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A DREAM BECOMES A REALITY

BY JOHN ARNETT
UBC Reports Staff Writer

In retrospect, Dr. Shotaro Iida agrees that it probably was a rather presumptuous act on his part to march up to the director of the Sanyo Pavilion at Expo '70 in Osaka, Japan, and ask the company to make a present of the pavilion to the University of British Columbia.

Particularly when Dr. Iida, an assistant professor in UBC's Department of Religious Studies, had not even asked the University in advance whether it would be willing to accept the gift.

And he was quite aware of the fact that transportation and reconstruction costs could run into hundreds of thousands of dollars, and he had no idea who would foot the bill.

But when a man has a dream, and he is determined to see that dream come true, what else is he to do?

Dr. Iida's dream came in broad daylight.

IDEAL LOCATION

He was cycling to his office on UBC's West Mall one day when he looked across the row of cars in Parking Lot R to the Nitobe Memorial Garden beyond, and the thought struck him that this would be an ideal location for an Asian studies centre to complement the Garden, a beautifully landscaped Japanese garden dedicated to the memory of Dr. Inazo Nitobe, distinguished educator and international civil servant who did much to interpret Japan to the West and vice versa.

Not that he has anything against cars, mind you, except perhaps a cyclist's aversion to noise and fumes and the lack of exercise and the unsightly parking lots that cars represent.

"Then it occurred to me that most of the buildings at Expo '70 in Osaka would be demolished at the end of the fair and that perhaps one of them could be dismantled and moved to UBC," Dr. Iida said.

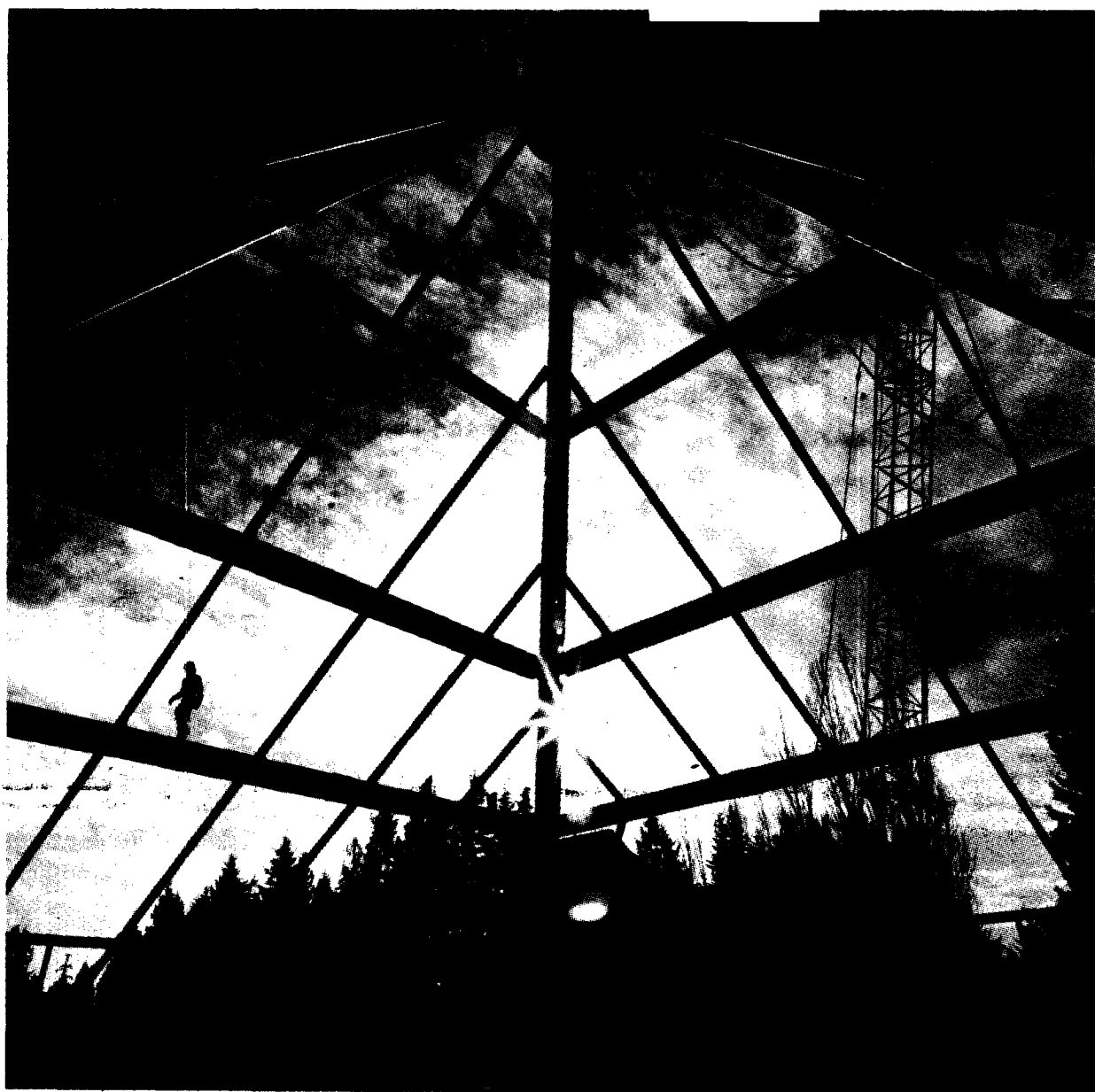
What happened, of course, is now history. Dr. Iida went to Expo '70 — "I got a free ticket from my sister, so I didn't even have to pay to get in," — made his pitch for the pavilion, and his dream has literally come true.

The pyramid-shaped pavilion, one of the hits of the fair, is being reconstructed on part of that parking lot as a unique academic building and a Canada/East-Asian cultural centre. It is certain to become not only an important centre of learning but also one of the most interesting tourist attractions in B.C.

The reconstruction has been made possible through a fund-raising campaign undertaken in both Japan and Canada in a true spirit of international co-operation and friendship.

That campaign raised more than \$1.6 million through donations from the B.C. and federal governments in Canada and from sources in Japan to enable the first stage of construction to proceed. Another campaign is now under way to raise an additional \$1.4 million to complete the interior of the building.

Actually, the original cost of reconstructing the pavil-



Picture by Dave Roels

Workman walking roof girder of UBC's Asian Centre is etched against a wintry sky

ion was \$1.6 million, which meant that the fund-raisers reached their target, but inflation and rising construction costs have almost doubled the final cost.

Dr. Iida recalled that it really wasn't that difficult to persuade Mr. Kazuhiko Nishi, the director of the Sanyo Pavilion, that UBC could be a future home for the pavilion because Mr. Nishi, a garden-lover, had already visited the Nitobe Garden on an earlier trip to Canada and had been very impressed with what he had seen.

REMOVE PAVILION

"He told me that tentative arrangements had been made to remove the pavilion to one of the Sanyo factories and rebuild it as a workers' gymnasium, but I told him that I didn't think that that was a very good idea at all," Dr. Iida said.

Once Dr. Iida got a tentative agreement from Mr. Nishi that relocation of the pavilion was a possibility, he travelled to Tokyo to try to find sources of money to fund the project.

"I called on people in government, trade unions and private organizations," Dr. Iida said. "I didn't get any firm commitments but there was a lot of interest in my proposal."

On his return to UBC, Dr. Iida discussed the project with Mr. Donald Matsuba, a Vancouver architect and then lecturer in UBC's School of Architecture, who was enthusiastic about the idea.

Next to get involved was Dr. John Howes, an associate professor in UBC's Department of Asian Studies, who, Dr. Iida said, was the real sparkplug in generating interest in the proposal both on and off the campus and in initiating the fund-raising campaign which made the project financially feasible.

Mr. Shinsuke Hori, then Consul-General for Japan in Vancouver, was another enthusiastic supporter, without whom fund-raising in Japan would have been virtually impossible. Vancouver lawyer Alan Campney, president of the Japan-Canada Society in Vancouver, originally headed up a fund-raising committee which had former UBC president Dr. Norman A.M. MacKenzie as honorary chairman.

The fund-raising committee met its original goal through donations of \$400,000 each from the Canadian and B.C. governments, \$250,000 pledged from the profits of Expo '70, \$550,000 from the Federation of Economic Organizations of Japan, and \$50,000 in private donations in Canada.

After subtraction of the cost of replacing parking areas displaced by the building, \$1.5 million was available for construction.

"I wish the news were all rosy, but it is not," Mr. Joseph Whitehead, president and publisher of Vancouver's *Journal of Commerce* and current chairman of the committee raising funds for the completion of the building, told *UBC Reports*.

INFLATION STRIKES

"Inflation has hit this project like so many others. While the building was being planned over the winter of 1972-73, construction costs skyrocketed. When the time came to sign the contracts it was discovered that the \$1.6 million which had been collected would finish the building from the outside but leave the interior incomplete.

"The alternative was to redesign the building with the sum collected, with the danger that continuing inflation

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See ASIAN CENTRE*

Crises reveal man's lack of

In an era when science has unlocked the secrets of the atom and landed a man on the moon, it seems ironic that so little is known about two of the fundamental components of our earth — the soil and the sea.

Man's awareness of his partial neglect of these two major components of his environment has been thrown into bold relief over the past decade or so by two crises. Humanity is currently beset

by a growing anxiety about the quality of Earth's environment and the pressing need to feed an expanding population.

At UBC, two academic units vitally concerned with soil and water problems are the Faculty of Agricultural Sciences and the Institute of Oceanography.

Modern science has applied itself to slices of nature that are similar, phenomena with common



Prof. George Pickard

OUR LIVES ARE TIED TO THE SEA

BY PETER THOMPSON
UBC Reports Staff Writer

If our attachment to the earth is fundamental, our relationship with the sea is romantic.

The earth is the inexorable coming of the seasons, the nurturing female, the family hearth, all that is secure and everlasting. Compared with the earth, the sea has appeared to men in many ages as mystical, adventurous and brutal. Dull boys stayed at home while the restless went to sea.

The sea has a special significance to British Columbians. Other Canadians sometimes think of us as living among snow-capped mountains. The truth is that the most striking part of the environment of most British Columbians is the sea. Many of us are more familiar with the gossamer islands and fiords of the coast than the alpine interior.

"I think we should remember that about 70 per cent of the population of the province lives on the Lower Mainland and Vancouver Island," said Prof. George Pickard, director of UBC's Institute of Oceanography. "Our lives are tied to the sea."

Prof. Pickard said that about 1.5 million British Columbians live close to the Strait of Georgia. The rate of increase of this population is more than 1½ times the national average, and the population is expected to double, he said, within a mere 25 years.

The dependence of British Columbians on the Strait is in many ways an exaggerated microcosm of humanity's growing reliance on the oceans, he said. Use of the Strait and of the seas of the earth is increasing, and in many instances the demands are in conflict with one another.

LINKED TO INDUSTRY

"Our use of the Strait is enormous. The Strait and its adjacent land are linked with the forest, mining, agricultural, tourist and, of course, the fishing industries.

"The logging industry uses the Strait as a booming area. Both the forest and mining industries move most of their exports through ports on the Strait. About 70 million tons of material pass into or out of the Strait every year and the ports on the Strait are among the most important in the nation.

"The importance of these ports," Prof. Pickard said, "can only grow with Canada's increasing trade with Japan, China and other nations on the Pacific rim."

Our fishing industry simply couldn't exist without the Strait, he said. Many species of fish use the Strait as a halfway house in their movements between fresh water and the sea. Literally billions of fish spend their critical juvenile life in the Strait. The Fraser River, which empties into the Strait, represents about half the entire commercial salmon fishery of the province, he said.

Apart from our growing commercial dependence on the Strait, Prof. Pickard said, the water is being increas-

ingly used for recreation. In fact, recreational use of the Strait has become an industry in itself. More money is tied up in sport fishing facilities on the coast than in commercial salmon fishing, he said, and it has been estimated that about 77,000 small boats use the Strait for recreation — boats, incidentally, larger than the types carried on top of cars.

"The Strait is obviously a rich resource to the people of B.C. But we are making greater use of it without really knowing what we are doing. While our use of the Strait is accelerating," Prof. Pickard said, "our knowledge of it is very limited. There is a real danger that we might do something that will turn out to be disastrous."

There are all kinds of proposals for projects adjacent to the Strait that might have detrimental effects on that body of water, he said. What will be the effect of super-tankers? What effect would a Moran Dam on the Fraser have on the Strait, let alone the river?

A number of other projects have been mooted: port developments at Squamish and Nanaimo, expansion of Vancouver International Airport and the Roberts Bank Superport.

Each of these proposals could have unforeseen effects on the physical motion and chemical make-up of the Strait and on the life in it, he said.

POTENTIAL HAZARDS

It is because of these potential hazards that the federal government recently announced a six-year study of the Strait, he said. The study will involve scientists from government departments as well as UBC. The aim of the study is to produce information which can lead to a sound plan to manage the Strait intensively so that damage is minimized and benefits increased. The policy will have to intervene in the free use of the Strait by different interests so that each user gets the most benefit.

Prof. Pickard said that increased use of the Strait is indicative in a concentrated way of what is happening to the oceans around the world. His Institute's major role in assuring wise use of the oceans is to train students and do research into oceanographic problems.

"Just compare the sea to the land for a moment. The land changes itself very slowly. Its history is locked in its rocks and soils. But the rate of change in the sea is much greater, and for that reason an understanding of its history and how it functions is more difficult to obtain," Prof. Pickard said.

A greater understanding of the oceans could have an enormous payoff. "Contemporary weather forecasting methods," says an oceanographic report done for the Science Council of Canada, "increasingly recognize the impact of the ocean and its variability upon the weather."

"Such great international programs as the Global Atmospheric Research Program and the World Weather Watch take cognizance that improved weather forecasting calls for increased knowledge of the nature and response of the upper layers of the ocean."

"Apart from the weather, which may be taken as the short-term variability of the atmosphere, there are longer-term events even more dominated by the ocean. It is almost certain that such persistent phenomena as abnormally cold winters or extended periods of drought are associated with oceanic changes."

The 1971 report was co-authored by Dr. Robert Stewart, then a member of UBC's Institute of Oceanography and now director-general of Ocean and Aquatic Affairs in Victoria for the federal Department of the Environment.

Dr. Stewart, while at UBC, was one of the scientists who built the Institute's international reputation for work on the interaction between the atmosphere and the sea.

Prof. Pickard said that at a recent meeting of the

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knowledge of soil and sea

characteristics. Laws and principles have been developed for the behavior of gases, atoms, biological molecules and tissues, large pieces of the earth's mantle, the life and death of stars.

The soil and the sea in some sense are among the last areas without a systematic body of unifying principles. The land and sea are so complex that any organized study of them must involve scientists trained in different disciplines coming together to struggle with a common subject.

Physicists, chemists, geologists, biological scientists and others apply their training in the fundamentals of their subjects to try to find out more about the land and sea so that we can benefit from them.

In the articles beginning below *UBC Reports* staff writer Peter Thompson outlines some of the activities in UBC's Faculty of Agricultural Sciences and Institute of Oceanography.

KEY ROLE FOR FOOD EXPERTS

By PETER THOMPSON
UBC Reports Staff Writer

Apart from a meal or two or three missed during some unusual situation, we in Canada have not known hunger, let alone its ominous cousin, starvation.

To write about hunger is to describe a part of the world few of us have been to or want to visit. Photographs of balloon-bellied children aren't carried in travel magazines.

Death by starvation of millions of human beings is now accepted as a virtual certainty by many of our agricultural scientists and economists, unless underdeveloped countries make a greater effort to feed themselves. Rising populations and incomes, vagaries of weather and inflation have caused increased pressure on world food supplies.

Food used to be associated with the pleasures of eating and was tinged with indulgence. Now, the thought of food also carries with it a leading edge of anxiety.

We are told that some of the foods we take for granted we may have to do without, and for a long time to come we will be paying a larger percentage of our income for food than before.

The unfolding food crisis is having some interesting social effects in industrialized countries. We are now realizing that as urbanites most of us know nothing about the largest industry in Canada and the United States. In fact, it comes as a surprise to some of us to discover that agriculture is the largest industry in North America.

Kenneth Galbraith, an agricultural economist, says that the United States owes its industrial might to the efficiency of its agriculture. North Americans are able to produce enormous amounts of food using a small portion of their populations, freeing most of us for other activities.

NEW CONSCIOUSNESS

Our new consciousness of agriculture may have an effect on the direction of science. Some of the lustre enjoyed by scientists doing basic research in the hard sciences such as physics and chemistry, which received boosts in the West after Russia launched Sputnik, the first earth satellite, will now likely shift to agricultural sciences.

In fact, in a very real sense the future of all of science may depend on whether the agricultural sciences are able to save us from destruction through the forces unleashed by a starving world.

There has long been a stigma attached to agriculture on university campuses. Harvard Business School President A. Lawrence Lowell did not want to have "hogs at Harvard."

The dean of UBC's Faculty of Agricultural Sciences thinks that the agricultural sciences may become the most important of the sciences.

"Agriculture," said Dean Michael Shaw, "is one of

the most diffused and pervasive activities of our society. It's one of the few industries left that still has family enterprises at the basic level, at the level of food production. Yet it also includes the largest corporations in Canada.

"Agriculture is entirely based on a handful of plant varieties. Even at this level its complexity is staggering. The problems of the soil itself are enough to occupy legions of physicists and chemists.

"If you're going to produce a crop, you should have the right seed, the right genetic strains that are disease-resistant and high-yielding. Then you've got to have fertilizer and good weather. Then the crop has to be harvested, processed, transported, marketed and sold.

"You begin with photosynthesis and end with a very complex industry.

"Up until a few years ago, temperate-climate countries such as Canada, the U.S. and Russia were the major food producers for the world. We had an excess of grain, so we fed it to animals and gave some away.

LIVING STANDARDS

"Population increases in less-industrialized countries have chewed away part of the surplus. At the same time, the standard of living of many countries such as Japan has risen and their populations are no longer content to eat grain only. They want to feed grain to livestock and eat meat, just as we do.

"Despite the current North American surplus, eating animals will become a luxury to some of the peoples of the world. It takes about 400 pounds of cereal grains to feed one person adequately for a year. In North America, we each consume 2,200 pounds of cereal annually in the form of chicken, beef and other animal products, apart from the 150 pounds we eat in the form of bread and breakfast cereals."

Dean Shaw is among the experts who predict that millions of people will die of starvation, unless food production increases in underdeveloped countries, a statement which isn't new but is still surprising, considering that only a couple of years ago humanity was celebrating the first landing on the moon.

He says that the major contribution his Faculty can make to the world's food problems is to train food experts. "Our primary product — if you want to think in those terms — is the Bachelor of Science graduate in Agricultural Sciences," he said.

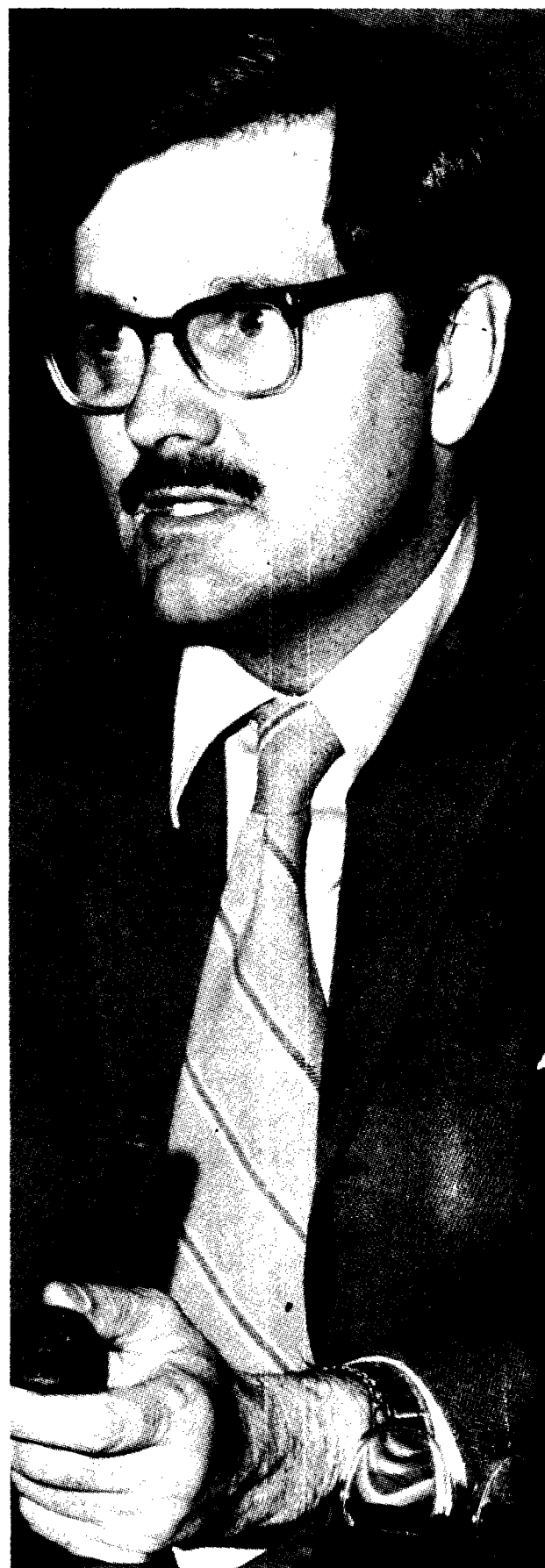
Perhaps anticipating the new awareness of agricultural problems, student enrolment in agriculture has increased in the past few years. Enrolment in every school and faculty of agriculture across Canada increased this year, Dean Shaw said, and job opportunities for agricultural science graduates are better than for graduates in general science.

The other contribution of UBC's Faculty of Agricultural Sciences, after teaching, is research. Dean Shaw said that research in his Faculty covers a variety of subjects, many of which can be applied all over the world. But the majority of projects aim at problems of the agricultural industry of B.C.

At an international and particularly third-world level, many projects aim at increasing the food supply of populations which will and are experiencing starvation.

Dr. Shuryo Nakai has developed a substitute for soybean protein in simulated meats and other foods. The price of soybeans, a lot of them produced in the U.S., has skyrocketed to the point where wheat protein is now much cheaper. But no one has been able to find a way of using wheat protein in simulated foods.

Dr. Nakai, an associate professor in UBC's Department of Food Science, has discovered a method of using both wheat protein and whole wheat flour in simulated meats and dairy products. He has also found a method of enriching the newly simulated milk by adding rape-



Dean Michael Shaw

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CHANCELLOR N.T. NEMETZ



PROF. WILLIAM ARMSTRONG



PROF. CHARLES BORDEN



PROF. ROY DANIELLS



DR. JOHN McCREARY

UBC will honor retiring Chancellor

The University of B.C. will confer honorary degrees on its retiring Chancellor and four other persons closely associated with UBC's academic and administrative life at Spring Congregation ceremonies in May.

The honorary degrees, approved by UBC's Senate, will be conferred on May 28, 29 and 30.

The Hon. Nathan T. Nemetz, Chief Justice of the Supreme Court of B.C. and Chancellor of the University since 1972, will be awarded the honorary degree of Doctor of Laws (LL.D.) on the last day of Congregation.

On the same day, Mr. Nemetz's successor as Chancellor, Mr. Donovan Miller, will be installed in office for a three-year term.

In addition to Mr. Nemetz, honorary degrees will be conferred on:

- Prof. William Armstrong, former deputy president of UBC, who is now chairman of the Universities Council of B.C. created under the new *Universities Act*;

- Dr. Charles Borden, Professor Emeritus of Archaeology at UBC and a pioneer in the excavation of ancient Indian archaeological sites in B.C.;

- Prof. Roy Daniels, University Professor of English Language and Literature at UBC and one of Canada's foremost English scholars; and

- Dr. John F. McCreary, Co-ordinator of Health Sciences and former dean of Medicine at UBC, who is credited with the development of new concepts in health education.

Here are brief biographical notes on each honorary degree recipient:

The association of Chief Justice Nathan Nemetz with UBC extends back to the early 1930s, when he enrolled as a student at UBC. After graduating with honors in history in 1934 he joined a law firm as a Vancouver School of Law student and was called to the bar in 1937.

NAMED TO BENCH

After a distinguished career as a practising lawyer and appointment as a King's Counsel in 1950, he was appointed to the bench in 1963 as a Justice of the Supreme Court of B.C. He was named Justice of Appeal in the B.C. Court of Appeal in 1968 and Chief Justice of the Supreme Court of B.C. in 1973.

He was elected president of the UBC Alumni Association in 1956 and the following year became a member of UBC's Senate representing the Alumni Association. He was elected by Senate to the Board of Governors of UBC in 1957 and served as a Board member for 11 years until 1968. He was Board chairman from 1965 to 1968.

He was elected Chancellor of UBC in 1972 and in this capacity again became a member of both the Board of Governors and Senate. Although eligible for another term of office as Chancellor he chose not to be a candidate for the post because of the heavy work load involved in the post of Chief Justice of the Supreme Court.

Chief Justice Nemetz is also widely known for his activities as an investigator and arbitrator in the field of industrial labor disputes. He has conducted a number of labor studies on behalf of the provincial government and his work as an arbitrator has succeeded in averting strikes in a number of major B.C. industries.

Prof. William Armstrong, the chairman of the new Universities Council of B.C., had a distinguished career as a scholar, teacher and administrator before leaving UBC in 1974 to assume his new post.

A graduate of the University of Toronto, Prof.

Armstrong joined the UBC faculty in 1946 as an associate professor of metallurgy. He became head of UBC's Metallurgy department in 1964 and dean of the Faculty of Applied Science in 1966. In 1968 he was named deputy president of UBC.

Prof. Armstrong's reputation as an educational statesman rests on his ability to bring people of varying interests together to form new ventures. He has been involved in the establishment of major scientific projects in Canada and abroad.

He played a key role in the formation of TRIUMF, the consortium of universities that developed the \$35-million cyclotron now in operation on the UBC campus and served as chairman of the project's board of management.

He has served as chairman of the board of directors of the Canada-France-University of Hawaii project to build a 144-inch telescope on the island of Hawaii, which will give Canadian astronomers access to one of the largest and best-situated telescopes in the world.

NATIONAL SERVICE

Prof. Armstrong's role in education and science policy has been at both the provincial and national levels. He has served on numerous committees of the National Research Council and is a former member of the Science Council of Canada.

At the national level he has served on the board of directors of the Association of Universities and Colleges of Canada and was a member of the Committee on University Governance established by the B.C. government in 1973 to recommend changes in the *Universities Act*.

For his work in the field of metallurgy, Prof. Armstrong last year received the Alcan Award of the Metallurgical Society of the Canadian Institute of Mining and Metallurgy and was named a fellow of the American Society of Metals for "distinguished contributions in the field of metals and materials."

Prof. Charles Borden joined the UBC faculty in 1939, initially as an assistant professor in the Department of German. His previous training in the field of archaeology and his interest in the prehistory of the Indians of B.C. led him to initiate a survey of ancient Indian village sites soon after he arrived in Vancouver.

He discovered a number of sites near the UBC campus on Point Grey and at the south end of Granville Street in Vancouver. He excavated several of these sites and in 1948 began lecturing in archaeology at UBC.

The excavation site most closely linked with Prof. Borden's name is the so-called Milliken site, near Yale, B.C. The site, excavated by Prof. Borden and UBC colleagues over a period of years, has proven to be one of the most important archaeological sites in North America, with a record of human habitation stretching back more than 8,000 years.

Students reminded to submit cards

The UBC Registrar's Office again reminds students who expect to graduate this year that they must submit Application for Graduation cards as soon as possible.

Students are responsible for applying for their degrees so that a list of candidates for graduation may be compiled for submission to the Faculties in which students are registered and to the Senate, which grants all degrees.

Students in Arts, Fine Arts, Commerce, the Licen-

More recently, Prof. Borden has been in charge of the excavation of an ancient site on the Musqueam Indian Reserve, near the UBC campus, which has yielded some valuable artifacts.

As a result of these activities, Prof. Borden has accumulated some 90,000 items from the prehistoric period of B.C. Indian history. Many of these artifacts will be on display in UBC's new Museum of Anthropology when it opens later this year.

Prof. Roy Daniels joined the UBC faculty in 1948 as head of the Department of English after holding a similar post at the University of Manitoba.

In 1965 Prof. Daniels was named University Professor of English Language and Literature at UBC, a post designed to recognize his contributions to scholarly studies in English literature and his activities as a poet and writer.

In addition to being the author of two volumes of poetry, Prof. Daniels has written extensively on Canadian literature. He is perhaps best known, however, for his studies in 17th century English literature, particularly the work of the poet John Milton.

He has written a number of books on Milton and various literary and artistic movements in the 17th century.

Prof. Daniels is a former president of the Royal Society of Canada, this country's most prestigious academic organization, and has also served as chairman of the Humanities Research Council of Canada.

Prof. Daniels has been the recipient of a number of honorary degrees from Canadian universities in recognition of his activities as a scholar and writer.

Dr. John F. McCreary has been associated with UBC's Faculty of Medicine almost from its inception in the early 1950s. He joined the UBC faculty in 1951 as head of the medical school's Department of Pediatrics and pediatrician-in-chief of the Health Centre for Children at the Vancouver General Hospital.

NAMED UBC DEAN

In 1959 he was named dean of the Faculty of Medicine, a post he held until 1972, when he became Co-ordinator of Health Sciences at UBC.

Dr. McCreary has been a key figure in the development of UBC's Health Sciences Centre, which is designed to centralize and co-ordinate the training of all students in the health sciences, including doctors, dentists, nurses, rehabilitation specialists, pharmacists and students in allied paramedical groups.

A major goal of health sciences centres is to train health professionals to work more efficiently as a team in the delivery of health care. Treatment of the majority of diseases now involves a variety of health professions and this means that professionals can no longer operate in isolated disciplines.

Dr. McCreary was a pioneer in the concept of health sciences centres and his work in this area has resulted in the development of a number of integrated training centres across North America.

tiate in Accounting program, Elementary and Secondary Education, and Science should have received cards by mail. Any student in these categories who did not receive a card by mail should confirm with the Registrar's Office that his or her mailing address is correct.

Students in the graduating year of all other degree programs, except Graduate Studies, can obtain Application for Graduation cards from Faculty offices. Graduate students can obtain cards from their advisors.

Six of the twelve members of the new Universities Council, which visited UBC on Jan. 27, listen attentively as Prof. Hugh Wynne-Edwards, head of the Department of Geological Sciences, explains a complex piece of research apparatus in the new Geological Sciences Centre. Council saw a variety of new and old UBC buildings on the morning of Jan. 27 prior to holding an afternoon public meeting on campus. Council members are, left to right, Ms. Rita Macdonald, Prof. William Armstrong, Dr. Frances Forrest-Richards, Ms. Betty McClurg, Ms. Dorothy Fraser, and, in doorway, Mr. Randolph Harding. Picture by David Roels.

COUNCIL HEARS UBC OPINION

Questions concerning university involvement with the larger community dominated the first public meeting of B.C.'s new Universities Council, held on the UBC campus Monday, Jan. 27.

The 2½-hour meeting was preceded by a morning tour of the campus and an inspection by the Council members of some of UBC's newest and oldest buildings. Council members also met members of UBC's new Board of Governors, deans and other University officials at a luncheon.

Only about 60 persons attended the public meeting, held in the Instructional Resources Centre. However, the audience included a spectrum of faculty, student, staff and administrative leadership, and a number of issues of deep concern to the University community were discussed.

A verbatim transcript of the meeting is available from the Department of Information Services. What appears below is a heavily edited version of this transcript, in which the sequence of the discussion has been rearranged so as to group questions and comments under a number of themes.

Council's function

Prof. W.M. Armstrong, chairman, Universities Council: The Council is a relatively new organization and was established under the new *Universities Act* passed in 1974. Council takes over the functions, in a general way, of the (financial) Advisory Board and the Academic Board in the old act, but with considerably wider powers.

The Council was named on Oct. 15. Since that time it has had seven meetings, mainly concerned with budget submissions from the universities, and has made recommendations to the minister (of education) based on those submissions.

Council is now setting up four committees required under the act, with fairly extensive powers, and we'll also, I'm sure, set up ad hoc committees to provide more input for Council decisions. Certainly there will be a committee on continuing or extension education, probably a university/college liaison committee, committees of this kind which are not mentioned in the act.

Council will also be carrying out independent research studies. At the moment, for instance, they're carrying out one on student housing and daycare on the public campuses. Various committees are going to provide the routes for academic and community input to the Council, and the committee membership will certainly have many people from the academic community involved; at least, this is my hope.

Today we are interested primarily in your advice and your opinions regarding areas in which we can assist the universities and the community in the field of post-secondary education. This isn't a normal Council meeting with a controlled agenda. This is a public hearing, if you wish, in which we would like to receive input from the audience.



Part-time studies

Dean George Volkoff, Faculty of Science, UBC: I'm wondering whether the Universities Council is planning to undertake some sort of a study on the demands throughout the community for continuing and part-time education. We have been challenged in the past year by the premier to move in that direction.

The Faculties of Arts and Science got together to plan a program. It is very difficult to duplicate all the offerings of the multi-faceted University on a part-time basis, so four degree programs were picked in the Faculty of Arts and four in the Faculty of Science. We said that if we're going to go into part-time B.Sc. and B.A. degrees, you have to give assurance to a student that it's going to be possible for him over a period of years to complete a program on a part-time basis.

In order to carry out these eight programs, and we tried to pick the less expensive ones, it turned out that as you develop this program, eventually you'd run into about \$1 million a year to operate enough courses on a rotating basis to do it. For the first year it would cost about \$250,000. We got \$100,000 and no assurance for future support.

So we are mounting a bit of the program that we planned. And at the moment we're disappointed that the response to it hasn't been all that great. Classes that we put on in the evenings are populated largely by people from the daytime program who either like to hold a part-time job or like to get all their courses over on Tuesday to Thursday and then have the weekend free from Friday to Monday inclusive.

As for what you might call the genuine part-time student, where we have been told they're waiting outside in large numbers, we haven't succeeded in attracting them.

Now, I'm not saying they're not there. I think what is really needed is what might be called a market survey, to go out and find out how many of these people there are waiting for the part-time education. And on the basis of that, then, somebody has to make a decision as to how much money you're prepared to spend in introducing new programs.

Prof. Armstrong: You're reinforcing many of the things that members of the Council are most interested in. Dorothy Fraser (a Council member) has been asked to convene a committee on extension or continuing education. We're finding it isn't only the universities that are concerned about this, but also the colleges.

It's fairly obvious that a study in depth of this whole field will be needed, and certainly the Universities Council is quite prepared to carry it out.

Ms. Betty McClurg, Universities Council: If government policy — and that's the way I read it — is to provide continuing education, for the universities to be going out into the community, then I think it is the responsibility of the Universities Council to approve and for the government to make available additional funds for these programs.

Dr. Donald MacLaurin, Universities Council: There are some fundamental questions that have yet to be answered.

Why do we talk in terms of part-time study? Why do we have rules that say to be a student at university you must carry so many units, and you must do this and you must do that?

I think that all these questions should be re-thought through our Senates and through our various academic components of the university structure. I do think we tend to compartmentalize our views about study at the post-secondary level.

I suggest that it should be possible to be just a student and that you should be able to study at any public university at a rate that is suitable to you and compatible with your other avocations. In order to do that there will have to be some major changes in the rules and regulations.

Dr. William Webber, Department of Anatomy, and member, UBC Board of Governors: In respect to the limits of a purely administrative nature on admission of students on a part-time basis, this has been a matter of concern to the Senate of this University for the past several years. I think we have moved a considerable distance in the direction of eliminating unnecessary restrictions, with respect to residence requirements and things of that sort, for part-time students.

Prof. Robert Clark, Office of Academic Planning, UBC: We've had a very remarkable increase in the last two years in the number of part-time students, who come to take courses up to 4:30 in the afternoon; we use a definition of extra-session students for those who come for evening courses.

We've had an increase from 1972-73 to this year — that's a two-year period — from just under 1,200 to over 2,500 part-time students. Our forecast is that these numbers will continue to grow substantially. There has not been a corresponding growth in the number of evening students.

Continuing education

Ms. Dorothy Fraser, Universities Council: As convenor of a (Council) committee on adult education, I'd like to give you a rough outline of what we hope to take up at our next meeting:

"The committee should consider the needs of the people of the whole province for university-level courses; relation of present courses to these needs; availability of courses; methods for encouraging people to take such courses; co-ordination among the universities about the courses offered and the territories served; defining responsibilities of universities and colleges; feasibility of combining part-time university education with part-time work; survey of some successful schemes elsewhere; expansion and/or changes; financial implications."

We should be very happy indeed to have additions to the list.

Prof. Joseph Katz, Faculty of Education, UBC: In France, where continuing education is referred to as a recurrent education or permanent education, they have

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introduced the practice where anybody working in business or industry is permitted to take two weeks, a month, or six weeks or more, on full pay, in order to attend any educational institution that is related to their work.

I think this is something we might do in order to broaden the base of the people who attend our educational institutions. There are too many in our population who are working, who do not have the opportunity to attend, not necessarily because they don't want to or that business would not be prepared to co-operate, but because we need a much greater degree of flexibility in our educational system.

Mr. Martin Kafer, Department of Physical Plant, UBC: I'm a member of the University community as well; the forgotten third group, the employees.

I thought it was great to hear the chairman of the Council mention educational opportunities for employees in general. I hope the Council, when the universities come and ask for funds so they can send the employees to get that education, will look upon it kindly and open their pocket. We'd be very happy, because many of us have in fact contemplated such studies. Some of us have been able to swing it, and others just have to forget about it.

Ms. Pat Thom, Centre for Continuing Education, UBC: Continuing education tends to be synonymous with credit. For many years it's been our desire to develop as many credit part-time continuing education programs as possible but this has not been all our work.

We have another very important function, which takes up a great deal more of our time. And that is non-credit, non-traditional, informal education programs. The Centre for Continuing Education at UBC continues to make a major contribution in this type of education which, because it doesn't fit into any neat category, tends to get overlooked.

In your discussions about continuing education, please give special heed to this very important area which extends the University to the community. It has been traditionally self-supporting; 75 per cent of our budget comes from programs which we mount.

Mr. Gerald Savory, Centre for Continuing Education, UBC: Many of us in Continuing Ed were encouraged by the statements of the premier, encouraging the universities to get out and do some leading. Particularly in the area of non-credit education, various segments of the community are looking to the universities for some leadership.

I do some work that relates to the local level of government, working with municipalities. They're looking for assistance in coming to grips with the problems they're facing as municipal councilmen. And because the universities are the repository of certain kinds of expertise, and because they, unlike the colleges, generally do not have a territorial area which they are expected to serve, it seems to me important that the universities acknowledge this special relationship and special responsibility.

Prof. Gideon Rosenbluth, Department of Economics, and member, UBC Board of Governors: This whole business of part-time education, evening education, continuing education — which is not one problem but a whole range of problems — has a lot of potential dynamite in it and must be handled carefully.

Dean Volkoff asked about a survey to determine what the needs and demands for all these various activities really were. None of us have any doubt that they're real. But we also know that they cover a variety of educational efforts, starting with basket-weaving, that have to be properly allocated between the night schools run by school boards, the colleges, and the universities.

And there are some allocations that make sense and others that don't. Of course, everybody wants the prestige of university courses for whatever they're doing, no matter what the intellectual level. But it isn't necessarily efficient to force on universities a variety of activities regardless of their intellectual level. So this is a matter into which we should go slowly and with care.

Ms. Betty McClurg, Universities Council: I would like to assure the last speaker that the Council has no thoughts, to my knowledge, of suggesting that basket-weaving should be a degree program in a university. There may be something I haven't heard of yet, though.

Decentralization

Prof. Armstrong: One of the things that concerns me in the field of continuing education is that people who have been out of the education system for a few years seem to be intimidated by campuses in the formal sense. They're reluctant to return to a campus environment to continue their education.

We need to have decentralized learning centres, probably in the downtown area of the city, away from

the campuses, to introduce these people into a learning situation again. A certain conditioning program seems to be required for at least a year or so before they come back into the system.

Mr. Bernard Gillie, Universities Council: I'm a graduate of UBC, back in the mists of antiquity, and I certainly understand why anybody would find this place intimidating. I'm sure there must be people who disappeared into this campus years ago and have probably never been seen since.

I suggest the size of institutions of this kind is something that needs examination. I have nothing against UBC and its reputation is unsurpassed. But I do think that size is a factor. And I think that one of the things that mitigates against the effective acceptance of university education by the public at large is being confronted with a complex and expanded type of operation such as we have here.

Ms. Dorothy Fraser, Universities Council: One of the most successful extension courses ever given by UBC was Living-Room Learning, which went throughout the province, with local instructors. It was a casual, living-room-type thing, the informal type of thing that adults like. They didn't have the intimidation of campuses.

This was cut off in the flower of its youth by a previous administration. I was very sorry about this because even in a little tiny place where I lived we had three groups going.

Ms. Betty McClurg, Universities Council: I think that probably we all agree that one of the problems of our university system is that we are not decentralized; that people don't feel that they can just drop into a university; that if they have something they particularly want to learn, universities aren't the place for them; that they are for academics, they are for a certain elite.

Maybe the problem is that the universities haven't gone out to the people. I think that was one of the reasons why the Universities Council was set up. I hope one of the things we'll be able to do is encourage everyone who feels they have a need to benefit from a university's education, and for universities to go out there, in the world, as it were.

Dr. Webber: While there are obvious drawbacks to too large an institution, on the other hand it does make possible a greater diversity of programs. At the simplest level it means there are more options open to the student at such an institution than it would be possible to mount at a smaller institution.

I would hope to see a fairly wide diversity of type of institution to allow the individual to seek one which best meets their particular needs. But I think there's no doubt that there is a need for the major, broadly-based type of institution such as this one.

University autonomy

Prof. Joseph Katz, Faculty of Education, UBC: There are questions I would like to raise. The first is the question of duplication among the post-secondary institutions in the province. Mention has already been made of this in connection with continuing education but I believe it's a matter which could also be examined with respect to undergraduate and graduate programs.

The second question is that of articulation among the institutions. The educational system is made up of various levels. There's a tendency to look on these as fragmented and separate entities and to forget that together they really form the warp and woof of one institution.

The third question is that of universal credit. Students registering with a university or community college generally have to stay within the single institution to be given credit or to achieve a degree or a diploma. I think we could introduce a considerable measure of flexibility if there could be some kind of agreement — this would be a matter for the Universities Council to examine and recommend — to have students take whatever courses they saw fit and to have all this become part and parcel of whatever degree they wish to achieve.

Mr. Hamish Earle, former student ombudsman, UBC: Professional courses at universities have external criteria of excellence; Arts courses may not. Would the Council guide universities to an external assessment in all final examinations? I feel that the system used in other countries might be expedient, whereby Oxford teaches, Cambridge evaluates.

Mr. Franklin E. Walden, Universities Council: One thing that strikes me is the altruistic comments that have been made by faculty members here. I wonder if it means that the people in this university would be satisfied to give up their autonomy to a more senior body, to some validating organization?

Do you really mean that there could be a shopping basket, or that some body such as the Council could pick courses around the community at large and indicate



Members of UBC's academic and administrative staff who addressed the Universities Council during a public meeting on campus on Jan. 27 included Dr. William Webber, seated at extreme left, associate dean of Medicine and a member of the UBC Board of Governors elected by the faculty; Ms. Pat Thom, standing at microphone, director of the Daytime Program in the UBC Centre for Continuing Education; and Dean George Volkoff, seated at right, head of the Faculty of Science. Picture by David Roels.

to UBC that they might grant a degree on the basis of courses over which they didn't have control?

Prof. Katz: I believe there is a place for a degree-granting institution to which each of the universities would give up a measure of autonomy. The Open University concept would have a better chance of achieving success and of presenting a province-wide image that would be acceptable and provide comparability with the regular university student, and for this reason I think it would be viable.

This would be a challenge to the present universities, to see what extent they are prepared to give up that measure of autonomy in the interests of a much wider population than presently participates.

This body would take perhaps a stronger stand in reaching out to the public, to all levels, all age groups, all interests, without in any way jeopardizing the present interests and constituencies of universities and colleges.

Prof. Robert Clark, Office of Academic Planning, UBC: Are we willing to give up our autonomy to a validating body? That is a difficult question. It's not a case of conflict between those who regard this as an intellectual fortress which is threatened with attack from without, and those who would tear down the fortress walls and say to all, 'come in, because if you don't we're coming out to you.'

I think there is a conflict between the priority that most faculty members put on research as compared with teaching, including non-credit courses.

I wouldn't personally favor one central degree-granting body for the province. We have to be continually re-thinking what it is that a degree stands for, but we are proud of what they have come to stand for in this province. I cannot believe that if there were one central body granting degrees they would enjoy as high a reputation as what we now have at this University.

I am not, by implication, denigrating the quality of degrees of other universities, but I feel that they should have the same right to determine what they mean by degree as we do.

I am dissatisfied with the degree of co-operation among universities in working out their academic priorities and what a degree will represent. One of the great public benefits of having a Council with you people on it will be the stimulus, the prod from behind, to promote a greater degree of co-operation among the universities.

Mr. Svend Robinson, student member, UBC Board of Governors: Too often, I think, the word autonomy has been used by people as an excuse for complacency and self-interest. Autonomy of an educational institution is fine, as long as it is a private institution. But UBC, the University of Victoria, and Simon Fraser University are public institutions and must be prepared to meet the needs and demands of the public.

Autonomy implies that in some way it should be just the people at the universities who decide what those are. And the people at the universities are primarily faculty. Now, faculty so far, and administrators, have been making most of the decisions. That is not good enough.

That is what autonomy has meant so far and that is why I welcome the Universities Council.

I think it's about time that the wider public interest is focussed on the universities and that the people of the province, through the Universities Council, can say, 'these are some of the things that we want to see done.'

An example of something which many people consider to be interfering with university autonomy was Premier Barrett holding the line on the budgets of the universities last year and saying 'look, you people, come up with innovative programs and we will give you extra money.' Now, for the first time, people over 65 were able to attend university free of charge, and this was a very successful program.

These kinds of innovations can only come about because of external pressure and it's the kind of external pressure that you on Council should be putting on the universities if you feel they aren't meeting public needs, that the universities should welcome.

Prof. Gideon Rosenbluth, Department of Economics, and member, UBC Board of Governors: There is certainly a widespread view among faculty members that the existence of this Council, with the powers that have been given to it, represents potentially a serious possible threat to the quality of British Columbia universities, and the only thing that stands between us and the realization of this threat is the good sense of the Council and its chairman, which I am sure will continue to prevail.

Universities are distinguished from other institutions of post-secondary education, such as dancing schools, by the combination and mutual integration of the teaching and research functions; by the intellectual level at which teaching and research is supposed to take place; by the fact that both teaching and research perform a critical function, that the criticism of existing institutions is part of the duties of universities; and by the fact that research carried out at universities is curiosity-oriented and motivated research, which is not carried on anywhere else.

It's an old question as to how you integrate the need for this internally-motivated intellectual activity with the fact that the money comes from public sources and that there has to be public accountability. The standard solution is a system of a largely external board and a largely academic Senate. And there really is no evidence that the system has worked badly.

Yes, many faculty members are worried about a possible loss of autonomy. I think they are right in being worried. I think they are right in being worried about the possible loss of autonomy to students. It is perhaps our fault that we have not educated students to a level where they understand what universities are about, and perhaps that is something that we ought to work on.

So my plea is that the Universities Council use its powers with wisdom and moderation and attempt not to destroy the intellectual qualities of universities.

Student housing

Stefan Mochnaki, chairman, Student Housing Committee, Alma Mater Society, UBC: Various studies being undertaken by the Universities Council and the (UBC) President's Ad Hoc Committee on Student Housing will statistically prove the need for more student housing. Because of the acute and worsening shortage, new housing must be provided as soon as possible. It should be multi-purpose, allowing for alternative uses in the event of high vacancy rates in the future, or during summers.

A number of solutions have been discussed. The most obvious one is new residences on campus. However, it would be two or three years before a new residence could be ready for occupation. The capital outlay for 1,000 or more students would be in the vicinity of \$10 million.

Another project we're involved with is self-help housing. But this is obviously not a mass solution.

Buying existing buildings could provide an instant solution; one possibility is buying and converting hotels.

Subsidy of landlords could be done. It's done a lot in England. A subsidy to tenants without rent control is not desirable.

It appears now that the provincial government must get into the picture much more than previously and that we do need something done fast. The situation next September is going to be worse than it is now, because the vacancy rate in Vancouver is dropping and the enrolment is predicted to increase.

Prof. Armstrong: As you know, a study of student housing needs is the first major study that Council undertook, because the need is obviously a very serious one. The report of Council on the housing problem is approaching draft form. It will then be submitted to

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Giving their undivided attention to Mr. Neville Smith, head of UBC's Department of Physical Plant, during recent visit by members of the Legislative Assembly to the UBC campus are, left to right, Ms. Pat Chubb, a member of UBC's new Board of Governors appointed by the provincial Cabinet; Hon. Eileen Dailly, Minister of Education for B.C.; Ms. Heather Freeze, executive assistant to Mrs. Dailly. Mr. Smith is shown pointing out highlights of campus master plan on campus model located in the Planning Division of Physical Plant. Picture by Jim Banham.

President-designate plans to 'run fast'

The next president of UBC plans to "run fast."

Those are the words of Dr. Douglas T. Kenny. The president-designate told 18 MLAs visiting the University that he intends to accomplish his aims as president within a certain period of time.

The tour and Dr. Kenny's luncheon talk to the MLAs, faculty members and students in the Student Union Building touched upon what have become classic themes in the role of the university in society.

Relations between the university and the community, access by citizens to the benefits of the university and the balance between teaching and research were among the points explored by the MLAs and Dr. Kenny.

The MLAs represented each of the four provincial parties and included the Hon. Eileen Dailly, Minister of Education; Social Credit party leader Mr. William Bennett; and Dr. Scott Wallace, leader of the Progressive Conservatives.

During the visit, sponsored by UBC's Alumni Association, the MLAs were given conducted tours of TRIUMF, the \$35-million cyclotron or atom smasher which recently went into operation, and UBC's Dairy Cattle Teaching and Research Unit, on the South Campus.

They also toured the Instructional Resources Centre and its electronic teaching facilities, and the Sedgewick Library, and saw the large-scale model of the University in the Department of Physical Plant.

After lunch the MLAs split into groups and met with faculty members who specialized in areas, such as ecology, forestry, agriculture and applied science, which the MLAs wanted to know more about.

At the luncheon Dr. Kenny outlined his educational goals. He said he will defend the right of freedom of inquiry and speech of students and faculty members. Without this freedom, the University would not be what it is today, he said.

He will do his utmost to maintain a high quality of teaching, Dr. Kenny said. The educational opportunities of future generations depend on the quality of education that is maintained now. Central to the question of education standards, he said, is the quality of teaching and research done by faculty members.

UBC faculty members are naturally influenced by work done at other universities, he said, so there is always the possibility of other institutions raiding UBC.

"We must recognize that we must be competitive," the president-designate said, "and that faculty members are very expensive people."

"But this doesn't mean that faculty members may be allowed to become complacent. My job will be to shake up the deans so that we can maintain the quality or standard we think is important to keep."

Dr. Kenny said he would try to reconcile the University's contributions to the needs of society with the responsibilities of faculty members to do their own work.

"Besides the need for a university to protect its own autonomy, a university has a responsibility to society at large," he said. Universities would be remiss if they didn't concern themselves with the injustices of the world.

Though it must respond to the community's needs, the University must decide what its long-term academic priorities are. Universities should not be involved in "toaster-repairing," he said, activities which can be better carried out by other organizations and which don't take advantage of the intellectual and research capabilities of the university.

LETTER TO THE EDITOR

Dear Sir:

I enjoyed meeting with members of your staff at the MLAs' tour of the UBC campus.

As you no doubt are aware, in past years the members of the UBC community have travelled to Victoria to meet with MLAs and, at the suggestion of our caucus, the format was changed to bring the MLAs to the campus. I am certain that all the members of our caucus found this format to be far more useful, and I have written Dr. Kenny to suggest that he continue inviting us to the campus for future sessions. You may wish to know that Hugh Curtis had hoped to attend the tour but represented the caucus at the funeral of Ned DeBeck and was unable to attend.

Yours sincerely,

W.R. Bennett,
Leader of the Opposition,
Legislative Assembly.

STUDENT HOUSING

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Council for discussion and then sent to the minister of education who will probably produce it as a public document.

The study is essentially finished. It's been a very difficult problem for us. We have had tremendous trouble getting any hard data on student housing needs in this area. We still feel we're short of certain types of data. I think, however, the evidence is piling up to support many of the points that you have made and this study is being pushed just as fast as we are able to push anything. The report should be available within the next few weeks.

Prof. Clark: A brief footnote in support of what has been said about the urgency of the housing situation: Our preliminary forecasts of enrolment show a very substantial increase for this coming year. It is my considered opinion that there will be more than 1,500 additional students coming to the campus during the daytime next fall.

Degree shortcuts

Dr. Edward Sallin, research director, Inter-Institutional Policy Simulator, located at UBC: There's a class of student that I really haven't heard any concern for, and that's the potential student who's faced with the lack of that carte blanche known as the baccalaureate degree.

Perhaps because I've spent maybe half my time out in the grey, grim world of commerce and half in the University, I've become very sensitive to the recruiting methods and requirements that are established in industry. Often, for lack of any better judgment, it's blind adherence to the philosophy that the baccalaureate degree presupposes something.

What about those adults who, at some point in their lives found themselves out working and now find themselves at "the end of the line" professionally, unless they have that piece of paper? How do they go about seeking that baccalaureate degree if they don't fall into the mainstream of students?

I'm not proposing that the University become a mill for the production of pieces of paper. On the other hand, for those people who must remain gainfully employed, the idea of earning a baccalaureate degree over an eight-year period is really not a very practical program.

One minor suggestion that I have is that we severely re-examine what we mean by earning a baccalaureate degree, and see if there are shortcuts. I could think of many adults who could easily skip the first two years in any university with no ill effects and who would still be, I think, a worthwhile product of that institution.

Elitism

Dr. Webber: The term 'elite' was used (by Ms. McClurg earlier in the meeting). I am not sure whether this is intended to have any kind of pejorative sense or not. I would agree that elitism is undesirable if it implies that irrelevant criteria are used in consideration of admission or advancement in programs.

But if what one means is that there is a level of quality or a level of attainment that has to be expected of university programs, then I don't think that we should make any apologies for striving to mount the highest possible quality programs and for expecting of our students that, for admission to particular programs, they meet a certain set of academic standards.

Prof. Clark: Dr. Webber raised the question of how high a standard we have: Is this place to be regarded in some sense as an elitist institution?

Now that term can be defined in a variety of ways. We did undertake a study in 1971 about the background of all of the students who came for the first time to enroll here, and we found that we accepted 90 per cent of the students who applied to come out of Grade XII in this province.

Mr. Svend Robinson: I was a member of Senate when that study was presented and there was some question of elitism, but I don't think anybody is saying really that the University is denying access to people who are poor. But maybe people are dropping out at a stage before they even start thinking about university.

Mr. Bernard Gillie, Universities Council: Is it correct that there are a large number of students in British Columbia who do not attend university somewhere because of lack of funds?

Prof. Rosenbluth: I don't have any figures on that matter, but my casual impression is yes. I don't know



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how large a number, but I would say it is significant.

Mr. Gillie: Would you believe that the removal of fees entirely would be in the interests of higher education?

Prof. Rosenbluth: That gets us into a more complex issue. I think that the removal of fees would be a thoroughly bad thing and probably fees should be higher. But what we should have is a student loan program that does not involve a student in a risk in case of failure, and a much more thorough and far-reaching program of student grants.

The main cost in going to university is not the fees at all, but the income which you don't earn while going to university. And the main reason why people who might otherwise go, don't go, is not because of the fees but because they can't sacrifice the earned income.

Studies suggested

Mr. Robinson: Have you considered a study of the length of the academic year? UBC right now, I feel, is being under-utilized in the Summer Session. It would seem to me that the Universities Council could conduct



MR. SVEND ROBINSON

a study to determine whether it would be more appropriate, from a public point of view, that the universities are all on a trimester system, such as SFU is, or perhaps some other kind of system to better utilize the available facilities.

Prof. Armstrong: We haven't set up such a study. One was made in Ontario on the full use of the academic year, which really brought out both advantages and disadvantages to the year-round operation. It is something that will have to be considered by Council.

Mr. Robinson: Has the Council set up a committee to look into ways in which women are discriminated against, possibly, or certainly under-represented, at the universities?

Ms. Dorothy Fraser (Universities Council): It has been on my list since the beginning but we have been so busy on the budgets that we have not really got to more general questions yet.

Ms. Bonnie Long, former student representative on the University Governance Committee: I would like to know the Council's priorities with regard to student aid. Will the present aid programs be continued, will aid be made available to part-time students?

Prof. Armstrong: I simply don't know at the present time. We have no investigation of student aid at present.

Institute funds study

A team of researchers from the University of B.C.'s Faculty of Commerce and Business Administration has received a \$41,000 research grant from the Real Estate Institute of British Columbia to conduct a study of housing needs in British Columbia.

The study, which will be co-ordinated by Prof. F.G. Pennance, of the Department of Land Economy, University of Aberdeen, Scotland, who was formerly a visiting professor in the UBC Faculty of Commerce and Business Administration, will cover a variety of areas ranging from the general relationship between income and the demand for housing to the effects of land use controls and rent controls in the supply of housing.

UBC faculty members involved in the project are: Dr. S.W. Hamilton, associate professor and chairman of the Urban Land Economics division of the Faculty of Commerce and Business Administration; and four other members of the division, Dr. Michael Goldberg, Mr. David E. Baxter, Mr. Ab Eger and Mr. David Dale-Johnson.

Dr. Hamilton said the researchers are expected to come up with preliminary findings in May and that a final report is expected by September. The final report will appear in two sections — the first taking the form of a general report based on the research team's findings and the second a technical study fully documenting the material covered in the general statement.

Mr. E.F. Henderson, chairman of the Public Affairs Committee of the Real Estate Institute, said the study "represents an effort by the real estate industry in B.C. to promote some genuine teamwork among all those concerned with the housing situation. We hope that the University's report will act as a catalyst and enable everyone involved in this very complex area to try and solve the problem where it exists."

Mr. Henderson said that last May, at the annual

meeting of the Institute, members approved a voluntary assessment of \$10 for every agent and salesman who belonged to a local real estate board and the realtor division of the Institute.

"That fund was made available to develop a public information program which could acquaint the public, the industry, and government with the facts of the current troubles which are affecting the housing market in B.C. and, in many cases, causing hardship for different segments of the public," he said.

IWY workshop

"Femininity/Masculinity: How Do We Call Off the Game?" is the intriguing title of an International Women's Year event sponsored by the Women's Resources Centre at the University of British Columbia in late February.

The workshop, which will explore the rules of the sex-role "game" and what they do to men and women, will take place on Friday evening, Feb. 28 (8:00 to 10:00 p.m.) and on Saturday, March 1 (9:30 a.m. to 4:30 p.m.) in Lecture Hall No. 1 of the Woodward Instructional Resources Centre.

The experiential exercises and dialogue will be led by Betty Roszak, co-author of *Masculine/Feminine, Readings in Sexual Mythology and the Liberation of Women*; Carol Gordon, free-lance writer; and two members of the Faculty of Education, Dr. John Allan and Dr. Marvin Lazerson.

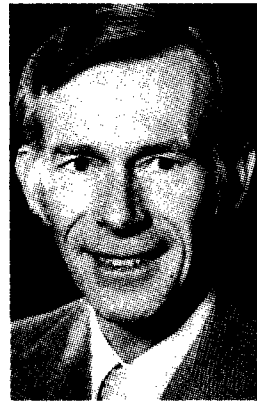
An explanatory brochure may be had from the sponsor of the event, UBC's Centre for Continuing Education, by calling 228-2181.

CONTINUING EDUCATION PROFILES

By COLLEEN BOURKE,
Director of Communications and Promotion,
Centre for Continuing Education.



Jindra Kulich



Graham Drew



Sheila Maxwell

Bridge to community

Last year 23,985 persons joined non-credit programs sponsored by the UBC Centre for Continuing Education. This year, with a record 256 spring programs offered, enrolment is expected to go even higher.

"The excitement of discovery — learning facts, knowledge, abilities — seems to have permeated the modern world," observes Jindra Kulich, assistant director of the Centre.

"Our programs," he continues, "act as a bridge to bring the research and expertise of the University to practical application in the community."

The Centre already has one of the largest daytime program enrolments of any Canadian university, but this year they are offering an even wider choice of times so that more and more people can make learning part of their lifestyle. If night school is not your cup of tea, you can attend a daytime program, a residential weekend retreat, take an intensive crash

course (a Friday-night and all-day-Saturday program to immerse yourself in a particular field of study), or go on a field trip.

Highlights of the Centre's spring programs are many and varied.

Local history and development are covered in two three-week mini-courses entitled **Insights on Early British Columbia**.

Songs of our People; The Rise of Nationalism: Quebec and English Canada; The International Scene, and a weekend film seminar on **Cultures of the World** are some of the opportunities available to understand and appreciate the world we live in.

You can learn to speak modern languages like Arabic and Italian, study Chinook (the trade jargon developed through early Indian-European contacts on the west coast), or take a program in personal development. Personal identity, awareness, skills, and body/mind integration are topics for numerous programs led by members of the Faculty of Education, the Departments of Psychiatry, Psychology, Religious Studies and School of Physical Education. Many special programs of this nature are offered by the

Women's Resources Centre to help women assess their roles in a changing role.

Philosophy and history always figure prominently on Continuing Education programs. New programs this year are **The Sacred and the Profane — Two Philosophies of Life, Genealogical Research** and **Archival Research for the Amateur Historian**.

You can learn about the environment — about weather, forests, birds and ocean life, and there are many "how-to" courses — how to breed cattle, paint, photograph, appreciate great art and literature. The tremendous scope of program offerings is made possible through the enthusiastic participation of faculty members from many UBC departments, often working with off-campus experts in a variety of disciplines.

"Our experience shows that the community is eager to share University experience, but we just create the opportunity. People make it happen," concludes Mr. Kulich.

To obtain a complete listing of Spring programs offered by the Centre for Continuing Education, phone 228-2181.

Agriculture expands

In 1955, ex-poultry farmer Graham Drew (BSA'55, MEd'69) was appointed supervisor of agricultural programs for the Department of University Extension. "In those days," he recalls, "if I put on 18 to 22 programs in a full year I thought I'd done pretty well. To give you an idea of contrast, I've already run 52 programs since September this year, and there will be more before the year is out."

The growth of Mr. Drew's programs parallels the growth of continuing education and particularly of the University's Centre for Continuing Education — created in 1970 to replace the former Extension department.

In 1955, Mr. Drew's agricultural programs were directed mainly at the needs of special producer groups and drew an average 300 enrolments a year. Although these programs have remained important, in the intervening years interdisciplinary programs have been initiated and current registrations are close to 2,000 persons a year.

The title of Agricultural Supervisor has been changed to Director, Resource Industries, to reflect more accurately the Centre for Continuing Education's policy of recognizing and responding to con-

temporary needs. "I guess we were dealing with the environment long before such issues penetrated public awareness," says Mr. Drew. "Management in agriculture, forestry, fisheries, wildlife and mining realized long ago that their problems were inter-related because there is a limited land resource for all the different land uses. It must be 15 years since we put on our first water-quality conference and the Pollution Control Board wondered what we were doing."

Not only has Mr. Drew's work grown in the area of interdisciplinary programs, a new clientele has emerged. There is a growing urban audience for programs in the agricultural sciences. Many city dwellers are acquiring property on which to raise a few head of cattle, sheep or swine; but they know nothing about animal husbandry. The Centre for Continuing Education, in co-operation with the Faculty of Agricultural Sciences, gives short courses such as small-scale beef and swine production, and programs in soil, food, poultry, and plant science for this clientele.

A major boost to Mr. Drew's activities came this year with the provincial government's \$80,000 grant to the Faculty of Agricultural Sciences for innovative programs. For the first time, credit programs in this Faculty are being offered off campus. Many of these programs are open to non-credit students at reduced rates. The success of this kind of programming is

evidenced by **Nutrition, Health and Use of the Horse** (Animal Science 430), which has enrolled 96 non-credit and 55 credit students in a 12-week (1½-unit) program.

"The grant has given faculty members the time and finances to deal with some of the problems we've always known about. It's a big step forward," says Mr. Drew. "In the fall we offered programs on energy, food and the environment so that the general public could become better informed on these critical issues."

As well as his work with the Faculty of Agricultural Sciences as director of Resource Industries, Mr. Drew co-operates and collaborates with many other organizations and government departments at all levels. Among the fascinating programs that emerge from this activity is the illustrated lecture series **Ocean Life of British Columbia** — part of the spring program. Repeated from the fall of 1973, this program introduces the layman to the common forms of ocean life found in the Strait of Georgia and on the open coast.

To occupy his spare time, Mr. Drew is on the national council of the Agricultural Institute of Canada and is chairman of that organization's national committee on public relations and publicity. "I guess if I were three people I'd still be busy," he says.

Creative arts

One of the Centre for Continuing Education's largest and most active program areas is creative arts, directed by Sheila Maxwell. Fabrics, photography and native art rank high among the 40 exciting programs under Ms. Maxwell's direction this spring, but music, theatre, painting, drawing and nature study also form a part of this talented lady's bag of tricks, and fun is a basic component of every program she administers.

"I'd be quite happy to do nothing but to go to my programs — all day long," says Ms. Maxwell. "There's so much creative energy generated on campus, and I find that artists and naturalists are so extremely generous with their time and energy. I like informal people and when it makes them happy to share their talents and knowledge, I just think it's a beautiful world we live in."

Perception of the world we live in is probably Sheila Maxwell's strongest point. She doesn't believe that most people taking creative art courses will come out of the programs as practising artists, but she does believe they will see new things, and in different ways (and she speaks with authority since many former students are among her personal friends).

In her opinion, art is always going to "happen". As long as there are people, some will create, some will perceive. This leads her naturally to develop programs on birds and wild flowers for creative, perceptive people, and to Bowen Island weekends that bring to-

gether the creative arts, talented instructors and natural surroundings. In the Spring program, Bowen Island weekend events include **Paint for the Joy of It**, with Prof. Sam Black of the Faculty of Education; **The Great Composers Visit Bowen Island**, a weekend of listening and learning about Bach, Beethoven, Berlioz, Dvorak, Gershwin, Mozart, and Tchaikovsky, with Douglas Talney of the Department of Music; **Waves 75**, a drama workshop with Doris Chillcott and Jane Heyman of the Department of Theatre; **The Art and Mystery of Wildflower Watching**, with Ros and Jim Pojar, plant ecologists; and **Birds of Bowen Island**, with Neil Dawe, former chief naturalist of the George C. Reifel Migratory Bird Sanctuary.

A highlight among the non-residential programs this spring is **Spend Sunday Afternoon with the Lighdown Family**, a sharing of art, heritage, food and tradition with a unique and talented family of native West Coast artists.

Ever-popular photography courses will this year include two sections of **Photographer's Eye** with instructor Denes Devenyi; **Basic Photographic Techniques** with Duncan McDougall; **Introductory Photography** with Keith Dunbar; choice of a Thursday night series or a Bowen Island weekend with Fred Herzog, head of the photo-cine division of UBC's Biomedical Communications department; and can culminate — for those interested — in a May-June photography tour to Northern Italy and Yugoslavia with Fred Herzog.

For the first evening of a **Tapestry Workshop** you are given a bag with "everything in it but the sheep" — wool, seeds, lanolin — and in the following nine weeks you learn to card, spin, dye, weave and study basic elements of design through illustrated lectures and discussion. This course, offered by members of the School of Home Economics, has had a waiting list since it was first offered five years ago.

Studio courses offered this spring include **Chinese Painting**, **Figure Drawing**, **Perceptions in Painting**, **Printmaking**, and a special **Glass Workshop** to cover basic off-hand glass blowing, furnace and annealer construction for hot glass work. **Experience in Glass** will be a lecture-demonstration following the **Glass Workshop**.

A Creative Arts Open House on April 12 will be a free exhibition of work done by students in creative arts studio courses. Students in the **Photographer's Eye** classes will show and share their work in a free public exhibition April 24. Both shows will take place in the Conference Room, Centre for Continuing Education, UBC.

Many programs are given in co-operation with arts and community organizations outside the University. For example, **Opera Overtures**, given in conjunction with the Vancouver Opera Association's presentations, introduces the prospective audience to the historical background of the opera, its composer and time. **Die Walkure** will be the topic of French Tickner's March 10 **Opera Overture** prior to the VOA performances on March 13, 15, 19 and 22.

Major course changes

UBC's Faculty of Medicine is introducing major revisions to its curriculum.

The University's Senate has approved in principle changes which would encourage introduction of new teaching methods and schedules while retaining the existing general structure of the curriculum.

Among other changes, the result of three years of work by the Faculty's curriculum committee:

- A 45-hour course on social issues in medicine will be introduced in the first year;
- Basic laboratory science and the study of disease in hospitals and other clinical areas will be more evenly distributed throughout each phase of the four-year program;
- Training in the third year will be expanded to include student experience in specialized services in Vancouver such as those concerned with cancer, rehabilitation, venereal disease and arthritis. Other changes in the third year will better prepare students for the fourth year of clerkship or clinical training.

Both Dr. David Bates, dean of UBC's Faculty of Medicine, and Dr. David Hardwick, chairman of Senate's curriculum committee, describe the changes as major. Both said the changes are designed to overcome a problem that has faced most medical faculties in recent years.

Until about 20 years ago, Dr. Hardwick said, most medical faculties taught students in much the same way. In the first years of the curriculum, students were taught basic medical sciences such as anatomy, the study of the structure of the body; physiology, the study of the body's functions; and biochemistry, the chemistry of the body.

Then the students moved out of classrooms and laboratories to hospital wards and clinics where they learned clinical subjects such as pediatrics, obstetrics and surgery.

Both the basic sciences and the clinical subjects were taught along departmental lines, Dr. Hardwick said. For example, students learned of the structure of the lungs in an anatomy class, the function of the lungs in a physiology class, and diseases of the lungs in a pathology class.

"About 20 years ago the first attempt was made at Northwestern University to introduce a systems approach to the medical curriculum," Dr. Hardwick said. "Instead of students being taught a discipline, they were taught a system, such as the respiratory system."

"An attempt was made to teach the students the anatomy, physiology, pathology, medicine and surgery of the respiratory system all at the same time, because all the information was interrelated and interdependent."

Dr. Hardwick, head of UBC's Division of Pediatric Pathology, said that since then medical schools have been trying to accommodate the benefits of the systems approach to teaching. But a common problem many of them have faced is that the faculty members doing the teaching were trained as specialists in various disciplines, rather than in body systems.

He said some schools that have experimented with a total systems program have reverted to programs similar to their original curricula.

The UBC formula will retain the departmental structure of the Faculty of Medicine. Systems teaching, which forms an important part of clinical training, Dr. Hardwick said, will be done by faculty members from various departments.

"I think ours is a pragmatic and balanced solution and I congratulate the faculty members who put it together," Dr. Hardwick said.

Dean Bates described the changes as cautious. "Some medical schools changed their curricula too fast with too little consideration of the probable impact on quality," he said. "Many of them are now in the process of returning to some extent to a more traditional approach."

Dean Bates said the changes would also give the

students more elbow room to pursue topics of interest to them throughout the four-year program.

"Pressure is always increasing to include more areas of knowledge in the medical curriculum," he said. "It is important that students be protected from this pressure as much as possible. They should have the opportunity to organize their schedule so they can learn in depth subjects that interest and concern them."

The curriculum changes also aim at reducing the sharp distinction between the basic medical sciences given in the first years and the clinical subjects given in the final years, Dean Bates said.

"Students will be introduced to clinical work earlier than under the present curriculum," he said, "and a basic science course will be introduced during the third year."

"The course will allow students to receive more in-depth knowledge of basic sciences after they have come into contact with important clinical problems, particularly problems concerned with failure of a vital organ."

The new basic sciences course will not be offered until 1978, he said. Some other medical schools in Canada have planned this type of course, but there is little information now available on which to judge the probable success or failure of this type of program.

Dean Bates said the course on social issues in medicine would include subjects such as death and dying, study of health care systems, community attitudes towards physicians, human sexuality, occupational hazards of being a physician, protection of patient confidentiality, and moral issues such as abortion, euthanasia and human experimentation.

Dr. F.R.C. Johnstone, professor in UBC's Department of Surgery and chairman of the Faculty of Medicine's curriculum committee, which prepared the proposals, pointed out that the present scheduled time in the four-year UBC program is several weeks shorter than the Canadian average.

"The Faculty has now recommended, and Senate has approved, a lengthening of the first year by three weeks, but even with this we will still be running a program shorter in scheduled time than the Canadian average," Dr. Johnstone said.

He said that phased introduction of the new curriculum will give individual departments an opportunity to adjust to it. Even so, the transition from one timetable to another will throw a considerable strain on some departments, particularly Pathology, he said.

"Adjusting the curriculum is an important and continuing responsibility of faculty," Dean Bates said, "but further major improvements will only be possible when new and expanded clinical resources have been provided, and when a way is found to expand the budget available for all clinical teaching."

CANDIDATES SOUGHT

Names of candidates for the post of dean of the Faculty of Arts at UBC are being sought by a ten-member committee chaired by Prof. Peter Suedfeld, head of the Department of Psychology.

The selection committee, which has begun collecting the names of possible candidates, hopes to complete its deliberations in time for an appointment to be made by July 1.

The committee has asked interested individuals to submit for consideration the names of possible candidates, on or off the UBC campus, preferably with a statement of reasons for submitting the names.

Individuals are also asked to submit in writing any general considerations concerning the qualifications to be sought in the person to be appointed, and any matters of general advice to the committee.

Letters of nomination and advice should be sent to Prof. Suedfeld, Department of Psychology, Henry Angus Building.

The committee to appoint a dean of Arts is made up of members appointed by President Walter H. Gage, and members elected by the Faculty of Arts and the student Arts Undergraduate Society.

Presidential appointees are: Prof. Suedfeld; Prof. Cyril Finnegan, associate dean of the Faculty of Science; Prof. Margaret Prang, head of the Department of History; and Prof. Samuel Rothstein, of the School of Librarianship.

The four members elected by the Arts Faculty are Prof. Malcolm McGregor, head of the Classics Department; Prof. Elli Maranda, of the Department of Anthropology and Sociology; Prof. Peter Remnant, head of the Philosophy department; and Prof. A.D. Scott, of the Department of Economics.

The two students elected by the Arts Undergraduate Society are Linda Bartram and Robert Marris.

OCEANOGRAPHY

Continued from Page Two

international Scientific Committee on Oceanic Research in Ecuador, he heard evidence that the weather off South and North America is affected by changes that occur in the Pacific months before.

"There seem to be indications that what goes on out in the Pacific has an effect on the climate of South and North America something in the order of six months later on — quite small changes, changes in the order of a degree or two in temperature over large surface areas of the Pacific."

"Whether the climate of the continents is a consequence of the changes in the Pacific or whether they're both consequences of something else isn't important as long as we can work out the relationship between them."

"We would, in effect, have advance warning of which crops to sow and which not to plant and when to plant them. The weather is still the most important ingredient in the production of food," Prof. Pickard said.

Oceanography, he said, is an applied subject. Oceanographers don't expect their work to uncover new and basic laws. Oceanography applies basic laws already known to the oceans. The understanding that results can be used for practical benefits and predictions.

Shortly after the UBC Institute was established in 1949, studies began on the interaction between the upper layer of the sea and the air above it. This pioneering work led to much of what we know today of the

ASIAN CENTRE

Continued from Page One

during the design process would further reduce what could be done.

"Our committee decided that the facility must go ahead. I assured University officials that the people of Canada would want the building completed as planned and that funds would be furnished to this end."

"Two Canadian governments have given handsomely; Japanese private agencies have matched their gifts; our committee is negotiating with other Asian governments for additional funds. I'm positive that we can count on the generosity of Canadians to raise enough money to complete the project. The last thing we want to see is the building standing as an empty shell until the money is collected."

Mr. Whitehead said that unless the \$1.6 million can be raised quickly, construction will have to halt at the end of March. He made a special trip to Ottawa early in February to try to persuade federal officials to make another grant for the project. If he is successful he will ask the provincial government to match this amount.

The significance of the building as a cultural link between Canada and Japan was underlined last September, when the then Prime Minister of Japan, Mr. Kakuei Tanaka, paid a special visit to the site to unveil a plaque.

"It is most gratifying to see that the Asian Centre is to be established at this University, which has such an active

EXPERT SPEAKS

Dr. William Epstein, a Canadian expert on disarmament, will give five lectures on the campus in February and March as a Cecil H. and Ida Green Visiting Professor.

Dr. Epstein joined the United Nations when it was formed and became a specialist adviser to disarmament commissions. On his retirement from the UN in 1973 he spent a year with the UN Training Institute in New York before becoming a visiting professor at the University of Victoria.

Dr. Epstein's February lectures are as follows: Tuesday, Feb. 11, 12:30 p.m., Room 106, Buchanan Building. Topic: "Is the Arms Race out of Control?"

Wednesday, Feb. 12, 8:00 p.m., International House: "Last Chance to Prevent a Nuclear Disaster."

The Cecil H. and Ida Green Professorships is also sponsoring a visit of the famed Nô Theatre of Japan to the campus in February. The troupe of 11 performers, headed by Nô Master Mr. Sadayo Kita, will give a public performance of "Hagoromo: The Heavenly Maiden" on Saturday, Feb. 15, at 8:15 p.m. in UBC's Old Auditorium. This performance is co-sponsored by the Vancouver Institute.

WORKSHOP SET

Federal and provincial consumer legislation will be discussed on the UBC campus on Feb. 22 during a one-day workshop sponsored by the B.C. Home Economics Association. The meeting will be held in the Student Union Building beginning at 9:00 a.m. Tickets for all sessions and lunch are available from Jan Peskett, Nabob Foods Ltd., Box 2170, Vancouver V6B 3V6 (299-4311).

**UBC
REPORTS**

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turbulence of the air over water. Vancouverites are familiar with the research platform at Spanish Banks where much of this research was carried out.

"There's evidence that a lot of the interaction between the air and water takes place not during light or moderate winds, but during short-duration, strong-wind conditions," Prof. Pickard said. "We're now trying to get data under more severe conditions. Understanding the relationship is very important to weather forecasting, because much of the energy used to push around the atmosphere from one place to another on the globe comes from the sea in the form of latent heat carried by water evaporated into the atmosphere."

Another area of the Institute's research is pollution. Prof. Pickard himself is an authority on the fiords of the western coast of South and North America. Studies on the water circulation in the fiords are important in determining what quantity of pollutants can be safely disposed of in the inlet waters. The deep waters of most fiords mix very slowly, he said, and pollutants added to the fiords would be carried out to sea by the surface waters only.

Prof. T.R. Parsons of the Institute is one of the directors of the Controlled Ecosystem Pollution Experiment (CEPEX), an international project to determine the long-term effects of small amounts of pollutants on life in the sea. The five-year, \$10-million study is taking place in huge test tubes suspended in the water from the surface of Saanich Inlet on Vancouver Island.

Other pollution studies involve mine tailings dumped into Rupert Inlet from the operation of Utah Construc-

tion and Mining Co.'s copper mine at the north end of Vancouver Island, as well as the amount and effect of pollutants brought into the Strait by the Fraser.

Prof. Pickard said there is evidence that the Roberts Bank causeway on the southern part of the Fraser delta might be causing erosion of the delta by the sea.

"The delta has been built up by sediment brought down and deposited by the Fraser," Prof. Pickard said. "Measurements taken in 1973 indicate that whereas the delta has continued to advance in its northern part, there are signs of some retreat, at least during 1973, in the southern part, possibly because of changes of water circulation due to causeways built there."

Work on the behavior of the delta was done by Prof. James Murray, of UBC's Department of Geology, who is a member of the Institute.

Prof. Murray is one of a group of scientists who are doing geological and geophysical studies on sediments and the crustal structure of the ocean floor along the West Coast. This work is important in understanding earthquake activity and in assessing mineral and petroleum resources in the region.

Prof. Murray headed up a group which discovered and analysed nodules of manganese oxide found in Jervis Inlet, about 60 miles north of Vancouver. It was the first time manganese, a valuable mineral used in industry, had been found in western coastal waters of North America.

Prof. Murray, incidentally, says that the decision to ban exploration for oil off the west coast of B.C. is completely irrational. The decision was made because of

the dangers of oil spills, he said. But there is a danger of far greater oil spills from the supertankers which will pass down the coast from Alaska.

A lot of work is done in the Institute on underwater waves. Some of these waves are enormous. The parallel bands of smooth and ruffled waves extending over long stretches of the surface of the Strait, for example, are associated with underwater waves. There is some evidence, Prof. Pickard said, that these waves can mix large volumes of water and generate turbulence, important in dispersing pollutants.

Although they are concerned about threats to the ecosystems of the oceans, most members of UBC's Institute of Oceanography don't predict, as some others do, the imminent death of the sea. They look upon the sea as a relatively untapped resource but are quick to add that much more should be known about the ocean before its resources are exploited.

Prof. Parsons, for example, says that existing technology can provide a much greater amount of food from the sea. The oceans, he says, now provide about 65 million tons of food protein annually, about 20 per cent of the high-quality protein man now produces. He estimates that man can harvest about 300 million tons of protein from the sea a year, much of it in forms not exploited now, without harming the seas' ecosystems.

"We are told that we will have to produce in the next decade twice the amount of food we are producing now," Prof. Parsons said. "The oceans could provide a large amount of the extra food."

interest in, and deep understanding of, Japan," Mr. Tanaka said.

"I sincerely hope that this centre will become a springboard for better understanding of Japan by the Canadian people and that it will provide an impetus to the development of Canadian studies in Japan as well."

The building has also been described by Dr. Barrie Morrison, head of UBC's Institute of Asian and Slavonic Research, as "Canada's contact-point for cultural, intellectual and academic activity with East Asia."

Mr. Matsuba's design of the building is such that, while from the outside it will appear to be sitting tranquilly in a picturesque tree-and-garden setting, it will be a busy cultural and academic facility, housing the University's 170,000-book Asian Studies library, offices for faculty and graduate students in the Department of Asian Studies, and the Institute of Asian and Slavonic Research. There will also be a public area for cultural displays and performances.

All of the academic facilities, with the exception of the main library and the reading room, will be located on floors at or below ground level, some of which will look out onto a sunken garden and reflecting pools.

The bottom floor will contain a music practice room, especially equipped for concerts of Asian music. The floor will also contain academic offices. The next floor will contain a lounge, offices, book stacks, and seminar rooms, including a room which will memorialize the contributions made to Canada by immigrants from all parts of Asia.

On the main floor there will be a 200-seat theatre and meeting room which will be used for all types of musical and theatrical performances. This floor will also house departmental offices, spaces for exhibitions, and part of the library.

The main library and reading room on the mezzanine floor will be an impressive sight to the visitor, with the ceiling rising up to 40 feet. This floor will contain book stacks with collections in Chinese, Japanese, Korean, and

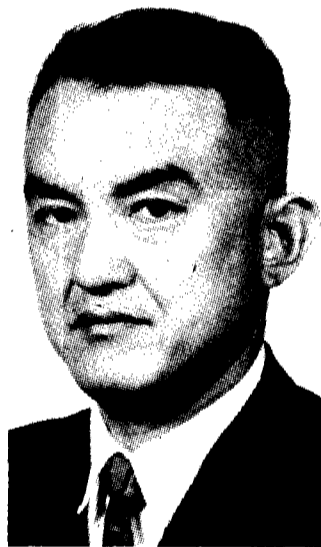
Indian languages, as well as study areas and a small lounge.

Dr. Iida spends a lot of time at the Asian Centre construction site these days, a diminutive figure standing quietly in the trees watching the work in progress.

If he's concerned about the fact that more than a million dollars is still needed to complete the project he doesn't mention it.

Considering the progress that has been made since the day he took it upon himself to pay a call on the director of the Sanyo Pavilion at Expo '70, cyclist Iida figures that from now on the ride is downhill all the way.

Dr. Shotaro Iida



Fund raisers seek gifts to complete Asian Centre

Your help is urgently needed if the campaign to rise \$1.6 million to complete UBC's Asian Centre is to be successful.

Mr. Joseph Whitehead, chairman of the fund-raising committee, says that donations, large and small, are being sought from the general public and business and commercial interests in addition to government support.

"Construction will have to halt if this \$1.6 million is

not raised this spring," says Mr. Whitehead.

Donations may be sent to: Asian Centre Fund, c/o Mr. Joseph Whitehead, Journal of Commerce, 2000 West Twelfth Ave., Vancouver.

If you wish to make further enquiries about the campaign, please phone Asian Centre Fund headquarters at 228-6657.

AGRICULTURE

Continued from Page Three

seed protein, part of the residue remaining after oil has been extracted from the rapeseed. Rapeseed protein is now fed to livestock.

Since rapeseed has a component that might be toxic to humans, he has invented a method of removing 95 per cent of the toxic substance.

Dr. Philip Townsley, another associate professor in the Department of Food Science, is working on the production of coffee and other foods using "meristem" culture. Plant cells from the meristem, or growing tip, of plants are put into a test tube containing ingredients necessary for growth and the cells multiply rapidly.

Using meristem culture, he has grown cells of carrots, potatoes, bush beans, red kidney beans, wax beans, soybeans, cauliflower, artichokes, lettuce, wheat, barley and grapes. He even tried medicinal products such as digitalis, used in treating certain forms of heart disease, as well as food essences and herbs such as licorice, sweet basil, dill, sweet marjoram, thyme, spearmint, and summer savory.

The majority of research in the Faculty, though, is directed at problems of agriculture in developed countries. Dean Shaw, for example, is an authority on the biochemical relationship between wheat rust and the fungi causing the disease. Plant breeders develop plants with genes that carry resistance to certain strains of a disease, but the plants may not be resistant to other strains of the same disease. Since the disease-causing organisms evolve, it's usually only a matter of time before plant breeders have to engineer a new plant variety.

Dean Shaw says there is one area of research concerning Canada's grain industry that hasn't been touched and

should be — development of a natural substitute for nitrogen fertilizer.

"Fertilizer production depends heavily on petroleum and the oil crisis has driven fertilizer prices up. Plants such as peas, alfalfa and clover restore the nitrogen content of the soil naturally, after their roots become infected by certain soil-borne bacteria.

"Cultivating these types of plants used to be an essential component of crop rotation," Dean Shaw said, "so that soil fertility was maintained."

"What I would like to see is work designed to produce a strain of wheat or barley or other cereals that has this nitrogen-fixing ability. If this were accomplished it would have as much impact on agriculture as Louis Pasteur's discovery of the role of bacteria and yeasts in the production of beer had on the science of bacteriology."

As the largest concentration of agricultural researchers in B.C., the UBC faculty's main research concern is the province. Agriculture varies more in B.C. than in any other province. Conditions range from the harsh prairies of the Peace River district through the fruit orchards of the Okanagan to the rich delta of the Lower Fraser Valley, where half of the agricultural production of the province is located.

Though agriculture is the third-largest industry in the province, its importance shouldn't be discounted. Prof. George Winter, head of UBC's Department of Agricultural Economics, estimated four years ago that if the food industries of the province were eliminated, the gross provincial product would be reduced by \$1 billion and more than 130,000 jobs would disappear. The figures would, of course, be much higher today.

Research is being done to control plant and livestock diseases on a number of fronts. One method, for example, is to breed a plant resistant to a certain strain of disease.

Other projects aim at improving animal productivity and reducing production costs. Prof. Warren Kitts, head of UBC's Department of Animal Science, has been feeding wood sawdust to cattle and sheep as part of their diet. The sawdust provides livestock with cellulose, the major component of hay. Tests indicate that sawdust-fed beef is tastier than hay-fed beef.

A few years ago poultry and some other livestock producers noticed a drop in the health and productivity of their animals. The problem occurred in different areas across North America and was diagnosed as vitamin E deficiency. But when vitamin E was added to animal feeds there was no improvement and the cause of the problem remained unknown.

Prof. D.B. Bragg, of UBC's Department of Poultry Science, was among the first to show that the problem was caused by low levels of selenium in animal feeds. Selenium interacts with vitamin E in the body. Prof. Bragg confirmed that there was a low level of selenium in wheat and barley from the Peace River district of B.C., where most poultry feed grains in B.C. are grown. By comparison, selenium levels in grains from the Prairies are normal.

The UBC discovery and work done in other centres resulted in selenium being added to animal feeds with naturally low levels of the essential mineral.

Dr. Cedric Hornby, of UBC's Department of Plant Science, is halfway home in developing a new strain of tomatoes that ripens early so that tomato production in B.C. can be increased. He has successfully produced a variety that matures less than 60 days after being planted. But in selecting for early ripening, he inadvertently also selected genes that cause some malformation. The next step for him is to engineer the genetics of the variety so that the fruit has a uniform shape acceptable to consumers.

UBC ALUMNI Contact

PREPARED FOR UBC REPORTS BY THE UBC ALUMNI ASSOCIATION

Call goes out for nominations

It's election time again for the UBC Alumni Association's board of management and the call has gone out for nominations for positions on the 1975-76 board.

Advertisements notifying alumni that nominations were open were placed in the *Vancouver Sun* and *Province*, as well as many local papers early in February. Nominations were closed at noon on Monday, Feb. 17, 1975. Full details regarding any aspect of the election may be obtained from the Returning Officer, c/o UBC Alumni Association, 6251 N.W. Marine Drive, Vancouver V6R 3C4 (228-3313).

BOARD POSITIONS

The board of management, which governs the affairs of the Association, is composed of elected members and appointed representatives of groups such as the Alma Mater Society, the Faculty Association and men's and women's athletic organizations. With the exception of the Association president, no elected member may serve more than seven consecutive years or hold the same elected position for more than four years.

Positions open include the one-year terms of president, first vice-president, second vice-president, third vice-president and treasurer. There will be ten members-at-large elected for two-year terms.

The nominations committee of the Alumni Association has nominated the following alumni for the 1975-76 board of management:

President — Kenneth Brawner, BA'57, LLB'58;
first vice-president — James Denholme, BSc'56;
second vice-president — Charlotte Warren, BCom'58;
third vice-president — Robert Johnson, BA'63, LLB'67; **treasurer** — Paul Hazell, BCom'60; **members-at-large, 1975-77** — Frank Archer, BSP'66; Aunna Leyland Currie, BEd'60; Helen McCrae, MSW'49; Dr. Thomas McCusker, BA'47; Dr. M.T. (Mickey) McDowell, BPE'68, MPE'69; Donald MacKay, BA'55; Mark Rose, BSA'47; Robert Smith, BCom'68, MBA'71; Doreen Ryan Walker, BA'42, MA'69; Elizabeth Travers Wilmot, BSR'66.

MAIL BALLOT

In the event of an election, alumni will vote by mail ballot in the latter part of March, with the results being published by May 1, 1975.

Ten other alumni are currently completing a two-year term as members-at-large on the board of management:

Judy Shark Atkinson, BA'65, BLS'69; Joy Ward Fera, BRE'72; Fraser Hodge, BSc'69; John Hunt, MD'58; Robert Johnson, BA'63, LLB'67; Barbara Brown Milroy, BHE'51; Patrick Parker, BCom'68, MBA'69; John Parks, BCom'70, LLB'71; Oscar Sziklai, MF'61, PhD'64; Robert Tait, BSA'48.

For further information on the election, contact the alumni office, 6251 N.W. Marine Drive, Vancouver V6T 1A6, (228-3313).



Kini McDonald Photo.

Follow the bouncing ball...is what Young Alumni Club members do on Thursday evenings at Queen Mary school gymnasium, before reparing to Cecil Green Park for repairs. Volleyball is part of the expanding YAC program and if you'd like to join the full, call the alumni office, 228-3313, for details.

President-designate hits the road

February is a busy month in the alumni activities of UBC's president-designate, Dr. Douglas Kenny.

Early in the month Dr. Kenny was a featured speaker on the "Major Problems Facing Higher Education" at a Portland, Oregon, conference of the Council for Advancement and Support of Education. This was the first Pacific Northwest District conference of the new organization, the result of the recent amalgamation of the American Alumni Council and the American College Public Relations Association.

One of the conference organizers was UBC Alumni Fund director Mr. I.C. (Scotty) Malcolm, a member of the district's executive council. Other UBC participants in the programs were Mr. Harry J. Franklin, alumni executive director; Perry Goldsmith, program director; and Leona P. Doduk, field secretary.

With hardly time to repack his suitcase, Dr. Kenny was back on the road again — this time to visit California alumni. He was accompanied by the University's Chancellor, the Hon. Nathan Nemetz, and Harry Franklin. They attended alumni receptions in San

Francisco on Feb. 18 and in Los Angeles the following day.

Los Angeles alumni should mark their calendars now for the second annual reception of the Canadian Universities Associated Alumni, Monday, March 3, at the Town and Gown, University of Southern California. That noted Queens' University alumnus, former CBC announcer and long-time proprietor of the Ponderosa, Lorne Green, is the special guest of the evening. It should be fun. For further information and reservations call Mr. Wiley Millyard, pro-tem president of the association at the Canadian Consulate in Los Angeles.

Alumni in the New York, New Jersey and Connecticut area are having a wine and cheese party on Thursday, Feb. 20, at the Canadian Consulate, 1251 Avenue of the Americas. Ms. Rosemary Brough is looking after UBC's participation in the event, which is sponsored by the Canadian Universities Graduate Society in New York.



UBC, 60 years of serving you and the community....

On the first day of lectures, Sept. 30, 1915, the University of British Columbia officially came into being, leaving behind its McGill affiliation. Soon after, Frank Westbrook, the first president of the University wrote, "To us has come the opportunity of making our Province ... a better place in which to live ... To meet in full our obligation, may ours be a Provincial university without provincialism. May our sympathies be so broadened and our services so extended to all the people of the Province that we may indeed be the people's university whose motto is *tuum est.*" In 1975 we're celebrating UBC's first 60 years with special alumni events and activities. So watch for the UBC 60 symbol and join us...

NEW ADDRESS?

... or maybe a new name?

Let us know and UBC will still come to you through the *Chronicle* and *UBC Reports*. (Follow you to the ends of the earth we will!)

Alumni Records
6251 N.W. Marine Drive
Vancouver, B.C., Canada V6T 1A6

Keep that UBC INFO coming!

Name

Address

.....Degree/year

Married women, please give graduation name and preferred title.....

(Enclosure of old mailing label is helpful)