3)

Scuba Club

Don't hold your breath...come and see our equipment, slides, artifacts in the **Music Room, SUB.**

Sodales Debating Club

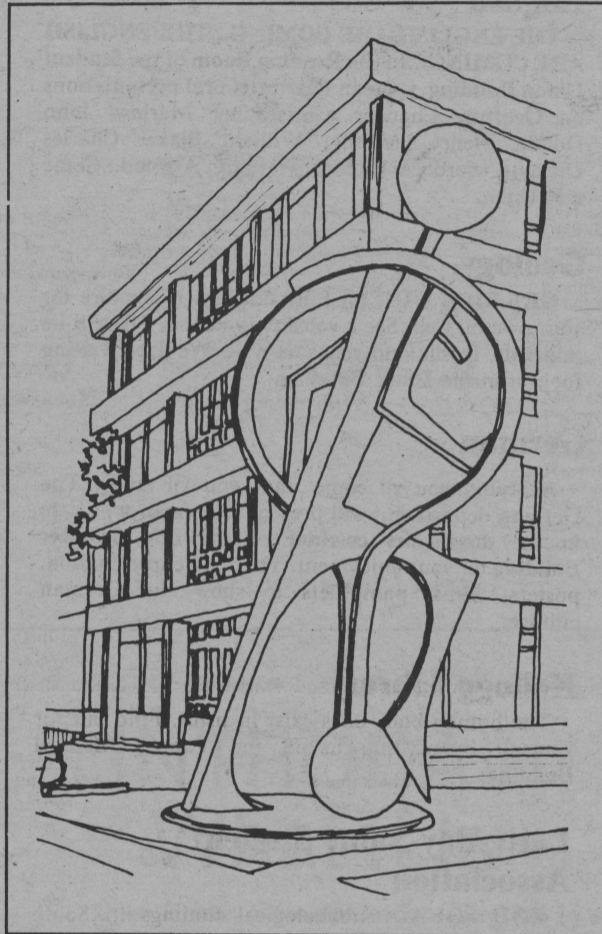
The art of subtle rebuttal...hear what's involved in conducting a successful debate by meeting and talking with members of our club...**Room 2900, Life Sciences Centre.**

The Students' Union

A students' union has been described as being akin to a schizophrenic amoeba. Schizophrenic in that it seems unable to decide whether it is a social or a political organization, amoebic in that its various components have a tendency to split from the parent body and to grow and develop into life forms of their own.

Dalhousie Students' Union is no exception, but the foregoing is not intended to convey the impression that students' unions are disorganized or without purpose.

The union at Dalhousie is the responsible student government, charged with the supervision of all extra-curricular activities, which are wide-ranging many. There are more than 100 societies, clubs and organizations covering athletics and recreation, politics and religion, philanthropic and community-oriented, and cultural activities and popular entertainment.



Spanish

Buenos Dios Amigos. Read and hear all about the department; listen to Spanish music. **OLE...Lower level of the Art Centre.**

Sri Chinmoy Meditation Society

Think about it OR to think OR not to think...come and learn how to meditate...view our books as well as a slide presentation on the lower foyer of the **Arts Centre.**

Student Services Council

The staff of the council (awards, counselling, health, chaplaincy, housing and recreation, manpower) will have a cumulative display using slide and overhead projector, banners, video tapes. Check with us for details on all our services at our booth in the **Life Sciences Centre.**

Medical School

An apple a day keeps the doctor away...but in this case, we want you to visit us in the **Tupper Medical Building** and discover the basic medical sciences.

Anatomy

The department, using charts, posters, models and video-tapes, will illustrate teaching and research methods...**12th floor, Tupper Building.**



Biochemistry

The DNA is NOT A TERRORIST GROUP...but do you really know this for sure? Do you know what happens to your tissue when you get vaccinated? Do you know the constituent parts of your body tissue? Answers to these and other questions are yours when you come to the **8th floor, Tupper Building.**

Microbiology

A display of bacterial spines and viruses using electron micrographs will be the focus of attention in our department on the **7th floor, Tupper Building.**

Obstetrics and Gynecology

We've come a long way, baby...be sure and visit the Grace Maternity Hospital's reception room on Friday and Saturday. See a fetal monitor record the fetal heart rate and uterine contractions; hear about the importance of monitoring in reducing newborn deaths and retardation.

Pathology

THE CORONER STONE OF CAMPUS...or a tape and slide presentation entitled **Investigation of Acute Pancreatitis** consisting of an autopsy specimen showing changes that occur as the disease progresses. See it all in **Room 11A2 and 11A6, Tupper Building.**

Pharmacology

Are you on a pill? Our people can tell you the effects of this and a lot more. Learn about the effects of drugs, the blood-brain-barrier; see animal models of brain disorders, dystrophic hamsters; view displays outlining cardiovascular pharmacology, the effects of PCB's and pollution...We're on the **6th floor, Tupper Building.**

Physiology and Biophysics

We'll have an automatic ECE analysis, a spiogram drawn by computer, a lung function test. There will also be an exhibit related to the cerebral cortex, a mathematical model for diagnosing cardiovascular disease. Visit our display on the **3rd floor, Tupper Building.**

Southern Africa Information Group

The group will have a book table and display in one of the Council Rooms, **2nd floor, SUB.**

times — 1976: An Overview

revenues, because of the relatively stable levels of tuition over the period.

Rapid expansion has not been restricted to higher education. In fact, total government operating expenditures and expenditures for other social sector departments such as health and education, which include grants to hospitals and local school boards, have increased at a faster rate than higher education operating expenditures and assistance in the past several years. On a government fiscal year basis from 1973-74 to 1976-77, in the Maritime provinces, total government ordinary expenditures increased by 59.4%; education by 65%; health by 62.6%; social services by 73.4% and higher education operating assistance by 52.4%.

Although the increase in post-secondary education spending in the region has been considerable, it has had little impact in reducing the difference between the level of support provided to institutions in the Maritimes and that provided in other Canadian provinces. In 1971-72, comparable country-wide figures show the Maritime provinces ranked 8, 9 and 10 in terms of operating grant per full-time student. The same ranking existed in 1973-74, the last year for which actual statistics are available. Subsequent to 1973-74, the situation has probably not changed significantly since 1974-75 and 1975-76 operating grants increases were merely equal to the national increase, while 1976-77 operating grant increases were among the lowest in Canada.

Post-secondary expenditures

	N.B.	N.S.	P.E.I.	Mar.	Can.
1. Per Capita 1975-76*	\$120 (9)	\$153 (5)	\$106 (10)	\$136	\$166
2. As per cent of personal income 1974-75**	2.7 (7)	3.2 (2)	2.9 (4)	3.0	2.8
3. As per cent of Gross Provincial Product 1975-76*	2.5 (5)	3.0 (2)	2.8 (4)	2.8	2.3

(Ranking of Maritime provinces in brackets.)

Source: Statistics Canada.

* - Estimated; ** - Preliminary

Institutional deficits

Although the situation varies from institution to institution, Maritime institutions are generally only in a fair state of fiscal well being. At the end of the 1974-75 fiscal year, slightly more than two thirds of the institutions under the MPHEC had accumulated operating deficits totalling \$6.7 million. Institutions in Nova Scotia accounted for most of this total deficit. Although in many cases the operating deficits are covered by trusts and bequests, these deficits will place significant strains on operating budgets in a period of government restraint and enrolment stabilization.

The capital debt of Maritime institutions is considerable as it totalled \$128.8 million at the end of the 1974-75 fiscal year. Institutions in Nova Scotia are responsible for about 80 per cent of this amount. The significance of the capital debt is reduced, however, by the fact that \$45 million relates to the Nova Scotia Capital Assistance Loan Programme, in which principal and interest are paid by the province on behalf of the institutions. In addition another \$39 million relates to mortgages payable on residence and other ancillary facilities which are financed from operating receipts.

The Commission has recognized the potential difficulties related to operating deficits and indebtedness particularly in this period of fiscal restraint. The MPHEC has thus adopted a policy whereby it seeks to ensure that no institution under the Commission incurs any liability in a fiscal year beyond the amount of the unexpended grant made to the institution by the MPHEC and the estimated revenue from other sources up to and including the end of that fiscal year, without the prior consideration and approval of the Commission.

Financial reporting and accountability

With the advent of increased government assistance for post-secondary education, greater demands have been placed upon universities and colleges to be accountable and to provide justification for public support.

Maritime institutions account for government support to the Commission by providing annual budgets and audited reports; by submitting new programme proposals for Commission scrutiny and approval; by annually submitting five-year projections of operating and capital assistance requirements, enrolments and research activities. In addition, most universities publish annual reports.

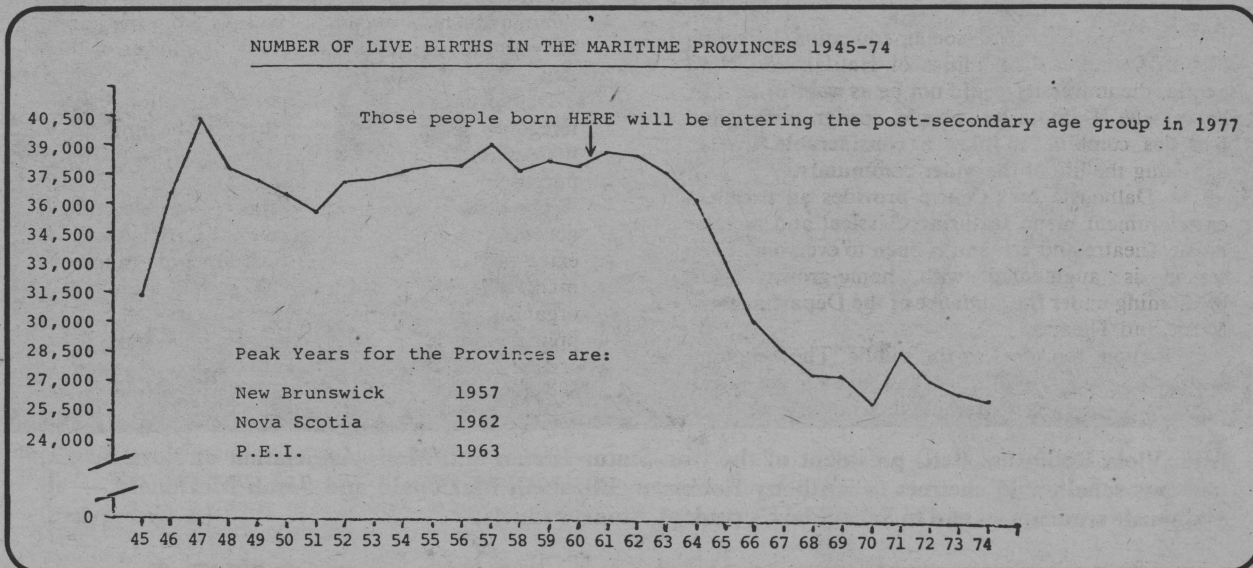
The MPHEC, itself, reports to the Council of Premiers and to the three Legislatures. The annual reports of the Commission are tabled in the Legislatures and released to the public.

In the 1970s the Association of Atlantic Universities, in recognizing a need for better financial information for decision making, initiated the development of a uniform financial reporting and programme costing system. Currently the Commission, Statistics Canada and the AAU are jointly funding the implementation of the final phase of the system.

Research funding

The quantitative and qualitative growth in Canada's post-secondary institutions during the last decade transformed the country from an educationally dependent to a donor nation. A key element in this transformation was the emergence of a financially well-supported research activity.

The relationship of a country's gross expenditures in research and development (GERD) to Gross Domestic Product (GDP) provides indicators of research activities. An analysis of the GERD in relation to the GDP in 14 industrialized countries shows that support for research and consequently the real scientific potential of



Canada is declining. According to this indicator, Canada ranked seventh among OECD member nations in 1968, but by 1974 it had fallen to 12th place.

A further indicator is a comparison of the federal government's research expenditures as a percentage of Gross National Product and of the federal government's budgets. Here there was a steady decline during the 1969-74 period from 0.72% to 0.59% and from 3.92% to 3.04% respectively.

An analysis of funds provided through the three largest federal granting councils - the National Research Council, the Medical Research Council and the Canada Council - between 1969 and 1975 shows decreases in terms of constant dollars of 24%, 1.5% and 10% respectively.

The Maritime share of assisted research funds has not been in proportion to its population which represents approximately 7.0 per cent of the Canadian population. Expenditures on assisted research by universities in the region has improved only slightly during the 1970-75 period, from 3.5% to 3.86% of the national total.

Tuition, fees, room and board

Tuition for undergraduate arts and science programmes at universities and colleges within the region varies from a low of \$600 to a high of \$740. Average tuition fees rank the three provinces - Nova Scotia, New Brunswick and Prince Edward Island first, second and third respectively in comparison with other Canadian provinces.

Historically, average tuition fees in this region have been high comparatively. At the same time tuition fees in the region and elsewhere have retained a degree of stability. Increases in tuition have not kept pace with increasing expenditures or increases in operating assistance. As a result, over the past several years, tuition has represented a decreasing portion of total institutional revenues.

Student aid

Student assistance in the Maritimes is a combination of Canada Student Loans and Provincial Bursaries. In recent years, the three provinces have followed the same general scheme, in that the level of assistance available has been \$2800 - the first \$1400 of which is loan, the next \$1000 bursary and the next \$400 loan. The Province of Prince Edward Island had modified this scheme for 1976-77 - the first \$1400 of an award will be loan, the next \$800 will be 50% loan and 50% bursary, and the next \$600 will be bursary. Actual funds made available are determined by an assessment of an individual student's needs and resources.

The average awards, by province, for 1975-76 were as follows:

	Average Loan	Average Bursary	Average Total Award
New Brunswick	\$1249	\$ 539	\$1584
Nova Scotia	1426	634	1937
Prince Edward Island	1289	618	1727
Maritimes	1346	601	1781

In each province, student aid is a ministerial responsibility. While the maximum aid available to an individual is the same, there exist variations in administrative matters, as well as separate provincial approaches to the availability of bursary assistance and forgiveness schemes.

The Commission's role in student financial aid, under its Act of Establishment, is:

"To recommend to the Council (of Maritime Premiers) programmes of financial aid and other assistance to students in the region".

An assessment of the interprovincial flow of students shows that considerable student movement exists particularly within the region, and that a regional or national student financial assistance scheme would provide greater equality of opportunity and accessibility to post-secondary programmes.

Job opportunities

Education at the post-secondary level extends and enhances job opportunities. While many thoughtful and concerned educators argue that the career benefits of post-secondary education have been over-emphasized at the expense of focussing less attention on other individual and societal benefits, it is a fact that, for the student, employment considerations remain a significant factor. For some occupations, university-level training is necessary for entry. Post-secondary graduates continue to have higher incomes than non-graduates. Other advantages are increased occupational

choice and mobility, potentially greater career flexibility and lower unemployment.

A number of studies in recent years have indicated a declining economic value of university education as compared to the period of the mid and late 1960's. They point to societal and individual costs associated with post-secondary education such as the cost of education itself, delayed entry into the labour force and foregone earnings. Although the results of such economic analyses have been varied, in general they point to a relative decline: post-secondary graduates still retain, nonetheless, absolute advantages in terms of greater income, lower unemployment and career benefits.

The effects of restraint

In the current period of general restraint and particularly in view of smaller increases in public support, the universities have introduced a number of measures to counteract the negative impact on their financial positions.

Several institutions have increased tuition fees and raised residence and room and board fees. However, because of the already relatively high fees in the region, and the magnitude of government grants in total revenues, universities have little flexibility in seeking increased revenues.

Most emphasis has been placed on controlling and reducing expenditures. Among these are conservation programmes to reduce fuel and power consumption; more stringent controls on staff additions or replacements; re-examination of expenditures for services - printing, duplicating, audio-visual materials, travel; deferrals of expenditures on furniture, equipment, space improvements; reductions in expenditures on educational supplies, operating supplies, laboratory materials; deferral of planned introduction of new programmes; reduced expenditures for library acquisitions; reduced plant maintenance programmes.

Institutions have pointed out that in several areas (e.g., fuel, utilities, minimum wage rates) cost increases largely beyond their control will be incurred.

Any restraint programme will affect the largest component of operating expenditures; that is, salaries. As is the case for several other professional groups, average salaries or faculty in the region tend to be below national averages. For the 1975-76 academic year, the average faculty salary for all ranks, as reported by Statistics Canada, places Maritime institutions in the lower half of the national scale. Nonetheless, with regard to the teaching staff, academic and professional qualifications as well as experience compare favourably with the national average and with institutions of similar profile and missions in the rest of the country.

The situation in which institutions are currently operating demands that creative use be made of available resources. However, three matters cannot be ignored. There is a possibility of real costs in terms of quality. Reduction in such areas as library expenditures, equipment replacement and acquisition, plant maintenance and other areas where short term cut-backs can be more immediately implemented can have longer range effects. Secondly, in areas where expenditures have been deferred, there is the danger that a backlog of necessary expenditures can develop, with implications for future budgets. Finally, great concern has been expressed that an extended period of severe restraint could result in significant deterioration of the quality and range of educational opportunities in the region.

Federal-provincial fiscal arrangements

Since 1967-68, provinces have recovered a considerable portion of their post-secondary education operating expenditures under the Federal-Provincial Fiscal Arrangements Act. For the Maritimes, recoveries have represented 65 to 70 per cent of provincial operating assistance.

Although the value of the transfers to the Maritime provinces has kept pace with the national average increase, the dollar gap between the per capita transfers has widened. In 1967-68 the per capita transfer was \$6 below the national average for New Brunswick and Prince Edward Island; by 1976-77, the difference is expected to be \$19, \$6 and \$20 for N.B., N.S., and P.E.I. respectively.

The current fiscal arrangements expire on March 31, 1977 and the federal government has recently made a new proposal for sharing the costs of post-secondary education. It is essential that any new agreement provide, as a minimum, equality of funding to the Maritimes.



Mrs. Viola Robinson, (left) president of the Non-Status Indian and Metis Association of Nova Scotia, presents scholarship cheques to Anthony Robinson, Elizabeth McDonald and Sarah McDonald — all Dalhousie students — and to Saint Mary's student, Stuart Francis. (A/V Services)

NSIM students each get \$750

A grant of \$3,000 given by the Canada Save the Children Fund to the Non-Status Indian and Metis Association of Nova Scotia has provided scholarships for three Dalhousie students and a Saint Mary's University student.

The Non-Status Indian and Metis Association (NSIM), founded in 1975, represents about 3,000 people in Nova Scotia and attempts to improve their socio-economic and educational conditions. The president, Mrs. Viola Robinson, said that lack of financial assistance had

discouraged her people from going on to high school, let alone to university.

The scholarships presented last month by Mrs. Robinson are each for \$750 and will help the four NSIM members to continue their studies. At present, Anthony Robinson of Yarmouth is in the B Comm program at Dalhousie, while Elizabeth and Sarah McDonald of Kingston are registered in Dal's BSc degree program. Stuart Francis of Milton is a second-year biology major at SMU.

Biochemist Bigelow new Science Dean at Saint Mary's

An outstanding Canadian scientist, Dr. Charles Cross Bigelow, has been appointed Dean of the Faculty of Science at Saint Mary's University.

Dr. Bigelow was Chairman of the Department of Biochemistry at Memorial University. He holds the degrees of Bachelor of Applied Science in chemical engineering from the University of Toronto, Master of Science and Doctor of Philosophy in physical chemistry from McMaster.

On NRC overseas fellowships, Dr. Bigelow did post-doctoral study at the Carlsberg Laboratory in Copenhagen. He has also been the recipient of several

research grants from the Medical Research Council and has engaged in extensive investigations in the field of protein structural chemistry. His numerous publications on the subject serve internationally as authoritative references.

A native of Edmonton, he has held appointments at the Universities of Alberta, Western Ontario, Toronto and Florida State. He is a past president of the Canadian Association of University Teachers and a Fellow of the Chemical Institute of Canada.

Dr. Bigelow succeeds Dr. William A. Bridgeo who completed his term as Dean at the end of December.

The unsung heroes

(Continued from page 1)

For example, if a Music professor were in a choir, this was not counted as a musical activity but as a subject-related activity. If a Biology professor were in a choir, it was calculated under music):

46.5% of the activities in which the faculty participates are related to the subject matter he or she teaches;

39.5% were in the category of directorship, board members or assistance in terms of guidance, or actions as consultant or advisor;

25.5% of the activities participated in were of a political nature;

14% of a religious nature;

30.2% concerned sports;

22% volunteer social work; and

5% music.

The number of faculty participating in career-related activities was approximately equal in all faculties. In the category of advisorship, the Medicine and Arts and Science faculties played equal roles; in politics, the Arts and Science faculty outnumbered Medicine three to one and in religion, Medicine outnumbered Arts and Science two to one. In both volunteer social work and music, Arts and Science outnumbered Medicine four to one and in sports, two to one. These statistics reflect only the findings of the questionnaires, not reality. It is highly possible that a larger sampling would reverse priorities. One member of the medical faculty commented on his form that the questionnaire was ridiculous for

any member of his faculty or any member of the School of Social Work because all of their activities were community related. This may explain the relatively small return of questionnaires from these faculties.

The questionnaires revealed that a considerable number of the Dalhousie faculty are unsung heroes in their spare time, devoting themselves to many excellent projects such as reading to the blind, working with convicts, with clinics, meals on wheels, etc. Those engaged in activities listed as political are members of many community action groups, ward councils, and environment improvement groups.

It is interesting to note that only nine per cent of the faculty surveyed participates in what may be rated as social clubs such as gardening, photography, etc. These activities are often combined with others when noted. The enormous preponderance of activities were not pastimes but solid contributions requiring effort and work. Public speaking, radio and television programmes, newspaper articles, leadership in church and political activities, as well as volunteer work, represent a substantial involvement in the local community on the part of the members of the university community.

The Community Relations Committee was gratified by the results of the survey which point out the quality as well as the large scope of activities in which members of the faculty of Dalhousie University play an important role.

The committee was also extremely pleased that such a considerable number of faculty members took the time to complete the questionnaire, and thanks them for their contribution to this survey.

A weekend out of this world

Spaced Out Library consultant and science fiction writer Judith Merrill was originally going to talk only to area librarians and School of Library Service faculty and students during her visit to Halifax in March. She will lecture to that group on "what librarians need to know about science fiction", on Friday morning, March 11. But now everyone is invited to attend HALY CON ONE: a science fiction weekend at Dalhousie! The evening of March 11 Ms Merrill will give an open lecture about science fiction. On Saturday, March 12, there will be displays, "raps" (group discussions) and SF films. For serious readers of SF who want to increase their critical skills or who hope to write SF, a workshop (limited to 35) will be conducted by Merrill. Noted SF author, Spider Robinson, will speak at the Saturday night banquet (see table for costs).

It's expected that SF freaks from all parts of Canada and from across the border will attend the Maritimes' first such gathering, says School of Library Service professor Dorothy Broderick, organizer of the event and an acknowledged SF fan.

Event	Option	A	B	C	D	E	F
Merrill Lecture		*	*	*	*	*	*
SF Films: (2001: A Space Odyssey; The Forbidden Planet)		*	*	*	*	*	*
'Raps' (Discussions)		*	*	*	*	*	*
Workshop		*					
Banquet		*	*	*			
Package Price		\$35	\$13	\$10	\$3	\$6	\$3

All events at the Killam Memorial Library (Except the banquet - in the Faculty Club).

Pre-registration appreciated; contact Dr. Dorothy Broderick, 424-3656.

Published lately?

(Continued from page 1)

this system of world-wide notification is a coding system which will assign a unique number to your publication. This will facilitate ordering and cataloguing of your work for libraries.

The Dalhousie School of Library Service has assumed the responsibility for centrally allocating these numbers (known as International Standard Book Numbers, ISBNs) to all publications of Dalhousie University. (The one exception is for the Institute of Public Affairs which has already established its own system of reporting to the National Library.)

Please, let the Library School know if you have issued any book, report or journal recently or, perhaps more importantly, let the school know the next time you plan to issue one. They can then give you your number ahead of time so that it can actually appear in your publication.

Carol Wiltshire, graduate assistant in the School of Library Service, or I can supply any additional information you might want.

Let us hear from you.

Who knows from how far afield your next work will be requested?

(Dr. Horrocks is Director of the School of Library Service.)

Dal's centre will aid lifestyle transition

By
Michael J. Ellis

Our massive thrust to affluence in a world dominated by industrial technology has led to major improvements in our health and quality of life. The dark concomitants of this process are only lately beginning to emerge. There are subtle costs that result from our being equipped with bodies designed by evolutionary processes for an active life in a world without pollutants, too much food and stress. These kinds of costs were simply and directly identified in the White Paper, *A New Perspective on the Health of Canadians*.

The White Paper called for the recognition that prevention should rank more highly than it has done in the past, and that we should recognize the fact that the life-style of Canadians is a major cause of our disease. Self-imposed risks, voluntary ingestion of chemicals, over-eating, and underexercising were all fingered as contributors. All involve ignoring long term risks in the search for short-term gains. The next major step in Health Care, the White Paper claims, will come from influencing the myriad individual decisions by individuals to behave in a way that minimizes health hazards.

Changing life habits will be difficult but there are signs that some progress is being made. Witness the resistance of non-smokers to their being forced to breathe other's tobacco smoke, and the number of joggers in the streets.

This awakening of public interest in life-style management comes at a convenient time for Dalhousie University as it struggles to provide adequate recreation, physical education and athletic facilities on its campus. Physical educators and recreators have always pleaded their case for better facilities on the grounds of immediate benefits to the participants' quality of life and the longer run benefits of a healthy

life-style. It is fortunate that both arguments are now more convincing than ever.

Interest in a university life with a balance between studies and activities is burgeoning. It is a healthy development. Academic standards are rising, the stress of competition in the academic aspects of the University are increasing, but so is the interest in the associated cultural life. In the area of campus recreation the growth in interest in doing active things shows itself in the participation statistics. In the last three years, the number of individual students served by the School of Physical Education's Recreation programmes have grown from 1,000 to 3,500, with forty-five percent of students joining in some organized activity. The number of participations jumped in a year from 7,200 to 11,200. The message that there are benefits in participating in a variety of activities, some of which exercise the whole person, seems to have been received on campus.

The Physical Education, Recreation and Sports Complex soon to be built by Dalhousie will be designed to service the activity needs of the University community and to help in the supply for the citizens of the province. The building is in effect a large open plan activity centre in which participation will be emphasized. It will complement the downtown Metro Centre which makes little provision for participation.

The University will bring to Nova Scotia another centre of the same calibre as the Dal Arts Centre. It is intended to mount the same kinds of complementary community service programmes from that centre. In the same way that the Arts Centre has contributed to the life of the area, so will the new centre.

(Reprinted courtesy The Nova Scotia Medical Bulletin, October, 1976)



Dr. Ellis is professor and director of the School of Physical Education at Dalhousie.

The essence of physical education and athletics

From the point of view of academic acceptance the field of Physical Education is relatively new in Canada. It was only in 1940 that the University of Toronto offered the first degree in this field and yet the concept of "a sound mind in a sound body" was known for centuries but usually by different names. Gymnastics, Drill, Physical Training and Physical Culture have all been used in the past to describe the area; today one is more likely to come in contact with the term Human Kinetics, Kinesiology, Kinanthropometrics, or long descriptive phrases such as "Sport, Exercise, Dance and Play". There seems to be an aversion on the part of many to the use of the term "Physical Education" because it seems to imply the narrow direction of teacher training. The twin realities of specific teaching training institutions and the ever expanding opportunities for graduates have stimulated the search for new and descriptive appellations.

And so while on the periphery, the field has been undergoing change, it is evident, upon closer investigation, that the essentials have remained constant.

Physical Education is an eclectic discipline. It draws from subjects such as Physiology, Anatomy, Physics, History, Psychology, Sociology and many others in order to focus on one specific area, Physical Activity. Should that activity, sometimes designated as sport, exercise, dance or play, be removed from the body of knowledge, the need for such a field as Physical Education will have disappeared.

It can be seen therefore that the area of activity within Physical Education is essential to the functioning of a viable programme.

Within the general framework of activities, three distinct areas are evident. In any degree-granting Physical Education programme, activity courses are a necessary component. These may range from Basic Movement to Olympic Gymnastics; Wrestling to Dancing; the level of instruction may vary from basic to highly specialized. Students who wish to pursue a coaching interest have the opportunity to delve deeply into their specific areas of interest.

With respect to coaching, more and more physical education programmes are including "Coaching Streams", that is, specific courses related to the

development of coaches at various levels of expertise. It should be noted that whereas there are specific teacher training institutions, none such exist for the training of coaches. It is a natural involvement for Physical Education.

Coaching is, in effect, teaching. Only the setting is different. Whereas one is performed in the classroom, the other is done on the fields, gymnasias or rinks. In an educational environment, coaching aims, objectives and goals are consistent with those of the institution.

The educator's mission is to teach people using the medium of his subject. In the process he is attempting to impart the skills peculiar to his subject. In Physical Education, this means education of and through the physical. Seen in this light, the coach has the same orientation. His charge is to contribute to the student's personal growth using his particular athletic area as the medium.

The means at his disposal are those of every educator: Current information based on an awareness, personal or gleaned, of the expansion of the frontiers of knowledge in his field. Having at once been exposed to, explored, expanded and redefined the limits of the area, dissemination follows, the media being through print, visual or verbal means, through a skill practicum or an inter-college or inter-university session.

Because activity is the medium through which a university's educational ideals can be imparted, it soon becomes noticeable that different levels of ability are apparent necessitating different levels of operation. Some people are in need of only a surface exposure of their sport; perhaps they wish a minimum level of competition preferring only to develop an individual skill at their own rate. To be sure, instruction is still needed but equally important are facilities and available time for the student to partake of this casual and unstructured approach to his activity.

There are others who wish a sense of competition to their activity. A game situation which allows for the measurement of talents with others; perhaps they wish to supplement or subordinate abilities in such a way as to work with others towards a common goal. It is this group which is the basis of the intramural programme. Face to face relationships, friendship, enthusiasm, a diversion, a re-release and focal point for that group are

all promoted. More importantly, however, it is an opportunity for hundreds of men and women within the university community to satisfy their individual talents at a personally appropriate level.

There is another group of university students who desire something more than a casual approach to athletics, to whom intramural sports are stifling. These people are at such a skill level, potentially or presently, that anything less than competition with the best available would be handicapping. These are the most talented performers, the fortunate few who have been blessed with a fluidity of movement, a gift of artistic grace; a talent which can cause absorbed audiences to rush to their feet while roaring with approval or slump lower in their seats in hushed dejection.

It has been stated previously that it is felt that one of the goals of the university should be to create a climate wherein one becomes a better person for having attended it. Activity, sport, helps to fulfill that goal. Sport, at one and the same time, can define and expand our humanity. It helps us to explore the dimensions of our being. It provides us with obstacles which can become stepping stones to wider horizons. In an educational environment it can be an effective instrument to advance institutional goals.

Sport can be defined as a competition involving people with people; people with the elements; people with themselves. The competitive aspect, ideally, can be the purest form of cooperation. Each competitor is obliged to perform at his best so as to allow the other the opportunity to develop to the fullest. It is within this framework that the aspects of sport previously referred to should be considered a valuable and integral part of the mosaic of the university's mission. Further, it is within the province of Physical Education as a recognized and accepted part of the university that it can be one of the agents of the latter in pursuing its goals through the medium of physical activity.

Dr. Cosentino is chairman and director of the Department of Physical Education and Athletics at York University. His article first appeared in the York University Gazette.

Calendar

FEBRUARY 4

...Friday-at-Four with Elizabeth Crocker, IWK on **Health Care in China**, Theatre A, Tupper.

FEBRUARY 6

...Winter Carnival continues with Sunday 7:30 p.m. movies in McInnes Room.

FEBRUARY 8

...Lunch Hour Theatre with a play directed by fourth year Theatre students, 12:30 p.m., Studio One, Arts Centre.

FEBRUARY 9

...Advanced Management Centre Seminar on **Cash Receivable and Inventory Management** with Ronald Storey. Cont'd on Feb. 10.

FEBRUARY 10

...Short course in **Neurology** sponsored by the Division of Continuing Medical Education. Cont'd on Feb. 11.

FEBRUARY 11

...Workshop in **Library Instruction** arranged by the School of Library Service. Cont'd on Feb. 12.
...Friday-at-Four with Dr. H.N. Munroe, Dept. of Nutrition and Food Sciences, MIT, Theatre A, Tupper...**Diet, Food Supplies and the Evolution of Man**.
...Cine-Club featuring **Les Ordres**, at 7 and 9 p.m., Killam Aud.

FEBRUARY 14

...Dental Table Clinics exhibited by dentistry students, 7 - 11 p.m., McInnes Room.
...Microbiology seminar with Dr. C. Balch, 7th floor seminar room, Tupper.

FEBRUARY 16

...Red Cross Blood Donor Clinic, 11:30 a.m. - 8:30 p.m., McInnes Room. Cont'd on Feb. 17.
...Advanced Management Centre Seminar on **Leadership Styles and Motivational Skills**, with Prof. R. Stuart-Kotze, Acadia. Cont'd on Feb. 17.

FEBRUARY 17

...Short course in **psychiatry** sponsored by Division of Continuing Medical Education. Cont'd on Feb. 18.

FEBRUARY 18

...Friday-at-Four with Dr. W.F. Doolittle, Dalhousie, on **Evolution—The Prokaryotic Origins of Eukaryotic Cells**, Theatre A, Tupper.

FEBRUARY 19

...Chinese New Year's celebration.

COMPUTER CLASSES

Feb. 15 - Introductory Fortran, SPSS, COMPASS
Feb. 16 - Introduction to Computing

ART GALLERY

Student, staff and alumni exhibition...until Feb. 24.

KILLAM LIBRARY

...an exhibition of business miscellanea from the Dalhousie University Archives

THEATRE

...the department stages a noon-hour theatre presentation every Tuesday, 11:30 - 12:30 p.m.

MUSIC

...Noon-hour recital every Tuesday, 12:45 p.m. in the Music Resources Centre, Killam and every Friday at 12:45 p.m. in the Arts Centre foyer.

Kinetics symposium for undergraduates at Dal tomorrow

The Atlantic Regional Symposium on Kinetics taking place tomorrow (Feb. 4) in Room 215 of the Chemistry Building has been especially designed for undergraduates.

Eight 20-minute lectures have been scheduled, each dealing with a different aspect of kinetics. Ten-minute discussion periods will follow.

The keynote speaker, University of Ottawa Professor K.J. Laidler, will talk about "Some Aspects of Modern Chemical Kinetics" at 4:30 p.m.

About 50 students from other Maritime universities, plus Dalhousie undergraduate and graduate students, are expected to attend. Scientists from Memorial, Acadia, St. Francis Xavier, Mount Allison and Dalhousie universities and from the University of Prince Edward Island and the University of New Brunswick will present papers.

The event is sponsored by Dalhousie's Department of Chemistry, the Chemical Institute of Canada's Atlantic Section and Dal's CIC Student Chapter.

For a detailed program and/or full information, contact Dr. A. Chattopadhyay at the Chemistry Department, 424-2474.

Capsule

...Faculty of Dentistry as part of its continuing education program will offer a course in **Removable Partial Dentures** on Feb. 14-15. Consideration will be given to dental materials, pathological implications of inadequate design, design simplification through orthodontics. Student table clinic presentations will be on view in the McInnes Room.

...Every year a moot court is produced by Dal's Medical-Legal Society — a mock trial with a judge from the Supreme Court of Nova Scotia. This year's "trial" will be held February 16, 7:30 p.m. at the Weldon Law Building and will involve nursing, with School of Nursing faculty participating in the "trial".

INTRO DAL '77

We can do it together
Feb. 11 - 13

KILLAM MEMORIAL LECTURE

with **David Suzuki**
THE TITANS RETURN:
SCIENCE IN THE
MODERN AGE
8 p.m., Feb. 4, Cohn
and
Richard Hoggart
GAMEKEEPERS OR ROACHERS:
values and action in
intellectual-professional
life
8:30 p.m., Feb. 11,
Weldon Law School

...Public lecture with author Desmond Guinness, president of the Irish Georgian Society, an authority on architectural styles, will lead a seminar on **Why Conservation** at 10 a.m., Feb. 7, Art Gallery.

BUSINESS LECTURE

Foreign Investment Guarantees and Export Credits...the subject of a public lecture to be given by B.A. Culham, assistant vice-president of the Export Development Corporation's foreign investment guarantees division...11:30 a.m., Feb. 9, Killam Aud.

SHORT COURSE IN PSYCHIATRY

The thrust of the Feb. 17-18 course is to enable family practitioners to use psychotherapy effectively as a means of helping patients maintain or improve their psychological stability. It is also designed to help the physician identify childhood situations which commonly lead to maladjustment or later psychiatric problems.

...Departments of biochemistry and pediatrics will sponsor a series of lectures by Dr. H.N. Munro of the department of nutrition and food science at MIT on Feb. 10 and 11. His lecture schedule:

- Feb. 10 - 5 p.m., Theatre E, Tupper...**Ferritin: structure, biosynthesis & role in iron metabolism.**
- Feb. 11 - 9 a.m., 6th floor conference room, IWK...**Protein metabolism & their clinical implications.**
- 12:30, seminar, room 2, Tupper...**Peptide hormone biosynthesis.**
- 4 p.m., Friday-at-Four, lecture...**Diet, food supplies & evolution of man.**

Offshore Oil-Exploration & Exploitation, a two-part discussion in the Politics of the Sea class, Feb. 8 & 15, 7 pm, Rm 4410, Killam Library. For information, 424-6494.

GEOLOGY FILM SCREENING

"The City That Waits To Die"
Feb. 9, 12:30 pm, R. 117, Dunn



DALHOUSIE CULTURAL ACTIVITIES PRESENTS

Ooooh-Whatta Way to Wile Away the Winter...

Winter/Spring 1977

At the Arts Centre...

Saturday, Feb. 5, 8:30 p.m. - Ernesto Bitetti,
classical guitar

Sunday, Feb. 6, 3:00 p.m. - Valteau & Tritt

7:00 p.m. - "The Haunting", 1963 film

9:00 p.m. - "Malpertuis", 1972 film in
French

February 8, Art Gallery - Student, Staff & Alumni
exhibition opens

Wednesday, Feb. 9, 8:30 p.m. - The Richards Quintet

Friday, Feb. 11, 8:30 p.m. - Marion Williams, gospel
singer

Sunday, Feb. 13, 8:00 p.m. - "A Boy and His Dog",
1973 film

Tuesday, Feb. 15, 8:30 p.m. - Dalart Trio

Ticket Information: 424-2298