

# UBC REPORTS

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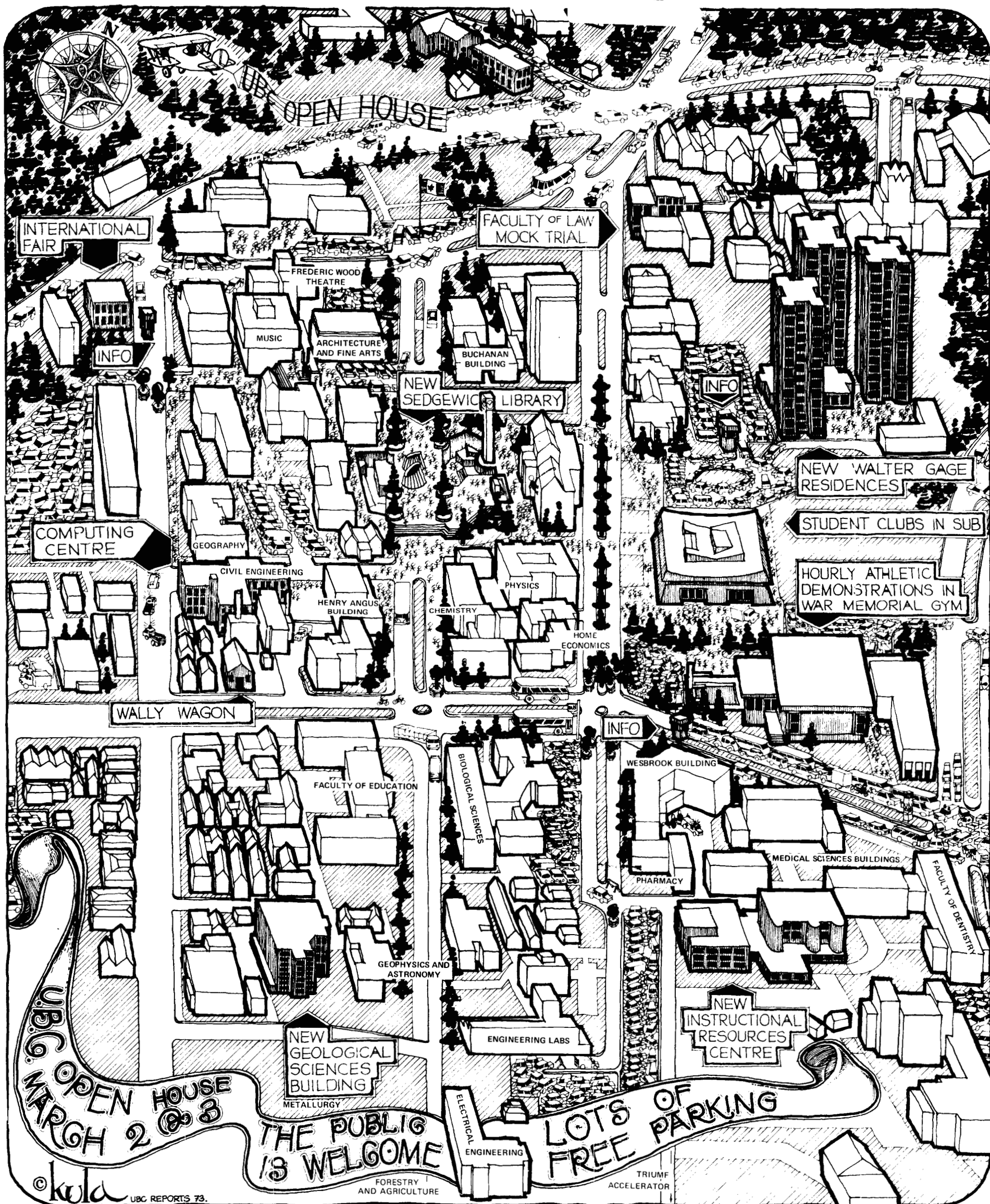
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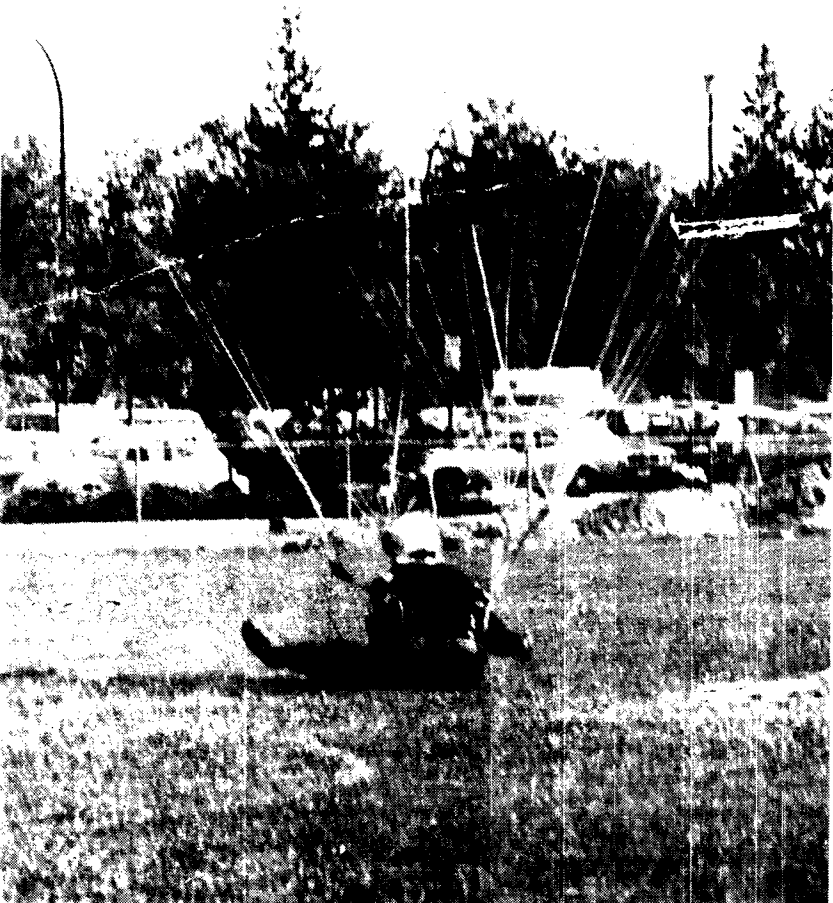
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# have a good day



*UBC's award-winning urban vehicle (above) — nicknamed the Wally Wagon to honor UBC's President, Dr. Walter H. Gage — will be on display March 2 and 3 in the laboratories of the Department of Mechanical Engineering on University Boulevard (see front cover map) during Open House 1973. Arriving on campus for Open House by parachute (left) is not recommended for anyone but members of the UBC Skydiving Club, who will display their skills for onlookers during the triennial, two-day event. Pictures by the UBC Photo Department.*



The Walrus stood in uffish thought  
And squinted mightily;  
His flipper slowly circled  
The dates March 2 and 3.  
"I must remind the Carpenter,  
It's Open House at UBC."

"One problem," said the Carpenter,  
"There's such a lot to see."  
The Walrus cleared his throat and said,  
"But all of it is free.  
And that I have upon  
The best authority."

"I'm told," the Carpenter intoned,  
"Since nineteen seventy,  
They've done a cunning thing and built  
A subterranean library.  
Not to mention something new  
For Geology."

"In the new Gage Residence, they say,  
Students live communally.  
And what is all this talk I hear  
About the IRC."  
The Walrus wept, "It is too much  
To contemplate," said he.

"Perhaps," the Walrus said, "they'll make  
The Carillon to ring.  
And all of us can stand around  
And sing and sing and sing."  
The Carpenter said, "I'd rather watch  
Each one do his thing."

"That's what it's all about, you know,"  
The Walrus said with glee.  
"The faculty and students  
Can let the public see,  
How its money's being spent,  
Out at UBC."

We have to admit that the Walrus and the Carpenter do, indeed, have a problem: facing them on March 2 and 3, when the University will stage its triennial Open House.

Namely, how to take in, in a mere two days, the displays and exhibits that will be staged by students and faculty members in UBC's 12 Faculties, which are, in turn, made up of some 100 Departments.

Add to this the demonstrations that will be put on by a myriad of student clubs which specialize in everything from skydiving to musical comedy and you have a giant smorgasbord of activity, both intellectual and non-intellectual.

One sensible way of taking part in Open House is to decide in advance that you're going to visit only those new buildings which have been built since the campus was last thrown open to the general public in 1970.

Such a decision will enable you to visit buildings valued at more than \$30,000,000, while at the same time viewing research and teaching facilities in such areas as medicine, geology, pharmacy, the biological sciences, nuclear physics and physical education as well as other important UBC developments in the shape of library buildings and student residences.

A stop at the new Instructional Resources Centre (the "IRC" mentioned by the Carpenter above) will enable you to see one of the most advanced facilities anywhere in the world for the training of students in the health

by jim banham,  
editor, ubc reports



*Supergraphics that grace the walls of UBC's recently-completed Sedgewick Library (left), which has been built under the Main Mall, will provide Open House visitors with a minor psychedelic experience. UBC gymnasts (above) will display their talents in the University's athletic facilities. Sedgewick Library picture by Ray Lum.*

sciences. The IRC is, of course, part of a cluster of buildings known as the Health Sciences Centre, a major development that is designed to provide integrated teaching and research facilities for students and faculty members in medicine, dentistry, nursing, pharmacy and rehabilitation medicine. In short, you could spend your whole visit exploring only this one complex.

We suggest, however, that you also try to visit the new Geological Sciences Centre where, once you get by the dinosaur that inhabits the building's main lobby, there will be a variety of displays and demonstrations to peruse.

Farther to the north you'll be able to go underground and wander through the recently-opened Sedgewick Library, which contains some 150,000 books and seating accommodation for about 2,000 students. The supergraphics that adorn the walls make it a minor psychedelic experience, as well.

To the east of the new Library is the new Walter Gage Residence, where groups of six male or female students live communally, sharing one of four quadrants on each of the 16 floors of the high-rise towers. Some demonstration rooms in the towers will be open and students will be on hand to guide visitors.

No matter how intent you are on seeing what's new at UBC, your peripatetic wanderings are likely to encounter numerous digressions. Between the buildings mentioned above there are, of course, other buildings

and you may find your attention taken up by everything from developments in agricultural engineering through environmental control to the presentation of an ancient Roman play in the Buchanan Building by students and faculty members in the Classics Department.

There will, of course, be other digressions of a non-intellectual nature.

Wandering in the vicinity of the Main Library you're likely to see a member of the student Varsity Outdoor Club rappelling down the stone face of that building as part of a mountaineering demonstration. Members of the UBC Skydiving Club plan to invade the campus regularly by parachute, landing on the playing field adjacent to the Student Union Building, which will be another hive of student club activity, encompassing everything from a baby-sitting service to a typical Chinese garden, constructed by the Chinese Varsity Club.

If your feet get tired you can do one of two things. You can get everything from a cup of coffee to a full-course meal in any one of the cafeterias and snack bars dotted around the campus or you can just sit and listen to the talk.

Talk, as you're probably aware, is one of the mainstays of life at a university and UBC is no exception. There will be an amazing variety of short lecture-demonstrations throughout the University, of course, but there are a couple of longer events that you may wish to sit in on. The UBC Alumni Association is

sponsoring a debate on the resolution that "Formal University Education is Obsolete" in the Conversation Pit of the Student Union Building beginning at 11 a.m. on March 3, and that evening a UBC astronomy professor, Dr. Michael Ovenden, will tell you how he "re-discovered" a lost planet that once circled our sun and exploded some 16,000,000 years ago. He speaks in Room 106 of the Buchanan Building at 8:15 p.m.

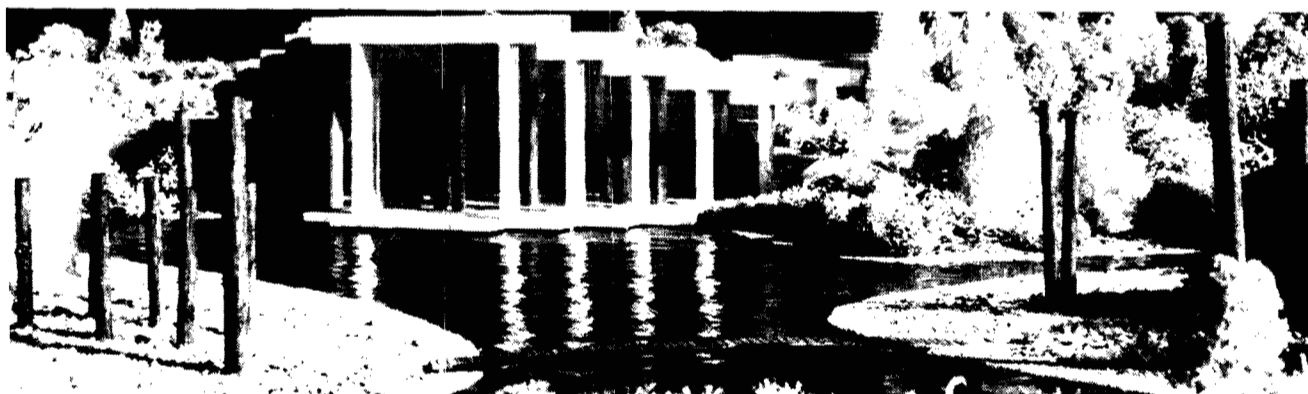
If you're a graduate of UBC the Alumni Association hopes you'll drop in at their headquarters at Cecil Green Park for a reception beginning at 2 p.m. on March 3.

And if you are curious about the shape of things to come at UBC you should plan to visit the Ponderosa Cafeteria building on the West Mall, where models of UBC's planned Museum of Man and the Botanical Garden will be on display. At this same location a host of people representing the Registrar's Office, the Dean of Women's Office and the Centre for Continuing Education will be on hand to tell you how you can become a student again.

There'll be lots of student guides on hand to tell you how to get to areas that interest you and there'll be a special issue of the student newspaper, *The Ubyssy*, available to give fuller details of what's available to see and hear.

Oh, yes — the hours. The campus is open from 3 to 10 p.m. on Friday, March 2, and from 10 a.m. to 10 p.m. on Saturday, March 3.

Have a good day.



*Model of UBC's new Museum of Man to be constructed on the UBC campus will be on display in the Ponderosa Cafeteria at the corner of University Boulevard and the West Mall during Open House.*

# RESOURCE BUILDS

Mr. Frank Kearney, the general manager of one of B.C.'s largest real estate and development firms, sliced off a generous chunk of his medium-rare steak and gazed reflectively around the small group of company executives, UBC faculty members and students who had joined him for lunch.

"People," he said. "Our biggest problem is getting good people. You have no idea how much time and energy this company expends trying to find the right people for the jobs that we have to offer. You'd think it would be easy, but it isn't."

"We are looking to the University of B.C. and the Faculty of Commerce and Business Administration in particular as a source of supply of bright young people who are interested in careers in real estate, in everything from administration to appraisal, land management and selling.

"But they must understand that a university degree is just a beginning. They still have a lot to learn in this business, or in any other for that matter."

Half a city away, in his book-lined sixth-floor office in the Henry Angus Building on the University of B.C. campus, Dean Philip H. White, the man with the ultimate responsibility for producing people for Mr. Kearney's workaday world, reflected on the relationships between his Faculty of Commerce and Business Administration and the community.

## TWO BROAD AREAS

He sees two broad areas of University involvement with businessmen. One is the responsibility for providing education and training programs for persons already established in their careers and the other is to find ways in which the business community can be used more effectively as a resource for both students and faculty in the planning and teaching of undergraduate and graduate programs.

In doing so, Dean White runs into the classic "damned if you do, damned if you don't" situation.

"If you get too involved with downtown business the University community says you are not paying sufficient attention to academic standards. But if you don't try to establish a dialogue with businessmen you are criticized for living in an ivory tower, out of touch with the requirements of the business community," he said.

Somewhere in between there is a happy medium, or should we say an *unhappy* medium?

"I sometimes think that the equilibrium point for a Faculty such as ours is for the University community and the business community to be five per cent dissatisfied with what the Faculty is doing," Dean White added.

As it heads towards this equilibrium point, the Faculty is exploring new ways of opening up channels of communication with businessmen.

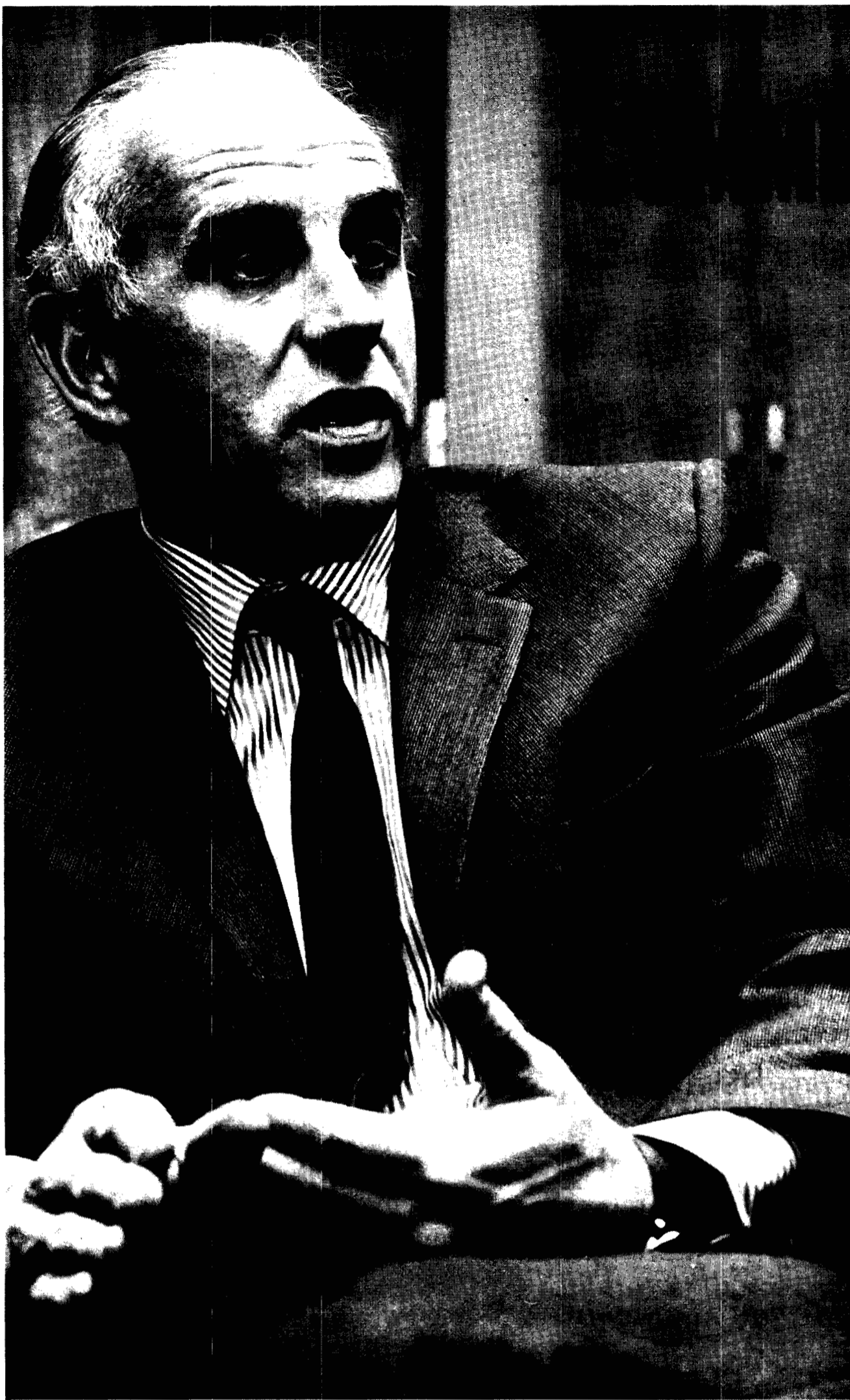
Luncheons, such as the one referred to above, are being scheduled on 29 Thursdays throughout the academic year. The luncheons are hosted either by the Faculty or by participating business firms and are attended by three students, three businessmen and two faculty members.

"They are proving a very useful device for the participants to exchange ideas about the things that are going on in the business world and at the University," the dean said.

The Faculty's Undergraduate Curriculum Review Committee invited businessmen to make submissions to it. "We were interested in hearing what businessmen have to say about our curriculum and what ideas they might have about revising it," says Dr. Michael Goldberg, chairman of the committee.

The Executive Programs Division of the Faculty is expanding its offerings beyond non-credit short courses, seminars and institutes to programs such as the "Distinguished Discussion Series," designed to bring outstanding businessmen, politicians and academicians to Vancouver to speak on topics of interest to businessmen.

Each of the other divisions of the Faculty is involved in some form of communication with the particular area of the business community that it serves. Two examples are an advisory committee of businessmen in the Finance Division and a close relationship with profes-



**DEAN PHILIP WHITE**, pictured above, head of UBC's Faculty of Commerce and Business Administration, steers a difficult course between the goal of improving academic standards in his Faculty on the UBC campus and devising ways in which members of the business community can be utilized as a resource in planning the curriculum and teaching students. His philosophy is that the sought-for point of equilibrium may exist when five per cent of both the University and business communities are dissatisfied with what the Faculty is doing.

# BRIDGES WITH BUSINESS WORLD

sional associations by members of the Division of Accounting and Information Systems.

Dr. Whatarangi Winiata, associate professor in the Finance Division of the Faculty, says the liaison committee between his division and businessmen has been active for two years.

"This kind of communication is, we believe, essential, but the form that it takes should be examined very closely and this is what we are in the process of doing," he says.

The committee was originally set up to provide two-way communication between faculty members and businessmen. "The idea was to give businessmen some idea of what we were doing while at the same time we obtain feedback in areas like curriculum development, research, visiting lecturers and general public relations."

Meetings have been held two or three times a year with a guest speaker or discussion groups on selected topics but, adds Dr. Winiata, both businessmen and faculty members are concerned that the committee has not lived up to its original expectations.

"Some members of the Faculty would like to see it continued in its present form, others would like to see it replaced with small working groups that would deal with specific problem areas."

The Division of Accounting and Information Systems has a close liaison with professional associations in business. The Division has an advisory council, made up of faculty members and chartered accountants, which meets four or five times a year. A second advisory group involving faculty and representatives of three professional accounting associations — chartered accountants, certified general accountants and registered industrial accountants — has also been formed.

While the primary reason for such advisory groups is to plan continuing education programs for professional accountants, the contacts give faculty members an opportunity to find out what is going on in the "real world" of business, says Mr. C.L. Mitchell, chairman of the Division of Accounting and Information Systems.

"The analogy of the business world being our laboratory is quite frequently used. We can use the experiences of the businessman to obtain empirical evidence and test hypotheses."

Mr. Mitchell says the Division has not, in the past, sought formal advice from professional associations on course content. "However, this is being done on an informal basis. We might discuss with tax accountants, for example, what they would like to see offered in a course. We then examine our own offerings to see if there are any gaps. We then look at those gaps to see whether or not they should be filled.

"We then ask ourselves whether or not the material that is included in their body of knowledge has a conceptual content that permits generalized principles to be established. If that body of knowledge is so technical or specialized that it cannot be generalized then we think it is better for the student to acquire this knowledge within the profession."

## ESTABLISH CONTACTS

Mr. Mitchell says faculty members within the Division hold memberships in such organizations as the Institute of Management Science, the Society for Management Information Systems, the Data Processing Management Association, the Financial Executives Association, the Estate Planning Council, the Canadian Tax Foundation and so on.

"These memberships permit a two-way interchange. We hope that we can make some contribution to the organization's development through informal discussions, participation in committees and so on. Our faculty members in turn establish valuable contacts that can be of assistance, for example, to students in doing research and finding employment as well as keeping our faculty members up-to-date on current business practice. We sometimes find, through such contacts, that business practice is in advance of some of the theory that we teach."

Dr. Goldberg, an associate professor in the Faculty, is involved in building up contacts with the business community for an entirely different reason.

As chairman of the Faculty's Curriculum Undergraduate Review Committee he went to great lengths to seek out the views of businessmen on what they would like to see included in the curriculum.

The report, completed in January and now before the Faculty for study, called for closer ties with what it termed the "real world." It suggested that this could be accomplished through an internship program in business and industry for students; greater emphasis on

## Research Funds Increase

Research funds granted to members of the Faculty of Commerce and Business Administration have increased dramatically over the past seven years — from \$12,000 in 1966-67 to \$163,443 in the current academic year.

Fifty-two members of the total faculty of 80 have been allocated research grants for 29 different projects. Grants range from a few hundred dollars from UBC funds to a \$61,580 federal Department of Industry, Trade and Commerce grant shared by five faculty members.

Sources of research grants include: the Canada Council, the Canada Transport Council, the Defence Research Board, the National Research Council, the Department of National Health and Welfare, Central Mortgage and Housing, plus a number of B.C. agencies and associations.

UBC's Research Administrator, Dr. Richard Spratley, says one of the measures of the academic quality of a Faculty is the amount of research money that its members receive.

"When you consider the increasing competition for research funds on a country-wide basis, UBC's Faculty of Commerce and Business Administration has been doing extremely well," he says.

Total research support in the past seven years is as follows: 1966-67 — \$12,000; 1967-68 — \$13,393; 1968-69 — \$52,253; 1969-70 — \$90,224; 1970-71 — \$157,432; 1971-72 — \$142,555; 1972-73 — \$163,443.

The Faculty is also the recipient of a \$350,000 grant from the Canadian International Development Agency to develop new programs in the Division of Accounting at the University of Malaya, Kuala Lumpur. This project will extend over 4½ years.

application and experience as opposed to theory and concepts; appointment of businessmen as "clinical professors" or businessmen-in-residence; greater use of business people for research purposes; and encouragement of year-round and night-time operation of the University to interest working people in taking courses and interacting with students and staff.

"The lack of views of business people represented one of the great gaps in previous policy discussions in this Faculty," the report said.

Stereotyped images of businessmen being interested solely in efficiency and profit were often dispelled during meetings that the Curriculum Review Committee held with businessmen.

One such meeting, late one afternoon in the Faculty Club, sparked spirited discussion on creativity. One of the businessmen present criticized young graduates for being insensitive to the creativity of business.

He added: "A place must be found somewhere in the curriculum to discuss the 'creative challenge' of business. There is far too much talk about people in business being interested solely in making money and too little talk about the creative faculties that it satisfies."

This increasing interaction with the business com-

munity comes at a time when UBC's Faculty of Commerce and Business Administration has established itself as one of the leading business schools in Canada.

Listed among its faculty members are men who have distinguished themselves in the fields of labor relations, transportation, finance, accountancy, business and politics.

The Faculty's graduate program has been accredited by the prestigious Association of American Collegiate Schools of Business. Such accreditation — the only one given outside of the United States to date — is given only after an exhaustive examination of the program offered. Another measure of the success of the graduate program is that it is attracting an increasing number of students from other parts of the continent and the world.

While enrolment in most other Faculties on campus has levelled off or shown a slight decline, the number of students in the Faculty of Commerce and Business Administration in 1972-73 has jumped by nearly 15 per cent over 1971-72 to a total of 1,380 students for the current Winter Session.

The Faculty's graduates are among leaders in the business and industrial world. To name a few: Mr. Art Phillips, Mayor of Vancouver; Mr. Taferra De Gueffe, Governor of the Bank of Ethiopia; Mr. W.R. Clerihue, President of Chemcell; Mr. Richard Higgins, President of Canada's newest bank, The Unity Bank; Mr. Donovan Miller, President of the Canadian Fishing Co. Ltd and a former member of UBC's Board of Governors.

An eminent U.S. business educator and visiting professor during the fall of 1972 in the Finance Division of the Faculty, Dr. Alexander A. Robichek, professor of finance at the Graduate School of Business at Stanford University, says he was impressed with everything he had seen during his stay at UBC.

"The faculty is a well-diversified group and there are people who are doing some extremely interesting research in areas such as investment, money capital markets, financial institutions and international finance," he says.

## BRIGHT FUTURE

"And, potentially, the Faculty has a very bright future because enrolment in all of the major U.S. business schools is levelling off and there is not the competition for new faculty members that there has been in the past."

The Faculty of Commerce and Business Administration, one of 12 Faculties on the UBC campus, is internally organized into eight divisions, covering accounting and management information, finance, international business, management science, marketing, organizational behavior and industrial relations, transportation and utilities and urban land economics.

The Faculty offers undergraduate studies leading to a Bachelor of Commerce degree and a graduate program leading to a Master of Business Administration, Master of Science in Business Administration and Doctor of Philosophy. The Faculty also offers a two-year Licentiate in Accounting program.

The Faculty also runs a variety of professional and diploma courses in accounting, banking, urban land economics, management, marketing and sales management.

The Executive Development Program offers a comprehensive series of workshops and seminars designed to give businessmen opportunities to keep up with new developments in business theory and practice.

The Faculty had its beginnings in 1916 when the Vancouver Board of Trade established a committee to meet with representatives of the young University of B.C. to discuss the possibility of setting up a course leading to the Bachelor of Commerce degree.

A year later the UBC Senate approved a recommendation that a commerce course be established "subject to the provision of the necessary funds." Despite repeated attempts to get the program started, those funds were not forthcoming until 12 years later, when courses leading to the B. Com. degree were

Please turn to Page Nine  
See GENERAL EDUCATION

**S**UPPOSE you are the Minister of Health in a dictatorship.

You have a budget of \$100,000.

For that money you can remove 170 acutely-infected appendixes or repair 40 diseased hearts by open-heart surgery.

Which would you choose?

Would you favor appendectomies on the grounds that heart disease is an ailment of middle age and people who suffer from it have lived at least half their lives anyway?

Or would you spend the money on open-heart surgery because middle-aged heart-disease victims have contributed a couple of productive decades or more to society and have "earned" their operations?

Or would you simply toss a coin, remembering that open-heart operations are done on children with congenitally malformed hearts and that many middle-aged people suffer from appendicitis.

If you could afford only one operation for lung cancer and two patients were eligible, one who ignored all warnings and smoked all his life and the other who gave up smoking, which one would you give the operation to?

These aren't academic questions. They are the kind of problems society is just now beginning to face. They are problems of which diseases are treated and which are not, which community gets the new medical centre, who lives and who dies.

The process has begun of arranging the almost endless list of our health demands into some kind of priority. Many of low priority will simply go begging.

This kind of selection is an exquisitely sensitive subject. It's an activity most people find repugnant. Many of us would rather not know that it goes on. Anyone who takes the activity seriously is confronted with a crushing weight of doubt.

Who should decide who is treated and who isn't? The public? The health professionals? The government? And if that isn't controversial enough, how should the choice be made?

These are fearful questions. They are now being asked because the entire health care machine is being examined nut by nut and bolt by bolt for the first time in North America. It's being taken apart because many people are dissatisfied with it. The old model has outlived its usefulness, many people say, and it's time for a new one. But the job isn't as simple as that. Many health experts can't even agree on what parts of the old machine should be examined or what to examine them with.

How do you measure good health care, whether you're getting the biggest bang for your health dollar? By the number of doctors? By the number of people occupying each hospital bed each year? Does good health care mean more people in hospital beds, or does it mean fewer? This vagueness allows both defenders and critics of the present health system to argue about "the quality of health care" with impunity.

You might well ask how we got into this mess. A guess might be that our legislation hasn't kept pace with technological and social changes.

Traditionally, money has been the most important factor in deciding who gets medical treatment and who doesn't. But attempts have been made throughout history to ensure treatment for those who couldn't afford it. Many towns in Europe in the Middle Ages hired doctors to treat citizens regardless of their ability to pay. The demand for medical treatment reached such proportions in France in 1375 that the king allowed quacks to practice because physicians and surgeons were too expensive for most people. And in 1542 the "Quacks' Charter" in England gave quacks the same privileges for the same reasons.

**A** PART from the ability of patients to pay, another dampening factor on the demand for medical treatment in the past was the little help doctors could give the sick. One of the first examples of medical statistics is a report of an experiment carried out in a European hospital before the arrival of modern medicine. Patients entering the hospital with pneumonia — then a common cause of death — were divided into three groups. The first group received phlebotomy or were bled, the second were given emetics to make them vomit and the third weren't treated at all. Phlebotomy and emetics were common treatments. About 20 per cent of the phlebotomy and 21 per cent of emetic patients died compared with seven per cent of the pneumonia victims who were left alone.

The tremendous power of modern medicine is relatively recent. Up until the beginning of this century medicine could do very little for the sick. People went to doctors when they were acutely ill and seldom before. Hospitals were places where people died.

Today we all know how effective modern health treatment can be for many ailments, including some of the most complicated. Technological advances have placed some of the most stubborn diseases within the grasp of treatment, though sometimes at staggering costs. Heart transplants are just one dramatic example of the technological and expensive feats of modern medicine.

Through prepaid insurance programs and government financing of hospitals, health care is available to virtually everyone. Money, the old crude regulator of who gets

## By Peter Thompson, UBC Reports Staff Writer

In an era of escalating health costs and the emergence of new patterns of health care, UBC has pioneered the concept of the health team, in which health professionals work together in a co-ordinated and efficient division of labor. And to meet the demands of the future, a team of academics and health professionals is working to anticipate the health needs of the community. The work of three members of this team is described in the article on these pages.

# UBC's Role in the Health Care Crisis

treatment, is no longer a factor controlling individual demand, though it now may be placing constraints on the supply of health care.

The result is a literally inexhaustible demand for health care. People no longer see a doctor when acutely ill. They want treatment when slightly indisposed or a check-up when well. This burden of demand has been thrown on a health care system that has seen little change recently. At the heart of the system are doctors — expensive to train and pay and in short supply as they have always been — and hospitals, which are costly to operate.

The demand for health care has sent health costs through the roof. As a result governments, which control health care financing in Canada in the public's name, are beginning to demand a halt to escalating costs. In the years between 1955 and 1968 the cost of providing health care to Canadians increased at an average rate of about 11 per cent a year. In 1968 the money spent on health care in Canada was 6.6 per cent of the gross national product. Almost 70 per cent of that money came from government sources. Last year the increase in health costs was estimated at close to 13 per cent over the previous year.

A report issued in 1971 said that if the annual rate of increase for health services remained at 10 per cent, health spending would account for 7.4 per cent of the gross national product by 1981. More than 90 per cent of the money would come from government. The Economic Council of Canada has gone as far as to predict that if present rates of increase continue, health care and education will consume the entire gross national product by the turn of the century.

The blame for this falls on everyone's shoulders. On government's for encouraging the public to think of health care as "free." On the public's for irresponsibly demanding elaborate, expensive attention for sometimes trivial complaints. And on health professionals and others in the health industry for tolerating an inefficient system. Some doctors, for example, group many of their patients together in a hospital so that they can easily treat as many as possible in the same building, an efficiency to their practice but an inefficiency to the health system and an expense to the taxpayer.

A tremendous amount of confusion surrounds growing public interest in what's wrong with our health

system. Among the attacks and defences of the system that have splashed across newspapers in recent years, a number of themes recur, some of them accurate, some of them unfair.

**I**T'S OFTEN pointed out that the infant mortality rate in Canada and the United States is worse than in about a dozen other industrialized countries. And the death rate of adults from some diseases is also higher than in some other parts of the world. But those who defend the present system say that some of the statistics are misleading. It's wrong, for example, to compare Canada or the U.S. to Holland or Sweden, they say. Each uses different statistical methods. Besides, North Americans are heterogeneous



and dispersed across a vast area. Many European countries are compact and their populations tightly organized so that it is easier to provide good health care on a large scale.

Others point out that North Americans probably care less about their health than some other people. We tend to lead indulgent, passive lives and suffer the results. It simply isn't true that we value health above everything else. We smoke, over-eat, eat the wrong foods. We trade off health against other things all the time.

Our health system is often compared with a business to dramatize its shortcomings, again unfairly. Businesses, it's argued, are organized to give maximum service to the consumer in the most efficient way. There's feedback from consumers that affects the location of outlets, the services offered and the hours of business. But the health industry is little regulated by consumer preferences. In the U.S. about 10 years ago 80 per cent of cardiac operations were done in less than 100 hospitals, though about 800 hospitals were staffed and equipped to perform them. As a result, the expensive equipment went to waste and so did the staff since a cardiac team must work to keep up to the mark. It's also been pointed out that the toy and baby wear industries pay more attention to and respond more quickly to predictions of future births than the health system.

**C**OMPARING our health system to a business is misleading. In the classical free enterprise system that businesses are supposed to operate under, the consumer knows what he is buying and how much he's paying, and the producer tries to maximize his profits in competition with other suppliers. This situation doesn't apply to our health system.

Most of us, as consumers, know virtually nothing about medicine. We just don't know whether we're getting our money's worth or not. We don't comparison-shop for an appendectomy. And once you've had an appendectomy the experience can't be used as a guide for judging a second. Apart from not knowing what we're getting, we don't even know how

much we're paying. How many of us know the cost of a routine visit to a doctor, let alone an operation?

A monumental difference between our health system and a business is a lack of incentives. In fact, a case might be made that there are incentives in our health system to become inefficient.

What's the incentive to the public not to pick up the phone and demand health service on a Saturday evening?

What's the incentive to a doctor to prescribe a drug by its generic rather than brand name? Or to combine with other doctors into a clinic which could use less highly-paid health professionals, such as nurses and dietitians, who could take over some of the doctors' work? Does the patient or the doctor suffer — financially — if the patient stays in hospital seven days when he could have gone home after four? Does a hospital administrator get a raise or hospital trustees more prestige by running a smaller, efficient hospital than a large one? Which



government is so idealistic that it would refuse the political mileage that comes from misguided voters when an elaborate hospital is built? (Some of these ideas have been expressed by Dr. Robert Evans, assistant professor in UBC's Department of Economics).

For the past few years concern about the cost and efficiency of our health system has been limited to a small circle of health professionals. But recently it has bubbled over into the public. At the beginning of this year Dr. Richard Foulkes, head of a special commission set up by provincial Health Minister Dennis Cocke, asked for public submissions on B.C.'s health system. The commission has been swamped with more than 1,000 letters and briefs, most of them critical.

This turmoil and self-examination was predicted more than a decade ago by the University of B.C.'s Co-ordinator of Health Sciences, Dr. John F. McCreary. In what must have seemed a terrible gamble at the time, he committed health sciences education at UBC to an idea that was then revolutionary but is now received as a conventional wisdom.

He foresaw that whatever changes would be made to the old health care model, at least one theme would be constant. Any new health system would demand a more efficient sharing of work between health professionals. The mushrooming technology that has marked the success of modern medicine has also introduced more than two dozen new health professions. Lab technicians, physiotherapists, nutritionists and a host of others. Their training has often been far removed from the schools of nursing and medicine and the result is that many of today's health professionals are unfamiliar with each other's abilities and background, and apprehensive about delegating responsibility to a member of another group whose strengths and weaknesses they don't know. At UBC, for example, the School of Nursing is in the Faculty of Applied Science and nutrition is taught in the School of Home Economics in the Faculty of Arts.

Dr. McCreary began pioneering the idea of the health team — health professionals working together in a co-ordinated and efficient division of labor. To do this the mutual suspicions of different professional groups had to be broken down. The best place to do this was during the training of health professionals before the rigor mortis of professional loyalties had a chance to set in. Up until then UBC's new medical school was

committed to building a teaching and research hospital on campus as part of the complex of buildings dedicated to training medical students as many other medical schools had done. Dr. McCreary transformed the plans for the teaching and research hospital and its associated buildings to the integrated teaching of students in nursing, rehabilitation medicine, dentistry, and pharmacy as well as medicine so students could function more easily as a team in professional life. In this way UBC would be in a position to supply health professionals who would meet the demands of the new health care system, whichever model was eventually adopted.

The term given to this new kind of teaching centre was the Health Sciences Centre. The idea has since spread across North America and to other parts of the world. Plans for UBC's Health Sciences Centre were the major topic of the first meeting of the teaching hospital study group of the International Hospital Federation Congress held in Stockholm in 1966. The same plans had been presented to the Board of Governors of the University of Western Ontario in London two years before. Ironically, that University's health sciences centre opened last year. Construction of the core unit of UBC's teaching and research hospital, the final unit in UBC's Health Sciences Centre, has yet to begin.

So convinced were Canadian authorities of the soundness of Dr. McCreary's plan that the Pearson government agreed to set up a special fund in conjunction with UBC to help finance construction of UBC's Health Sciences Centre. The fund eventually grew to half a billion dollars and included assistance to universities in other provinces wanting to set up similar health sciences centres.

Dr. McCreary has gathered around him a team of people who like himself are trying to anticipate the health demands of the community. The work of two members of the team is described in the balance of this article.

One team member is Dr. John Milsum, who came to UBC in 1972 to assume the new Imperial Oil Chair of General Systems, the only chair of its kind in North America.

The chair was set up through the combined efforts of UBC, Dr. Milsum, and a senior vice-president of Imperial Oil, Mr. Ronald S. Ritchie, who is a member of the prestigious Club of Rome which received wide public attention for its prediction, using general systems theory, of the collapse of industrialized society in the next century if present rates of growth continue.

Dr. Milsum, who is also a professor in UBC's Department of Health Care and Epidemiology, is one of the few "general systems" experts working in the health area in Canada and the only one in B.C. General systems is something most of us know nothing of and even after long explanations many of us are still bewildered. Though general systems is an idea easy enough to understand, it takes much longer to feel comfortable about it, to feel familiar with it.

It doesn't help to be told that general systems or cybernetics is the science of control and communication in man and machine. To most of us such a statement reeks of 1984. Perhaps the best way of describing general systems is to trace Dr. Milsum's association with it. He did all of his post-graduate education at the Massachusetts Institute of Technology in the then budding area of control engineering. A simple example of control engineering is power steering in a car. A little bit of force by the driver is magnified so that the car wheels turn with ease. More typical examples would be the "steering" of a 300,000-ton supertanker by the helmsman who communicates with the massive rudder via a computer, or of an unmanned moon vehicle, where the "driver" in mission control centre on earth controls the vehicle through a computer and radio communication between the earth and the moon.

This type of control is always of the "closed-loop" type. There is always a device which measures the actual performance of the vehicle and compares it to what performance should be, so corrections can be made. This feedback is continuous. The more complicated the system to be controlled, the greater the use of computers.

Control systems can also be applied to the human body. All our movements can theoretically be described in terms of control engineering. Picking up a telephone receiver and putting it to your ear is a closed-loop action. But some body activities are "open-loop." A dramatic example of this is expert piano playing. Often a pianist will realize he is about to play a wrong note a note or so in advance. But there is nothing he can do about it. He is playing so fast that his brain has programmed his fingers and although he has received feedback information that a wrong note is about to be struck, he doesn't have time to send out a correction.

Dr. Milsum worked for the National Research Council in Ottawa from 1950 to 1961. He took a study leave from the NRC between 1954 and 1957 to attend MIT. After returning from MIT in 1957 he became head of the NRC's analysis section in the Division of Mechanical Engineering, which is concerned with developing applications of various types of computers. In 1961 he went to McGill University as the first Abitibi professor of control engineering in the Department of Electrical Engineering and in 1966 became the first director of McGill's BioMedical Engineering Unit.

Control theory and general systems can be applied to many other areas — the operation of a company, performance of a government, organization of an ecological system. By voting a party into power, for example, the public chooses a policy or program by which it wants to be governed. The government tries to implement that program and gets feedback through editorials, by-elections and whatnot on how it's doing, and tries to make corrections if necessary. If the ship of state is steered incorrectly, the public chooses another party and program at the next election.

General systems has become an important management tool. Dr. Milsum's first priority will be to apply systems techniques to the planning and operation of the teaching and research hospital the University plans to build on campus as part of the Health Sciences Centre.

He's leading a pilot project to tackle one of the most serious problems of our health system — inefficient use of information. It's been estimated that between 25 and 30 cents of every dollar spent in our hospitals is swallowed up in paperwork. The pilot project would involve installing computer terminals in UBC's Psychiatric Unit and the new Community Health Centre on campus and possibly at VGH.



## EACH TERMINAL

would be linked to a central computer and could be used by health professionals who would be given instant access to the latest details of the patient's record. When a physician ordered a drug, for example, the computer would automatically forewarn the nurse on the patient's ward, print out the prescription in the hospital pharmacy, and charge it to the patient's account. The computer could be programmed to feed back to physicians the latest information on drugs and could also automatically forewarn of possible incompatibility of one prescribed drug to another.

"Computers have been applied very effectively in most large industries," Dr. Milsum said. "For example, many airlines now have computerized reservation systems so that every passenger agent works in front of an individual computer terminal.

"There's a great difference, of course, in that health care deals solely with human beings. Nevertheless, much computer technology can be applied to health care, providing the system is designed with care and sensitivity."

His broader goal will be to discover ways of getting optimum performance out of the health care system. He says researchers have already carried out some preliminary work on deciding where the health dollar should be spent.

"One system worked out in the U.S. is called the Seriousness of Illness Rating Scale," Dr. Milsum said. "A number of doctors and members of the general public were given a list of illnesses and asked to rate their seriousness compared with a peptic ulcer which was given a rating of 500. They had to choose a number for each disease, a higher number for the more serious and a lower number for the less serious.

"It turns out that the medical people and the consumers both scored the ailments almost identically."

This type of information makes it easier to choose priorities. For example, a high-number disease that costs little to treat might be given priority over a less serious illness that is expensive to treat.

Another system uses a scale between one and zero. Zero is death and one is full health. Doctors and the public were asked to rank a list of diseases between zero and one, ignoring the fact that suffering from some diseases could literally be worse than death. And they were asked to rate how effective treatment would be.

"For example, suppose the disease is acute kidney failure and it's been rated as .1, very serious. But with renal dialysis — hooking the patient up to an artificial kidney two or three times a week — the health rating by



Pictures by UBC Photo Department

Dr. John Milsum, who holds the Imperial Oil Chair of General Systems at UBC, is applying general systems techniques to the planned research and teaching hospital in UBC's Health Sciences Centre.



Mr. Lloyd Detwiller, administrator of UBC's Health Sciences Centre, is one of the best-known authorities in North America on alternative ways of providing and financing health care.



Dr. John F. McCreary, former Dean of Medicine and now Co-ordinator of Health Sciences at UBC, pioneered the concept of the health team that is being developed in UBC's Health Sciences Centre.

## HEALTH CARE CRISIS

*Continued from Page Seven*

physicians and consumers is .7. The treatment by renal dialysis could be compared with transplanting an artificial kidney into the patient, which would bring him up to, say, .9.

"You can quickly work out cost analysis to find out which is the optimum treatment in terms of the amount of money providing the most benefit."

Studies of this type can help bring about more efficiency in our health system. But what about the person who doesn't want to leave the responsibility for his health in the hands of others? Suppose, for example, that someone feels he runs a greater than normal chance of inheriting a genetically-determined disease that is given low treatment priority. Would he be able to buy extra protection?

Or take the case of a person who's simply willing to put aside more of his pay cheque for health care for himself and his family than most people in the community. Would a health system, geared to the standards of the community, be able to provide such a family with a higher level of service?

After all, we don't all spend the same proportion of our earnings on clothes or food or shelter. Some of us prefer to drive an expensive car and live in an apartment, rather than pay off a house mortgage and drive an economy import. Similar individual fluctuations apply to the small part of our earnings we devote to health care. None of us plans to be sick and most of us tend to spend as little as possible on health care. Treatment of a chronically stiff shoulder would come second to a new outboard motor with many of us. But should the person wanting and willing to pay for better health care be denied it because his demand doesn't fit the pattern of the community?

This is a classic illustration of the conflict between the freedom of the individual and the authority of the community or state. It's questions like this that interest Mr. Lloyd Detwiller, one of the best-known authorities in North America on alternative ways of providing and financing health care.

The Commission on Education for Health Administration recently established by the W.K. Kellogg Foundation of Battle Creek, Michigan, has only one non-American as a member - Lloyd Detwiller, or "Det" as he's known to his friends. The new commission has begun an in-depth study of all education programs in health care administration, the first such appraisal ever undertaken.

The commission has been given \$305,250 to finance its work and is expected to release recommendations by mid-1974. A major stimulus to setting up the commission is "the rapid evolution" of changes in the way the public will receive health care in the future and the impact this will have on administrators and planners, the Foundation said. The Foundation wants to know how to prepare health administrators for the changes that lie ahead.

Mr. Detwiller joined the McCreary team at UBC in

1962 from the provincial civil service, where he was assistant deputy minister of hospital insurance. Other positions he held in Victoria were assistant commissioner and commissioner of the B.C. Hospital Insurance Service and commissioner of sales tax.

He took over administration of the BCHIS at the request of then premier Byron Johnson. He has also acted as consultant to two provinces in setting up their sales tax programs and to another province in establishing its hospital insurance scheme.

He is the administrator of UBC's Health Sciences Centre. He and Dr. McCreary established Vancouver as the world capital for health sciences centres. They have been involved in the planning of health sciences centre hospitals across Canada, in the U.S., and other parts of the world. Mr. Detwiller is now participating in the consulting work for a 1,400-bed health sciences centre hospital in West Germany.

The headquarters of the teaching hospital study group of the International Hospital Federation has been located at UBC for years. Mr. Detwiller, who was asked to join the Kellogg Foundation commission as much for his experience in pioneering health sciences centres as his ability as a health systems expert, has been chairman of the teaching hospital study group since 1965.

## H

HE CAME to UBC as a consultant to the building of the Health Sciences Centre and will be administrator of the Centre's teaching and research hospital, the only component of the Centre not yet built. He is the administrator of UBC's 60-bed psychiatric unit, which opened in 1969 and is the first stage of the teaching and research hospital.

Mr. Detwiller helped Dr. Anne Crichton, associate professor in UBC's Department of Health Care and Epidemiology, put together UBC's new program in health care administration which began last fall. Many other universities, tied to old teaching and research and referral hospitals, offer courses to train hospital administrators. UBC's program has been designed to go far beyond hospitals. It will train people who can anticipate and deal with the imminent changes in the delivery of health care. In effect, it will produce health statesmen.

"Suppose the new provincial government sets up regional health districts in B.C. to try to rationalize our health system," Mr. Detwiller said. "Who's going to run them? Where are we going to get the people capable of dealing not only with hospital administration but also with private practitioners, clinics, public health organizations, community health centres and who have an appreciation of various health professional associations?"

"He'll have to satisfy patients, the community, health professionals providing health care, the health civil service in Victoria and the long-range goals of the provincial government."

The UBC program emphasizes research and broad general planning on a regional, provincial, national and international basis.

Students are taught research methods and must prepare an original thesis. To enter the course students must have a degree in Commerce or in the health, life or social sciences. Since their backgrounds are varied, and since they will enter a variety of jobs in health care administration and research, students are offered a wide variety of courses in the program. The experiences of health planners in other parts of the world will be valuable examples to students in the program regardless of what new model of health care we eventually adopt.

"In a few years we hope that the uniqueness of our program will attract the second and third men in the health administration hierarchy in Washington, and their counterparts from other health agencies in other countries, to enrol as students. As authorities in the health system of their own countries, they will be able to explain how it works and perhaps how it differs from others to their fellow students in seminar," he said.

A number of studies have been assigned to students in the program this year. One student is investigating how health professional groups in the province ensure that the level of care given by their members is up to standards. So far he is discovering that little assessment of the quality of treatment is made of health professionals in private practice, although there is a mechanism for assessing treatment given in hospitals.

Another student is finding out how much information is available in Victoria on the operation of our health system. Preliminary study shows that there is a lot of information but until now little has been done with it.

Critical, in Mr. Detwiller's view, to the students' success as health administrators will be an appreciation of the profound moral and political questions involved in their work, the deeper implications of choosing one health care method over another.

For example, is health care a political right or a social privilege? Many people are beginning to think of health care as a political right. But if a person who is willing to pay for extra health care is denied it, is that denying his political "right"?

Another example of a political or moral issue is what responsibility a citizen has in health care. Should he be able to demand service at all times for whatever he thinks is wrong with him, however trivial? On the other hand, should a man who has contributed heavily to society be denied treatment for a trick knee in deference to a drunk with cirrhosis of the liver?

What place should religious organizations have in the health field? Many religions take it as their moral obligation to attend the sick. How do they fit into a government-financed health system, especially when the policies of a government may be opposed to the moral views of the religions in question?

Should religious sects be denied the opportunity to practice their beliefs and care for the sick? Should people living in an area, such as some parts of northern B.C. and the Northwest Territories, where many hospitals are run by religious orders, be given the opportunity of receiving the same treatment as people in other areas if that treatment is contrary to the religious views of the hospital administrators?



# General Education is Faculty Aim

Continued From Page Five

established. The courses were then offered in the Department of Economics in the Faculty of Arts and Science.

Ten years later a separate Department of Commerce was formed to serve 30 students out of a total University enrolment of 2,476. The end of World War II brought a huge increase in enrolment and in 1950 the Department's status was changed to that of School. Post-graduate courses were offered the following year and in 1956 the School was raised to full Faculty status under Dean E.C. McPhee.

At a symposium in October, 1957, held to celebrate the establishment of the new Faculty, Mr. Harold S. Foley, a well-known Vancouver businessman, demonstrated a rare insight into the whole process of business education.

Said Mr. Foley: "There is a common misconception that business wants from the universities only technicians — engineers, scientists, economists or accountants. It wants these, yes, but business has an equal need for people of character, integrity and the balance, wisdom and human understanding that comes from a knowledge of the story of human progress and association with great minds."

## WAR SERVICE

The head of the Faculty of Commerce and Business Administration, Dean Philip White, is a native of Derbyshire, England, who served as a lieutenant on torpedo boats during World War II. He came to UBC in 1958 from the College of Estate Management, University of London, where he was head of the valuation department.

He was professor and head of the Division of Urban Land Economics in the Faculty of Commerce and Business Administration until 1966, when he was appointed Dean, succeeding Dr. G. Neil Perry.

He is careful to point out that increasing involvement and interaction with the business community does not mean that the Faculty is being diverted in any way from its goals of academic excellence approved by the Faculty in the spring of 1971.

The Faculty's "Statement of Goals, Objectives and Policies" leads off:

"The general goal of the Faculty of Commerce and Business Administration is to strive for excellence and relevance in teaching and scholarly investigations in the areas of business and administration.

"To achieve this end, the Faculty must provide a milieu within which students and faculty can grow and develop their skills consistent with their own potential, interests, abilities and responsibilities."

Dean White says that, contrary to the expectations of some businessmen, Commerce graduates are not provided with skills that enable them to be effective the day they are hired.

"It would be quite easy to give courses, for example, that would make a student desiring to become a professional accountant a skilled audit clerk from the day that he entered an office and I have no doubt that this would make some people very happy indeed.

"But a training course such as this would be at the expense of the many other courses and experiences that are designed to permit the individual student to show leadership qualities and administrative abilities after seven, eight or nine years on the job.

"We try to give students analytical skills that they can apply to a variety of business problems for as long as they are employed. Obviously there is a good deal of institutional knowledge that is required for people going into management and business careers and we also try to provide this. But we are more concerned about giving students attitudes of mind, along with abilities and skills, that will be beneficial to them throughout their business careers."

## GENERAL EDUCATION

Assistant Dean Colin Gourlay, who heads up the undergraduate program in the Faculty, says the aim of the B. Com. course is to give a student a broad general education, with a certain degree of specialization.

"A man usually starts off in the business world as a specialist in marketing, production, personnel or some other area. As he moves up in the hierarchy towards the top he becomes more and more of a generalist.

"We believe that our undergraduate curriculum should include both of these concepts — a degree of

specialization through an option and a degree of generalization in terms of core courses and electives."

"We encourage students to take courses outside the Faculty. In fact, a study of the last Commerce graduating class showed that more than 50 per cent of the courses taken by individuals in that class were taken in other Faculties — mainly Arts and Science."

Of the current Commerce enrolment of 1,318 students, 1,005 are undergraduates. Graduate degree enrolment is: Licentiate in Accounting, 61; M.B.A., 184; M.Sc. 33 and Ph.D., 35.

The M.B.A. is a general degree while the M.Sc., introduced three years ago, permits specialization in areas such as accounting management, information systems, finance, management science and so on.

The Ph.D. degree program, also started three years ago, is offered at only two other Canadian universities — the Universities of Western Ontario and Toronto. "The doctoral program is fairly loosely structured, which represents a philosophy of ours, and it is principally for people who plan to teach or to do research in industry," Dean White says.

The Faculty also offers a Licentiate in Accounting, which requires a baccalaureate degree as prerequisite for admission. The course covers accounting and management information systems. "The majority of people who take this course plan to become chartered accountants, but as time goes on I expect to see the course being taken by an increasing number of students who want to go into the comptroller side of business, but don't necessarily want to become chartered accountants," Dean White says.

Professional and diploma evening courses are offered

in accountancy, business management, banking, real estate and appraisal, marketing and sales management and management studies.

However it is in the area of executive programs that Dean White sees perhaps the greatest potential for expansion of the Faculty's offerings. At present the program offers a series of workshops and seminars designed to keep business men abreast of new developments in business theory and practice.

Courses are selected in response to the needs of the business community and are offered by Faculty members and visiting lecturers. The offerings include one- and two-day seminars, evening seminars and residential workshops.

## PART-TIME STUDIES

"Executive programs extend to a whole variety of activities such as our business luncheons and our Distinguished Discussion Series."

While the Dean sees dangers in "being swept up in the populist fervor for continuing education programs" he does see a place for part-time studies leading to a degree. It will require, however, a change from the traditional approach to a university education.

"A full-time, five-year program suddenly becomes a 10- to 12-year part-time program and I suspect that few people have the time, motivation or the patience to continue on for that period of time. The next step is to change our traditional ways of thinking and I think that there is an argument in favor of this, but we must be extremely careful to distinguish between a genuine desire for change and change that would permit someone to get a quick, cheap degree."

# UBC NEWS ROUNDUP

## RESIDENCE RATES

UBC's Board of Governors has assured resident students that their voice will be heard before the Board makes a decision on possible increases in rental charges and room-and-board rates for campus residences.

At its regular meeting on Feb. 6 the Board heard objections from married students living in Acadia Camp and Acadia Park to a proposal made to residents by Mr. Leslie Rohringer, Director of Residences, for a 9.75 per cent increase in their rents. Mr. Rohringer has also proposed a similar increase for single students living in the Totem Park, Place Vanier and Walter H. Gage Residence complexes.

After hearing the Acadia students the Board was unable to complete its agenda Feb. 6 and adjourned its meeting until Feb. 12.

A body of students appeared outside the Board's meeting room on Feb. 12 and asked to speak to the Board. Eight students, drawn from all campus residences, were invited in to the meeting.

They were told by Mr. R.M. Bibbs, acting Chairman of the Board, that no recommendation for a rent increase had yet been made to the Board by the Administration.

Mr. Bibbs assured the students that if a rate increase is recommended, information justifying the recommendation will be made available to representatives of all the campus residences. The students would have an opportunity to study this information before the Administration's recommendation came before the Board for action, probably at a special meeting, Mr. Bibbs said.

He also assured the students that their representatives would be able to make further representations to the Board at that meeting.

The date of the special meeting has not yet been set.

## SECOND COMMITTEE

A committee to consider non-academic staff matters raised in the Report on the Status of Women at UBC, which was released on Jan. 23, is being struck by UBC's President, Dr. Walter H. Gage.

It will be the second committee established by President Gage to consider various aspects of the 100-page report, prepared by the Women's Action

Group, an informal organization made up of UBC faculty and staff members and students.

Sections of the report that deal with academic matters and academic staff are currently being considered by a ten-member faculty committee established by President Gage on Jan. 26.

This committee, which is chaired by Prof. Robert M. Clark, director of UBC's Office of Academic Planning, has initially established task forces to examine ten areas of concern identified in the report. The committee will deal with academic matters as they relate to students as well as teaching staff.

The report contends that women faculty and staff members are discriminated against in terms of appointments, promotions and salaries and that educational opportunities for women students are not equal to those available to men.

President Gage, in a statement issued the day the report was released, commended the Women's Action Group for the report and added that "If there are inequities in the University's treatment of its female students, staff and faculty members, our aim will be to eradicate them."

Copies of the full Report on the Status of Women at UBC are available from the Information Desk and the Women's Studies Office, both located in the Student Union Building, at \$1 a copy. An issue of *UBC Reports* that appeared on campus on Feb. 8 reprinted two sections of the report setting out recommendations and guidelines for achieving equality between men and women at UBC. Copies of the issue are available from the Department of Information Services, UBC.

## ORCHESTRA HERE

The National Youth Orchestra of Canada will hold its 1973 Summer Training Session on the UBC campus — for the first time ever in the West.

One hundred and ten of Canada's brightest young orchestral musicians will arrive on the campus on July 20 and stay in residence until the end of August to study up to nine hours a day.

The musical director for the season will be Mr. Kazuyoshi Akiyama, musical director of the Vancouver Symphony Orchestra. He will conduct the National Youth Orchestra public performances.

UBC's President, Dr. Walter H. Gage, said the

Please turn to Page Eleven  
See NEWS ROUNDUP

# Science Fellow Develops Course

A high school course embodying a new approach to the teaching of chemistry is being developed as a result of a unique program organized by the University of B.C. Department of Chemistry and the science department of the Faculty of Education.

The proposed high school course, which breaks with the mathematical approach to chemistry, is being put together by Mrs. Shirley Jackson, who was the first Science Master Fellow appointed under the new UBC in-service program.

Mrs. Jackson, a chemistry teacher at Centennial Secondary School in Coquitlam, has just completed a seven-month stint at UBC under this program. She plans to present her new approach to chemistry teaching to the provincial Department of Education as a locally-developed course.

The proposed course, which will be anchored in organic chemistry and biochemistry, will concentrate on the ideas of chemistry by an appeal to intuition rather than through a quantitative approach.

"The course could be an alternative or additional course to the regular chemistry course now taught in high schools," Mrs. Jackson said. "It will aim primarily at students in arts and biology who don't intend to take any further chemistry."

She entered the new UBC program at the beginning of the 1972 Summer Session and spent much of her time sitting in on chemistry courses and supervising laboratory sessions at the first- and second-year level.

Mrs. Jackson said there are a number of appealing features built into the new UBC program.

She was given an opportunity to brush up on her chemistry and to get an insight into the new directions and emphases that have developed in

chemistry, and its teaching methods, since she graduated from UBC in 1956.

An important advantage is that her renewed, intensive contacts with the University will benefit her high school students. "It will enable me to prepare



MRS. SHIRLEY JACKSON

them better for the transition to University," she said.

"One of the most attractive features of the program is that there is no financial hardship for those taking it," Mrs. Jackson said. "Sixty per cent of my salary is paid by my school district and 40 per cent by UBC."

One of the main objectives of the program is to strengthen the bonds and widen the channels of communication between UBC and high schools.

While inter-Faculty co-operation is well established in cases where teachers seek to obtain higher degrees, this venture is believed to be unique in Canada in that the program is particularly designed for teachers who have committed themselves to the classroom.

At least ten years of teaching in the high school is one of the prerequisites for admission to the program. The assumption is that experienced teachers will benefit more from a re-exposure to the university atmosphere than teachers who graduated more recently.

The program, still in its pilot stage, clearly illustrates the increased emphasis on the in-service function of the Faculty of Education. In its pioneering effort the Chemistry Department allows for a very flexible structure. Fellows may do original research if they wish. The total program aims at increasing the teacher's knowledge of chemistry and the methods of teaching it.

Participation of school boards involved is enthusiastic and competition for appointment as a Fellow is keen, according to the initiators of the program.

Mrs. Jackson returned to Centennial Secondary at the end of January and was succeeded on Feb. 1 by another Coquitlam chemistry teacher, Mr. James Law.

Picture by UBC Photo Department

## UBC to Honor Six at Spring C

Dr. Walter C. Koerner, former chairman of the Board of Governors at the University of B.C., will be one of six persons who will receive honorary degrees at UBC's Spring Congregation on May 30 and 31 and June 1.

Others who will receive degrees at the three-day ceremony are:

Mr. Harold E. Winch, leader of the CCF in the B.C. Legislature from 1938 to 1953 and CCF and New Democratic Party member of the House of Commons in Ottawa from 1953 to 1972;

Dr. Maurice F. Strong, executive director of the United Nations Environment Secretariat and secretary-general of the UN Conference on the Human Environment held in Stockholm in June, 1972;

Dr. Sylvia Ostry, chief statistician for Statistics Canada and a noted Canadian Economist;

Dr. Vladimir J. Okulitch, Dean Emeritus of the Faculty of Science at UBC and a noted Canadian geologist; and

Dr. J. Larkin Kerwin, Rector (President) of Laval University in Quebec City and a well-known Canadian physicist.

The honorary degree of Doctor of Science (D.Sc.) will be conferred on Dr. Kerwin and Dr. Okulitch. All

others will receive the degree of Doctor of Laws (LL.D.)

The award of the degrees has been approved by UBC's Senate. UBC's Chancellor, Mr. Justice Nathan T. Nemetz, will confer the degrees on the recipients during the Congregation ceremonies.

Dr. Koerner, who is Chairman Emeritus of Rayonier Canada Ltd., was a member of UBC's Board of Governors for 15 years from 1957 to 1972 and Board chairman from 1968 to 1970.

Dr. Koerner played a significant role in the development of plans for the Health Sciences Centre at UBC while serving as chairman of the Health Sciences Centre Management Committee.

A special gallery of UBC's new Museum of Man, which is scheduled for completion in March, 1975, will house the Walter and Marianne Koerner masterwork collection of tribal art, largely made up of artifacts that reflect the culture of the Indians of Canada's West Coast. The generous offer of Dr. Koerner and his wife to donate the collection to UBC was instrumental in the federal government allocating \$2.5 million to aid construction of the UBC Museum.

Born in Czechoslovakia, Dr. Koerner came to B.C. in 1939 following the takeover of his country by Nazi

Germany. With two brothers, the late Mr. Otto Koerner and Dr. Leon Koerner, he founded Alaska Pine and Cellulose Co., which was acquired by Rayonier in 1954.

Dr. Koerner became chairman of Rayonier of Canada Ltd. in 1954 and retired from that post in 1972.

Mr. Harold Winch was a foundation member in the early 1930s of the Co-operative Commonwealth Federation and in 1961 of the New Democratic Party. An electrician by trade, Mr. Winch was educated in Vancouver and was first elected to the B.C. Legislature in 1933.

He was parliamentary leader of the CCF in the B.C. Legislature from 1938 to 1953 and Leader of the Opposition from 1941 to 1953.

Mr. Winch resigned his seat in the B.C. Legislature in 1953 and the same year was elected to the House of Commons in Ottawa as the member for Vancouver East. He was re-elected in five subsequent general elections. He retired in 1972.

Dr. Maurice F. Strong was well-known in the Canadian business world before his appointment in 1966 as director-general of the federal government's External Aid Office, which later became the Canadian International Development Agency.



DR. WALTER KOERNER



MR. HAROLD WINCH



DR. MAURICE STRONG



DR. SYLVIA OSTRY



DR. V.J. OKULITCH

## NEWS ROUNDUP

Continued from Page Nine

University is delighted that UBC has been selected as the locale for 1973. "There is very great interest in music on Western Canada, as reflected in our own Department of Music in particular and the Vancouver community in general, which will contribute to the further development of the National Youth Orchestra. The University of British Columbia will, I am certain, co-operate fully in assuring that the Orchestra will spend a worthwhile, enjoyable and profitable month with us in study and rehearsal."

In previous years the NYO's training has taken place in various locales, including Quebec City, Toronto and Stratford, but its concert tours have taken it across Canada many times. Eastern supporters of the Orchestra will still be able to hear the students rehearse, since the Session will commence in Toronto on July 2.

At UBC the Orchestra will use the rehearsal facilities of the Department of Music and the Old Auditorium. Prof. Donald M. McCorkle, head of UBC's Department of Music, said the presence of the National Youth Orchestra on the campus this summer should provide a great impetus for orchestral music in the province.

"Our Department has excellent facilities for the demanding rehearsal requirements of the Orchestra. We are looking forward to our association with these talented young people," he said.

The NYO is supported by grants from the British Columbia Cultural Fund, other provincial governments, the Canada Council, and by private and corporate donations. It provides orchestral training to young Canadian musicians between the ages of 14 and 24 years and serves as inspiration to music students in schools across the country. Internationally, it is generally considered to be the world's leading youth orchestra organization and, in performance, is frequently compared to the highest of professional standards.

NYO President Mr. John Craig Eaton, of Toronto,

in thanking UBC for its generous co-operation, sees the 1973 Western season as an important milestone in the NYO's constant progress towards serving the whole country.

## NEW DEAN NAMED

Dr. John H.M. Andrews, a native of Kamloops, B.C., and a UBC graduate has been named dean of UBC's Faculty of Education.

Dr. Andrews, who is currently assistant director of the Ontario Institute of Studies in Education, will succeed Dean Neville Scarfe as head of the Faculty of July 1.

Acknowledged as a leader in the study of educational administration in Canada, Dr. Andrews is a well-known scholar in the field of organization theory as applied to education.

He has held important academic posts in the Departments of Educational Administration at the University of Alberta and the Ontario Institute for Studies in Education. He earned his Ph.D. degree in educational administration from the University of Chicago.

Dr. Andrews, 46, who holds B.A. and M.A. degrees from UBC, says he believes that a faculty of education should be an educational resource for the entire school system rather than purely an institution for teacher training.

"I see a faculty of education as a critically important resource, occupying a strong leadership role in educational matters, working co-operatively, not only with teachers, but with trustees, school superintendents, and other officials of the Department of Education," he said.

He also sees a faculty of education being deeply involved in in-service and continuing education programs for teachers.

Described by his colleagues as an extremely capable administrator able to make tough, hard-nosed decisions when necessary, and a strong believer in participatory administration, Dr. Andrews has been on the staff of the OISE since 1965, when he was appointed professor and chairman of the Department of Educational Administration. He became co-ordinator of research in 1966 and two years later was appointed assistant director.

Before moving to Ontario he was associate professor, and later professor, in the Department of Educational Administration at the University of Alberta, Edmonton, for eight years.

Dr. Andrews lived in British Columbia until he went to the University of Chicago in 1955. He received his primary and secondary education in Kamloops and came to UBC in 1943. He graduated four years later with a B.A. in honors physics and worked for two years as an engineer with Britannia Mines in Britannia, returning to UBC in 1949 to take a year of teacher training.

For the next five years he was a teacher and principal in schools in Squamish, Salmon Arm and Woodfibre. He also did graduate work at UBC during the summer and in 1954 was among the first group of students to receive M.A. degrees in education.

Married to the former Doris Payne, a UBC graduate and former teacher, whom he met while attending UBC, Dr. Andrews has a family of four.

## AWARDS MADE

Canada Council fellowships valued at close to \$250,000 have been awarded to 32 members of the UBC faculty.

The fellowships are intended to assist faculty members to undertake up to a year's full-time independent research.

Thirty-one leave fellowships, worth up to \$8,000, have been awarded to UBC teachers who will be on leave at partial salary.

A single research fellowship, worth up to \$9,000, has been awarded to Dr. A.R. Killgallin, of UBC's English Department, who will be on leave without pay.

Travel and research expenses are provided with either type of fellowship if needed.

The 31 faculty members who have been awarded leave fellowships are:

Prof. D.F. Aberle, Anthropology and Sociology; Mr. Keith Aldritt, English; Miss N.M. Ashworth, Education; Dr. A.A. Barrett, Classics; Dr. Frederick Bowers, English; Dr. D. Susan Butt, Psychology; Prof. H.A.C. Cairns, Political Science; Dr. L.B. Daniels,

## APPLICATIONS AVAILABLE

Applications for the \$200 Province of B.C. Scholastic Awards are now available to UBC students at the Scholarships, Bursaries and Loans Office, Room 207 in the Buchanan Building.

The Scholastic Awards, which have replaced the Government of B.C. Scholarships, will be made to a maximum of 17 per cent of the total full-time undergraduate enrolment by year and Faculty.

The awards are not granted for averages below 70 per cent, except in the Faculty of Law, where averages are based on rank. Awards are not open to students in Graduate Studies or those registered as "qualifying" or "unclassified."

Completed applications must be submitted by March 15.

Education; Dr. Martha S. Foschi, Anthropology and Sociology; Prof. John F. Helliwell, Economics.

Prof. R.W. Ingram, English; Dr. J.E.M. Kew, Anthropology and Sociology; Prof. J.A. Lavin, English; Prof. A.E. Link, Religious Studies; Dr. Pierre Maranda, Anthropology and Sociology; Dr. C.W. Miller, English; Dr. Keizo Nagatani, Economics; Prof. C.G.W. Nicholls, Religious Studies; Prof. P.H. Pearce, Economics; Dr. Margaret E. Prang, History.

Dr. Robert Ratner, Anthropology and Sociology; Prof. Peter Remnant, Philosophy; Prof. J.L. Robinson, Geography; Prof. Gideon Rosenbluth, Economics; Dr. A.H. Siemens, Geography; Dr. A.C.L. Smith, History; Dr. Marketa Stankiewicz, German; Dr. H.A. Wallin, Education; Dr. J.W. Wisenthal, English; Mr. W.E. Yeomans, English; Prof. Walter Young, Political Science.

## LECTURES SET

**THURSDAY, MARCH 1** — Canadian novelist Prof. Hugh MacLennan, of McGill University, will give the first of two Sedgewick Lectures under the sponsorship of the English Department. His first lecture, entitled "Literature and Technology," will take place in Room 106 of the Buchanan Building at 8 p.m.

**FRIDAY, MARCH 2** — Prof. MacLennan speaks again at 12:30 p.m. in Room 106 of the Buchanan Building on "Writing in Canada Over 30 Years."

**FRIDAY, MARCH 2** — Dr. Donald Chant, of the Department of Zoology at the University of Toronto and founder of the Pollution Probe organization, will speak at 3 p.m. in UBC's Instructional Resources Centre, under the sponsorship of Westwater, UBC's water resources research organization. His topic: "The Role of Citizen Groups in Environmental Decision-making."

**THURSDAY, MARCH 8** — Dr. Andreas Papandreou, professor of economics and director of the graduate program in economics at York University, Toronto, gives the first of two E.S. Woodward Lectures in Room 106 of the Buchanan Building at 12:30 p.m. His first lecture is entitled "The Ideology of Development."

**FRIDAY, MARCH 9** — Dr. Papandreou, who is a former cabinet minister in the Greek government, speaks again in Room 106 of the Buchanan Building at 8 p.m. His topic: "Underdevelopment and Dependence."

# UBC

## REPORTS

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# eremony

Dr. Strong served as secretary-general of the United Nations Conference on the Human Environment in June of 1972 and was widely credited with ensuring the success of the meetings as a result of his capacity for compromise and leadership.

In December, 1972, he was named executive director of the UN Environment program, which co-ordinates the activities of the entire United Nations system dealing with global environment problems.

Dr. Sylvia Ostry, one of Canada's best-known economists, is chief statistician for the federal agency Statistics Canada and is the former director of the Economic Council of Canada.

A graduate of McGill University in Montreal and Cambridge University in England, Dr. Ostry taught at McGill and the University of Montreal before joining the Economic Council of Canada in 1964. She is the author of numerous studies on urban development, manpower, labor and economic and technological change.

Dr. Vladimir Okulitch was Dean of UBC's Faculty of Science for seven years prior to his retirement in 1971. He was first appointed to the UBC faculty in 1944 and became head of the division of geology, then a part of the Department of Geology and Geography, in 1953. In 1959 he was named head of the Department of Geology when it was separated from the Geography Department.

Dean Okulitch was widely known for his work in the fields of geology and paleontology, the study of fossil plants and animals. His geological work was concentrated in the structure and stratigraphy of the Rocky and Selkirk Mountains.

Dr. J. Larkin Kerwin, Rector of Laval University and former head of the Department of Physics of that University, is noted for his research in the fields of molecular and atomic physics.

He is a former president of the Canadian Association of Physicists and is currently secretary-general of the International Union of Pure and Applied Physics.

Born in Quebec City, Dr. Kerwin was educated in Canada and at the Massachusetts Institute of Technology. He was awarded the academic degree of Doctor of Science by Laval University in 1949 and has been a faculty member there since 1946.

# UBC ALUMNI Contact

PREPARED FOR UBC REPORTS BY THE UBC ALUMNI ASSOCIATION



MR. ROBERT BONNER

## Bonner Speaks to Commerce Dinner

Mr. Robert Bonner, president and chief executive officer of MacMillan Bloedel Ltd., will be the guest speaker at the annual Faculty of Commerce dinner to be held in the UBC Faculty Club on Thursday, March 8.

The topic of his address will be "The Business of Business."

The annual dinner provides an opportunity for businessmen, Commerce faculty, alumni and students to meet and discuss business developments. The function gets underway March 8 with a reception at 6 p.m., followed by dinner at 7 p.m.

Mr. Bonner, B.A.'42, LL.B.'48, practised law in Vancouver until 1952 when he joined the provincial government as attorney-general. He retired from political life in 1968 to become senior vice-president, administration, of MacMillan Bloedel Ltd. Three years later he became vice-chairman of the company and in the spring of 1972 was appointed to his present position.

Tickets for the dinner are \$6.75 per person. For information and reservations call 228-3313.

## Special Appeal

The UBC Alumni Fund is conducting a special appeal for donations to help meet the transportation costs of two UBC sports teams which have been honored with invitations to tour Britain this year.

The UBC field hockey team recently received an invitation to tour England this spring. And the Thunderbird rugby team has been invited to tour Wales this September. Both teams have excelled in local, national and international competition and the tours present an opportunity for further development.

Each team member is contributing toward the cost of his tour, but more money is needed to meet the total cost. The field hockey team needs a further \$4,750 and the rugby team needs \$4,100.

Donations will be gratefully received by the UBC Alumni Fund, 6251 N.W. Marine Drive, Vancouver 8, B.C.

## Oxford-Style Debate Set For Alumni Open House

It's nostalgia time again!

UBC's triennial Open House will be held on Friday, March 2, and Saturday, March 3, and alumni are invited to come back and see how much or how little (depending on your age and viewpoint) the campus has changed.

And to particularly revive your memories of academia, the UBC Alumni Association is presenting an Oxford Union-style debate from 11 a.m. to 12:30 p.m. on Saturday, March 3, in the Conversation Pit of the Student Union Building.

The topic: Resolved That Formal University Education Is Obsolete.

Chairman of the debate will be Prof. Malcolm McGregor, head of the Department of Classics, and the debaters will be leading university educators.

You are invited to attend and listen, learn, question, argue, heckle and generally participate in the debate — including voting yea or nay on the motion.

After lunch in SUB (try a Brockburger, a sticky cinnamon bun and a cup of distinctive SUB coffee), take a leisurely stroll down to Cecil Green Park for a reception to meet UBC's President, Dr. Walter Gage, at 2 p.m.... And don't forget to visit the University Model Centre in the Coach House of Cecil Green Park to see a scaled-down view of UBC's growing campus.

And while you're in the area, you could take a walk to the end of the garden and see how close Cecil Green Park is getting to the edge of the eroding (soon to be stopped, we hope) Point Grey cliffs. But don't get too close to the edge.

