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Our cover this issue shows a corner of the Japanese garden. The photographer is Mr. McTaggart Cowan (no hyphen), father of UBC's Dean Ian McT. Cowan and SFU's President P. D. McTaggart-Cowan (with a hyphen). That's right; please don't shoot the printer, he's doing the best he can.

UBC ALUMNI CHRONICLE

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R. W. Macdonald, President, Alumni Association

A PART OF THE NECESSARY HOMEWORK for this year's responsibilities I have reviewed the President's pages appearing in the *Chronicle* since the Spring of 1962. They provide an interesting record of the activity of the Alumni Association.

Bill Gibson's call for increased federal aid, particularly at the graduate level, remains unresolved:

Frank Walden's forthright demand for new solutions to new educational problems; his mirror for grads, pointing out not only the rights and privileges of university graduates but more particularly their corresponding responsibilties; his urgent plea for prompt implementation of the Macdonald report:

Paul Plant's many challenges to graduates, particularly in realization of the areas of responsibility in the university family—administration, faculty, students, alumni and the community at large; his demand for a positive five year plan for UBC and his invitation to UBC grads to ensure the success of the "Challenge of Growth":

Dave Brousson's determination to develop an awareness and understanding throughout the community of the problems of UBC in particular and of higher education in general; his recognition that many grads today almost inevitably but properly have the problem of divided loyalties between the past and present of their own Alma Mater and a new and different university in their own region:

—all these questions are still to a greater or lesser degree challenging the university.

What is singularly impressive in this review is the degree of accomplishment that has been achieved in so many fields of Alumni Association activities.

Whither now Alumni?

We are at a time of questioning. As the products of UBC we have a continuing duty to review our participation

President's Guest Editorial

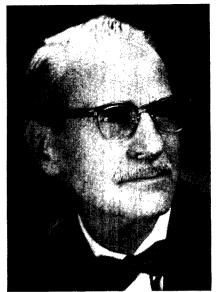
in the University's affairs, participation by way of assistance and not by way of interference.

Clearly we must continue and expand many of our existing programs, particularly our student-alumni committee activities, our branches activities, our riding contact program, our regional scholarship program (possibly with the development of a geographical equalization grant?), our new graduate fellowship program, Alumni Annual Giving and the 3 UCF campaign, our efforts towards increased Federal support of higher education. We must continue to review the challenging problem of athletic scholarships, the most meaningful nature of Homecoming, the quality and content of the graduate *Chronicle*, to name but a few of many areas.

The Alumni Association presently has committees engaged in four relatively new programs: (1) A Member of Parliament day on campus patterned after our recent successful MLA day and designed to inform our political representatives in the federal field of the accomplishments and needs of UBC. (2) An appropriate 50th anniversary program for your Alumni Association's birthday in 1966. (3) A 50th anniversary Alumni conference in 1966 in conjunction with the extension department which will seek to project British Columbia to 1976 (with some outstanding speakers and resource people). (4) A Great Teacher's Award in recognition of outstanding teaching accomplishment at UBC.

The Alumni readers of the *UBC Chronicle* are the Association. It is expected that interested, constructive criticism and suggestions in respect to the Association's activities will be expressed. Our Association has a unique quality in comparison with many alumni associations, namely, a very wide range of interest and concern, far beyond the conventional money-raising and social aspects of an alumni association. To be meaningful our opinions must be well informed, carefully considered and firmly pursued. With the aid of a strong Board of Management and of our many thousands of graduates, I will make every effort to maintain the standards of my predecessors.

Rumacdordd



John F. Davidson, BA '37, MA '40, PhD '47 (U. of Calif.)

Mass Training is not Mass Education

The author of this article, Dr. John Fraser Davidson, is Associate Professor of Botany at the University of Nebraska and has been guest lecturer for several summer courses at Berkeley. He is the son of UBC's own Professor Emeritus John Davidson whose association with this university goes back to the Fairview shacks era.

What do we want for our children, training or education? They are two different processes which should not be confused though both are required in the development of the mature adult.

Training, whether it be the training of a hunting dog, military training, pilot training, or child training, is characterized by requiring a given response to a particular situation. Thus when the situation arises again, the response will be almost automatic. In training, the responses are drilled into the trainees by repetition.

Education, on the other hand, as the word implies, is a drawing-out process. Here, there is no "correct" response to a situation, but the student is encouraged to develop a response which is satisfying to himself. Hence there may be several acceptable responses. The teacher may present ideas to the student which disturb the student's satisfaction, and thus lead to a different response.

The essence of education is the response of the student to the teacher. From this starting point the teacher may direct the attention to omitted details and force the student into consideration of more complex situations.

Unlike training, where instruction comes from the trainer and the response from the trainee, education involves a continuing dialogue between teacher and student, with the teacher drawing ideas and conclusions from the student, and suggesting increasing complexities.

Education involves the thoughtful consideration of continually new situations, and the development of the ability to cope with these. It involves the ability to think and to communicate. Communication must be through the medium of language, and this requires training.

Whether the language used be English, or the symbolic language of mathematics, there are correct and incorrect usages, and these must be learned through training. Hence training in some fields must precede education. Thus it is doubtful that one could be educated without being trained.

On the other hand, many receive a great deal of training without ever having been exposed to education.

WHEN we speak of a "Master Plan for Higher Education" what do we mean? More years of schooling? To what end? What are the objectives? Are we trying to prepare these young people to answer questions when the answers are already known, or are we trying to prepare them to cope with future problems that are themselves unknown to us? Are we really interested in education, or merely in training?

The success of the armed services in teaching through films and other mechanical devices has opened a Pandora's box of programmed learning. This, together with television, has advanced the cause of mass learning.

But let us recognize this for what it is, mass training, not mass education. A taped lecture repeats the same words, with the same emphasis, and can demand the identical response. This will produce the desired uniformity which is the goal of training, if the members of the audience are equally trainable.

Mass education, on the other hand, is impossible, at least without masses of teachers. These teachers must be aware that they are not merely trainers, but must strive to continually develop the student to think for himself, and to draw his own conclusions to his, the student's satisfaction. This cannot be done in classes that are so large as to prevent full and complete discussion by each student on the problems confronting him.

If it is education we want for our children, then we must be prepared to foot the bill.

For the teacher the problem is, To what extent am I attempting to educate my students, and to what extent am I trying to train them? Do I know what each student thinks? Am I expecting a correct response from each of them, or am I trying to get them to develop a response which will satisfy them?

There is probably not one correct solution, but several acceptable answers. \Box



HUT LIFE IS THE LIFE

Mike Bolton, Arts IV (Reprinted from The Ubyssey)

BEHIND BROCK HUT-LIFE is one segment of the campus few students know about.

Last Thursday I set out to discover the who, why and what of the various groups occupying these huts.

Some 400 students spend at least their lunch hour in the hut every day. Hut activities are the central part of their on-campus social life for most members.

Come fathers and mothers throughout the whole land, And don't criticize what you don't understand.

These words from folk singer Bob Dylan reflect the attitude of the Folk Song Soc to the outside world.

The folk singers insist that they are ethnic but not beat. They said ethnic includes chewing snuff and riding Hondas but not singing about friendly dragons.

"Real folk singing must protest something," said Ellis Pryce-Jones. He said the hut itself reeks of protest. Member John Carver (Science II) wears a noose around his neck to symbolize his continual protest against everything.

The Folk Song Soc hut is subdivided into a black-painted, unlighted roof for singing and a whitewashed one for other activities. I visited the white room first.

"In this room we do nothing but play bridge and neck," said one girl. She wasn't kidding for my intrusion did not at all inhibit their activities.

The activity room is decorated with various manifestations of the club's more creative minds. One mural is a communal effort consisting of a collection of beer labels from past parties.

/ overleaf

Hut Life — (from P. 7)

"The best thing about our hut is that we can do anything here," said Pryce-Jones. "Most of the people here are real individuals, we have no conformists. The hut hasn't got the sterile atmosphere of Brock," he said.

About 50 of the club's 150 members are active and at least 25 come every day.

More than 100 students regularly go to the Hillel house. Hillel is sponsored for Jewish students by the B'nai B'rith organization.

President Ron Appleton (Arts III) feels the hut is necessary for Jewish students to retain their cultural identity. "Some say they come here because it's close to Brock but most of us come to retain some bonds with our cultural history," said Appleton. "We need Jewish contacts because it doesn't look as though anti-Semitism will ever completely disappear. We feel more at home among Jewish people and Hillel provides a good contact centre."

Most Hillel members have known each other since childhood, have lived in the same area and gone to the same schools and synagogues. Many also belong to the Student Zionist Organization and the predominantly Jewish Zeta Beta Tau fraternity.

Hillel is the largest hut and is comfortably furnished with a library, kitchen, ping-pong table, study room and lounge.

Some students spend 12 or more

hours a day in the hut, even cooking dinner there. The doors open seven days a week at 8:30 a.m. and close when the last student leaves.

Jazz Soc competes with Folk Song Soc for the honour of having the highest proportion of neurotic membership, according to a member. About 30 members turn up daily at the Jazz Soc hut.

Sitting on the floor and listening to their kind of music in the Jazz Soc pad is the most integral part of the members' campus social life. Members said Jazz Soc was only now getting back to normal after thwarting an invasion by frosh rock 'n rollers.

Several other clubs also meet in the hut mall behind Brock.

About 30 members come regularly to the Chinese Varsity hut. Another 20 frequent the Nisei Varsity hut. These clubs serve social needs in the same way as Hillel, most members simply feel more at home with their own race.

The story at Jazz Soc and Folk Song Soc is the same as at the Varsity Outdoor Club, Varsity Christian Fellowship, Aqua Soc, Sports Car Soc and Sailing Soc.

The enthusiastic members of each gather at the hut every day with those who share the interest.

Most of these clubs feel they are threatened with extinction by the Student Union Building. Hillel has a 25year lease on its building and is the only club assured of a private meeting-



place in the future. The other huts may be demolished for parking space.

SUB will likely provide one large communal hall for all clubs.

AMS President Roger McAfee believes the fears of extinction are invalid. "Total garbage," said McAfee. "How do all the other clubs exist without a private meeting-place?"

But how can the folk singers make a womb out of a community centre?



Don't Look Now — It's a Computer!

"Major industrial revolutions in the past were on the order of 10. The first steam engines were about 10 times as effective as animal power, aircraft about 10 times faster than land vehicles . . . but . . . computers are up to 10 million times as fast as the mechanical calculators they replace."

That is a quotation from a recent article in *Business Week*. The same article states that at the University of Chicago computing centre a dollar buys as much calculating as a man could do in a year, that there are large computers in existence which are about 10 million times faster at calculations than humans.

Dr. James S. Forsyth, Head of UBC's Chemical Engineering Department, points out, however, that 'the computer is not as much faster as one may think but has the great virtue of forcing one to be more precise in one's thinking.'

From Business Week once again, a quote of a quote: "'The impact of computers is both so great and so subtle you'll find most of our people don't realize its extent,' says Eric Weirs, chairman of Sun's [Sun Oil Co.] computer committee."

Western Business and Industry in an article entitled 'Computers in the Junior Class-room' says: "The new 'commercial stream' in the British Columbia high school curriculum still turns out graduates who are prepared for manual file-keeping and manual bookkeeping, although the handwriting may be clearly seen on the wall. Young people in the 'academic stream' are no better off, and there is not the slightest reflection in the curriculum for the high school 'vocational stream' of the computer's existence."

A T A SEMINAR for business executives on 'Technological Reality and Business Policy' held on campus in February Dr. Robert Theobold of New York, the chief speaker, made some rather provocative statements. Dr. Theobold is a consultant on the effects of scientific and technological change on society and the economy and also teaches at the Foreign Service Institute at New York University. He drew attention to the position of analyst Richard Bellman of the Rand Corporation which specializes in considering the implications of the computer. Mr. Bellman had made the rather frightening statement 'it won't be long before two per cent of the population will be doing all of the work.'

Dr. Theobold, in a letter to a Vancouver paper, clarified his own stand on this question. "The importance of Mr. Bellman's statement is not the precise figure that he uses but his recognition that a very substantial proportion of the population will not be required in conventional jobs and will be liberated to perform self-motivated work and therefore require a totally new style of education which will permit them to develop the required capabilities."

THOUGH WE MAY VAGUELY REALIZE what has hit us, most of us don't understand how. The people who fail to get jobs in a rapidly expanding industry are not fully aware of the fact that the positions they might have held have been filled by computers. Perhaps no one lost a job directly by reason of computerization. Some retired in the natural course of events, some were retrained to serve the computers. The jobs that were lost were lost by the new arrivals on the labor market who simply found no vacancies where they would have existed before computers.

The following few pages take a look at a limited field — the University and the computer. $\hfill\Box$

Problem-solver at Work

"Look there!" said the one scientist to the other in awe and admiration as they surveyed the answer produced for them by a computer. "It would have taken four thousand scientists five thousand years to have made a mistake like that!"

Not so, says Mr. Werner Dettwiler, supervisor of the University Computing Centre; a computer is only as good, or bad, as the human brain directing it. Far from being a monster that is going to take over from humanity, it is in reality only a giant moron, low-grade at that, which must be instructed in tiny steps that would insult the intelligence of a three-year-old.

It is quite important to remember to sneer at the computer in terms like these; the alternative is to be shattered by the sight of all that awesome data spewing out of a featureless machine standing in dismembered blocks on the hollow floor which houses its electric wiring.

The computer, which looks like a number of separate machines, is actually a unit, its members connected by electric wiring in the same sense as the toe is connected to the brain by the nervous system. Feed a deck of punched cards-the punches posing a problem for solution-into unit one. and unit two, some distance down the room, will go to work almost instantly on the required calculations, translat-Fortran (formula translation, which is basically the programmer's machine communication language) into machine language, which in turn solves the problem. "While U Wait"

unit three then prints the results, in, as Mr. Dettwiler cautiously expresses it, more or less layman's English.

Can the computer translate from one language to another? (Now we are talking about the languages of humanity, not Fortran.) Yes, it can, but only by trying one word after another until eventually it reaches the correct word. The problem is with idioms and special endings. Unfortunately for computer purposes, language is not an exact science. True, it does its translating at incredible speed. And speed, combined with accuracy, is the computer's chief claim to worth.

It is quite a claim, at that, if we are to be fair, and in performance commands, at UBC, a commercial rate of \$300 an hour. This is the IBM 7040 computer, acquired last August, which works at that rate. More pertinently, it works on the average twenty times faster than the IBM 1620 which it superseded. As an indication of the unfulfilled demand for computer service, a year ago the IBM 1620 then in use was operated twenty-four hours a day. The 7040 now runs sixteen hours a day.

What makes Sammy run, of course, is human beings. The University Computing Centre is staffed by fourteen full-time and six part-time people. They are computer operators, key punch operators, a secretary, and a number of program analysts who help the man with a computer problem to decide how it can best be handled on the machine.

The IBM 7040 is the largest scientific computer in the province and does work which would otherwise have to be sent to Toronto or Los Angeles. Commercial work at the Centre averages only about one hour a day and University departments and individuals account for the rest of the monster's time. Almost all departments use it, but most notably engineering, chemistry and physics. Medicine and forestry call on it for statistical calculations.

As to individuals, many have special research projects where the computer can save hours, or years, of work. There is, for instance, a professor in the German department who is using the computer to help with a concordance study.

In most sciences today it is not possible to make any significant contribution to research without the use of computers. The first computer at UBC could only be obtained on an undertaking that it would cost the University nothing; it had to earn its way. Today it is recognized that it is essential for teaching and research purposes, and there are now about 400 registered users on campus, exclusive of courses related to computers.

Questionnaire analyses, such as the Student Means Survey conducted last winter, go through the Computing Centre. The Office of Student Services uses it for various studies. And as to commercial work, the Alexander bridge and the Port Mann bridge were engineered with the help of the University Computing Centre.

The computer is not only a problem-

solver, it is also a memory of virtually unlimited capacity. A magnetic tape, put through the computer, can record at a density of 800 characters—letters, punctuation marks, and so on—per inch. A reel of such tape is 2400 feet long, more than sufficient to keep a whole year of student records. In this respect, of reducing storage space for archives material, the tape functions like the now familiar microfilm.

The magnetic tape used by the computer is similar to tape recorder tapes except that it is used to record digital information rather than music or the spoken word. Like the tape recorder tape it can be erased and used for new material. Unlike the tape recorder tape, there is a safety device which can be employed when recording material meant for permanent storage, a device which ensures that the machine will refuse to erase when some absentminded human calls on it to do so.

The computer, that big, tireless, willing slave of humanity has not as yet made as much impact on business and industry as one might expect. Its failure to do so may be ascribed to the fact, as Mr. Dettwiler puts it, that a key man in any given business must be bitten by the computer bug. Then he begins to inquire into how the computer can aid his operations. So far, he is not being educated to step into a computerized world, and that truly computerized world won't exist until enough people at executive levels re-educate themselves to the point of acknowledging the existence of computers.

Yer my slave, see!



Rx for A Library



Librarian: Am I obsolete, Doctor? Strangelove: Zis question sprinks from ein fundamental mizunderstandink of a Komputer vhat is. A machine it after alles is, complex ja, bot neverzeless a machine. Do not by ze flashink lights und spinnink reels confused be.

Librarian: But Doctor, it is a thinking machine, and it will outthink me.

Strangelove: Prezizely nein, zat is no. Zere is nothing in ein Komputer what is not put in, in put by a man. It does not create information, information it absorbs. Und manipulates. Und manipulates as it is told to manipulate. Zis is der point. Zehr important, it works fast. Und so vatch it is fun. Ha ha.

Librarian: Could you be more specific?

Strangelove: Zertainly, dumkopf! Ein Komputer zeveral parts has. Der Inputoutput: zis means where ze information is put in und where it put out is. Der punched cards, der paper tape, both forms of input typical is. Usually pretty young girls make. Ha ha.

Librarian: You mean in the evenings, like knitting?

Strangelove: Nein! Mit machines called keypoonches. Ze keypoonch automatically turns alphabetical and numerical information into holes, accordink to standard codes. Zis is where ze information is comink from, ze girls are copyink it from ein supplied text into cards or tape.

Librarian: They make the output too?

Strangelove: Nein, nein, nein! Ze Komputer is making der output, can be cards or tape but usually printed out on continuous sheets of paper, zehr fast, zix hundred typed lines per minute maybe. Iz end produkt.

Librarian: What is in between?

Strangelove: Zeveral sings. Der operation und control unit: lotz of vires und tranziztors, arranged to perform spezific operations, zuch as mathematikal kalkulations, comparing, arranging information, all accordink to inztruktions called ein Programm. If you like, siz is the think.

Librarian: What else?

Strangelove: Der memory. Zis holds all der coded information: ze information to be procezzed, der program.

Maybe magnatic tape, zings called disc files, film even. Zience always findink new kinds of memory things.

Librarian: You mean that I have to give the information for the computer to someone for coding, that the computer has to read this, as it were, then I have to tell it what to do with the information, and if I tell it in a nice way, it will give me back the information, in whatever form I want it?

Strangelove: I thought you vould navar understand.

Librarian: It sounds wonderful. Let's put all the information in the UBC library into the computer, then we can get it back as we like.

Strangelove: Just a moment, schmart vun. I kalkulate. In der komputer memory each book vill take about ten million units of memory storage, called bits. You have about seven hundred thousand books, soon a million. You need memory wiz 10,000,000,000,000 bits. Maybe by 2000 A.D. zey have komputer memory zis large. Maybe not. Und der input problem! Zuppose includink coffee breaks der pretty girl does 25,000 bits per day; it will take her 400,000 days, she von't make it.

Librarian: Well, if I won't be able to press a button and get any line I want out of any book, what will the computer do for me?

Strangelove: I vish to make a diztinktion for you. It vill do two kinds of thinks. Ein: it vill help you to control der records of administration, zuch as budgets, book zirculation, der periodical zubscriptions, perhaps even der catalogue. Zwei, er, two: vun day it will help you to locate der information in der library, search der indexes, print out der abstracts. Latter not zo easy like der former.

Librarian: For the moment, let's skip the latter. You really think we should go to work on our record keeping problems?

Strangelove: Why not? I admit zere may be problems. Uzzer places are usink der Komputer. From zheir experience you benefit can. University of California at San Diego checkink in der journals mit Komputer. University of Toronto workink on printed catalogue for der new universities in Ontario. Several places usink it to lend der books.

Librarian: How do they use it for lending books?

Strangelove: Zimple. Each book has poonched card. Each student und profezzor has poonched card. Student wants to borrow book. Book card and his card you in little black box stick. Ha ha. Work finished. No writing. Accurate record. Easy to zend der lizts to profezzors too lazy to return books. Every day ein lizt of books on loan, to post in der book stacks. It might verk.

Librarian: Fine, we'll try it. Anything else?

Strangelove: Anythink? Everythink! Ztart to look carefully at vhat you do. Understand virst vhat you do. Zimplify. Zee if der Komputer can perform der routines. If zo, use it. If not, not. Do not afraid be! It vill not at night plan to take over der vorld or sprout der arms and legs and run avay mit der secretary.

Librarian: I feel so happy, Dr. Strangelove! So reassured! I become dizzy and euphoric!

Strangelove: Carefool! Carefool! Stop kissink mein Hand! I must varn you to keep an Eugen, er, eye on der budget sheets. Not alvays der Komputer cheaper dan der people is. Or besser. Not as pretty as der girl clerks, neither. Ha ha. But at der same time, do not too conzervative be. Komputers improvink rapidly, many new thinks possible. Make der changes vhen der time is ripe.

Librarian: Thank you, Doctor.

П

In September, 1964, UBC Library printed its first computerized list of scientific periodicals; a similar list will be ready soon for periodicals in the new Woodward Library. In September, 1965, a computerized circulation system will be introduced. An experimental printed catalogue for the phonograph record collection is being planned. Investigations on the feasibility of introducing automatic data processing equipment into the Acquisitions, Serials and Cataloguing Divisions are proceeding.

In the academic year 1964-65 the Registrar's Office entered the Computer Age. With the acquisition by the Computing Centre last August of the 7040 the Registrar was able to take advantage for the first time of the Centre and process through it the record number of student registrations.

Sixteen thousand students fed into the mechanical man came out less than four and one-half hours later accurately alphabetized, even to the Mc's and Mac's, on numbered, double-column pages, addresses and 'phone numbers included, ready for photographic reproduction and printing. "Bird Calls," the student directory, was in consequence distributed three or four weeks earlier than usual.

The 7040 next put its talents to work on examination scheduling. This twice-yearly headache at UBC is now triggered by the necessity of placing 1000 courses or sections into 30 examining periods. Last year the computer did much to alleviate the headache. First, the Registrar's Office placed on tape the total program of all students, and then determined for every course to be examined the other subjects with which it clashed. From this information and by judgment a core timetable of courses that must be separated was established.

Having this core for a base, staff of the Registrar's Office selected groups of subjects, forty at a go. Within four and one-half minutes the computer had checked the new selections against the core, recorded the interactions between it and the new group on a conflict matrix, and established, for each new course, not only which periods that course could best fit into but also how many students would be required to write another examination in an adjacent period.

At any time that a clash appeared inevitable, it was possible to determine who the student was and his complete program.

The core timetable was gradually built up until the last



A line-up that the computer left standing. This is the September rush for textbooks, more hectic each year.

The Computer is a timetabler

Timetabler

course had found a place in it. It was possible at any point in the process to remove and retest an earlier placed examination.

Having produced the master timetable the computer then assigned examinations and invigilators to classrooms.

To illustrate the time saved by utilizing the computer: in the past a search of only one course to determine potential clashes required an hour or more of detailed checking; now the 7040 will in less than two hours do searches for every course offered.

When the examinations had been written, the computer stepped back into the picture. On a card which had been prepared for each student, the marker recorded with three strokes of his pencil the mark assigned. The machine read the marks, translated them first into a punch, then through the printer into a listing of marks. Manual transcription and key-punching were eliminated.

The logical final step—the storing of the student's record by computer—has not yet been taken, but probably it is not far off. At present some 150,000 cards, stored in 75 drawers. are needed for one year's records. A single magnetic tape, equivalent in size to two record albums, or disc, or data cell, could carry all this information.

More important, equipment of this sort would permit very speedy access to any desired information. The data cell, for instance, revolves very rapidly and the reading device can pick out any item within a fraction of a second. The tape is slower, which means that it might take all of half an hour, or even forty minutes, to translate everything recorded in registration number order on a tape into alphabetical order, or any other order.

One of the other things that refinement of the computer process will permit in the near future is the placing in the machine of all the regulations of the calendar, ensuring thereby that every student's program complies with those regulations.

It is likely, too, that the computer will get involved with the constant review and reappraisal of academic programs. To provide promptly the information required the next step will undoubtedly be the integration of the tabulating equipment, which now speeds up registration procedures, with the Computing Centre and the installation of equipment capable of handling various jobs simultaneously.

If the computer could think (and all appearances to the contrary it can't), it would surely reflect that the reward for a job well done is more of the same.

The computer has infiltrated UBC classrooms and the Mathematics Department now sponsors two second-year courses, one in the first, one in the second term, known as "An Introduction to Computers," and "Fortran programming." That, for the uninitiated, is a telescoping of the words "formula translation."

In the coming academic year there will be a thirdyear course offered — "Advanced Programming and Data Processing."

For several years past numerical analysis courses have been given, courses which require a strong background in mathematics.

At other levels of instruction, courses related to computers are now being offered in the Vancouver area by the British Columbia Technological Institute, Vancouver Night Schools, and the UBC Department of Extension.

Computers in White



The New Teaching Hospital at The University of British Columbia may open as a fully computerized institution. That is a possibility currently being studied by UBC officials.

"Many people," said Sidney Katz in a recent Maclean's Magazine article, "expressed the fear that automation would 'dehumanize' the individual patient by reducing him to a coded series of numbers. Exactly the opposite has happened. Nurses now have more time for personal service to the patients."

The hospital Mr. Katz was referring to is Sick Children's in Akron, Ohio, the only hospital, so far as UBC Health Centre officials know, presently in existence with a hospital information system incorporated into its operation. Mr. Lloyd F. Detwiller, Consultant Administrator, and others from the University have made several study visits to Akron. The fundamental question is, What is wrong with conventional hospital procedures that computers can correct?

A detailed study made at Akron's Sick Children's Hospital showed that head nurses, registered nurses and student registered nurses were spending 41% of their time doing paper work. The practical nurses were actually giving more nursing care, by 14%, than the RN group.

Worse, perhaps, is the fact that every time an order is re-written there is the possibility of error, and orders may have to be re-written many times. At Akron it was found that a pill took thirteen written steps from prescription to the patient's mouth, an X-ray fifteen writings from order to the final report.

Now, in the computer era at Sick Children's Hospital, the doctor's prescription is converted into a series of coded numbers which contain the patient's age, weight, condition, the type of drug, the dosage, frequency of medication, duration of treatment. The nurse punches this out in code and the machine returns it to her typed out a second later so that she can check it. Electronic memory goes to work also and the computer issues a reminder—repeated at fifteenminute intervals, if necessary—when the medication is to be given.

The computer further safeguards the patient from the fallibility of his human health team. In the back of its mind is the knowledge of what constitutes a safe dose of any given drug for a person of any given age and weight. "If the dosage prescribed goes beyond the safe range," the Katz article points out, "the machine will question the order, and the nurse or doctor must then confirm that an unusually large dose has been ordered because of special circumstances."

The computer can—and at Akron does—have programmed into it every type of material or service a patient may require, 4500 items on the drug index, 900 possible tests on the lab index, a dietary index, a central supply index.

Should British Columbia's teaching hospital start out in life "as new as tomorrow?" It would mean that two kinds of teaching would have to be carried on, teaching for service in conventional hospitals as well as teaching for a computerized institution.

At the Sick Children's Hospital, although the Hospital Information Service costs something to operate, hospital officials believe that the outlay is an investment which may bring total costs down while at the same time providing better and safer care for the patients.

There are several big questions involved and the answers

cannot be drawn out of a hat. Can the present UBC Computing Centre, for instance, be utilized for hospital service as extensive as that provided in the Akron hospital? Obviously, hospital needs would have to take priority over all others, would have to receive instant attention. Can we afford computerization? If we cannot, is Canada's newest teaching hospital going to be out of date before it is fully operative?

From the patient's viewpoint, perhaps the most interesting feature of hospital computerization is that the putting of the computer on the nursing staff puts the nurse back by his bedside.

It is good to know that a computer committee has been set up at UBC to study this question of computers in hospitals. In March a conference was held with speakers brought in from New York and Akron to discuss the latest developments in the field. If the enthusiasm of the participants is any indication of the possible future application of the computer in the Health Sciences Centre, there is every reason to believe that the Centre will have the first computerized hospital in Canada. The Computer in White may soon be a reality on the Point Grey campus.

The Social Scientist Looks at Computer Technology

THE ACTIVITIES OF SOCIAL SCIENTISTS are coming more and more under the influence of a rapidly developing electronic computer technology. In the few paragraphs following we attempt to discuss the effects of the computer on the subject matter, the research, and the teaching methods of social scientists. We find that efficient methods of research usually involve the computer, that teaching methods may in future be greatly influenced by electronic devices, and perhaps most important of all, that the kinds of problems to which social scientists address themselves are likely to be largely determined by the computer through its effects on production processes.

Automation

The computer is already ushering in a new age of automatic production involving a wide variety of self-regulating devices. These are well known to be efficient in the performance of routine tasks because they avoid the use of relatively expensive and relatively unreliable human labour. Frank K. Schallenberger has put it this way:

Automation has given us devices which can see better, hear better, and measure better than human operators. They think and move infinitely faster than humans. They never get tired, they willingly work around the clock, they do not make mistakes, they do not talk back, they are obedient, consistent, and fully predictable. They will not go out on strike, they do not ask annually for higher wages, and they have few personal problems.

As a result of their efficiency, computers are now being used in the production of many material objects. Cloth, steel, coal, and engine blocks are only a few examples. The replacement of human labour that is involved is an old and unavoidable cost of economic progress. Automobiles put many harness makers out of business, and

truck transportation continues to close many railway lines, just as the computer has taken the jobs of many skilled machinists, payroll clerks, and elevator operators. Technological unemployment is never pleasant but it is the price of increased living standards and more leisure time.

One should not, however, assume that automation is no different from preceding mechanization processes. Automation means that whole systems can operate without human participation and these systems may involve sophisticated analysis and interpretation of complex data as well as the performance of routine tasks. Previously, managerial groups have not been greatly affected by automation, but the primary advantages of computers includes their better performance in communication, analysis of information, and control of operations. These are what we now think of as management functions, so that it cannot be assumed that the burden of automation will continue to fall largely on the unskilled and the uneducated.

Clearly, automation poses difficult problems for social scientists. How can its costs and rewards be equitably distributed? Will expansion of the service industries employ persons displaced in other sectors, or is this likely to require increased expenditures on public works? There will certainly be need for more and better retraining programmes, but what form should these take, how should they be provided, and by whom?

Increases in the amounts of leisure time which automation will make available to many people pose particularly difficult problems. Although in economics we treat leisure time as an alternative to employment to be valued in the same way as additional income, this is realistic only at the margin. Many people who are unemployed find that they have very little to do with their free time. Our society does not often equip people to enjoy

the large amounts of leisure time which automation seems likely to bring, and social scientists face the task of understanding why it does not.

An academic naturally asks why more people are not interested in intellectual development for its own sake, and just as naturally finds fault with our educational system. But surely the roots of social attitudes lie much deeper. What are the prime causes and what needs to be done that we may better cope with these new situations?

Does the new computer technology directly menace the human race? Professor Norbert Wiener argues that "machines can and do transcend some of the limitations of their designers and that in doing so they may be both effective and dangerous."

Are we approaching the time when man will become a slave to the computer, when for example "... learning machines will be used to program the pushing of the button in the next pushbutton war?" These are some of the questions which the computer poses for the social scientist.

Research

Fortunately, the computer not only creates difficult social problems but, as a research tool, provides powerful means for their solution. The power of the computer derives from the speed. the economy and the accuracy with which it performs simple functions rather than from its ability to "think." The computer carries out the standard arithmetic operations, looks up tables of data, stores data for future use, and makes logical decisions of various kinds. Although the computer can solve very complicated problems of logic, it must be told how, and it cannot provide the inspiration or insight essential to good research. In short, the computer is no substitute for hard thinking by its user.

At the same time, the computer is so fast and so accurate that man-years on a desk calculator are now measured in minutes of computing time. Despite the large capital investment involved, the speed and accuracy of the computer have greatly reduced calculating costs and thereby enabled widespread application in the social sciences of multivariate methods which are the product of 20th century statistics.

Multiple regression and correlation analysis and the analysis of variance are widely used to identify and test relationships. Psychologists, political scientists and sociologists employ factor and canonical analysis to identify the basic dimensions of behaviour patterns involving the semantic differential technique to develop the dimensions of meaning, and multiple scalogram analysis to provide an empirical basis for scaling items and to produce scales which are consistent with the underlying dimensions of a universe. Economists, on the other hand, make much use of simultaneous equation models, input-output and linear programming techniques for examining inter-industry relations and the structure and operation of economic systems.

Although the studies of social scientists range widely, the various disciplines are alike in that they are now investigating questions and testing hypotheses on a scale that would be impossible without the aid of computers.

However, the computer has done more for research in the social sciences than merely facilitate applications of modern statistics. It has also provided the simulation method of analysis which has already found widespread use in studies of personality, the brain, business firms, voting behaviour, industries, music, economic systems, and international relations and diplomacy. These various simulation models differ widely in their details but they do contain some common characteristics.

Wherever it is applied, simulation involves the building of a theory or model of a system's processes. The desired test elements whose actions are to be observed are first selected and then connected according to specific rules of logic in a manner which describes the essential features of the system's operation. Various subsystems may be involved and these must be connected so as to duplicate the actual input-output flow of information in the system. Where uncertainty is involved, the computer may be used to generate random numbers according to an appropriate probability distribution in order to select particular events from all that are possible. The conclusions are derived by allowing the computer to carry out the processes postulated in the model, thereby generating a hypothetical stream of behaviour which can then be compared with the behaviour of the real system.

Simulation provides social scientists with a powerful method for research, because computer models can be used

Dr. R. A. Holmes, assistant professor of economics and political science and the author of this article, came to UBC in 1961 from the research department of the CNR, Montreal.

to construct and test complex dynamic theories of real situations. Whereas mathematical models which require analytic solutions must be kept relatively simple, computer models can be as complex as the underlying theory allows. Moreover, the speed of the computer is so great that in some situations it can provide in a matter of minutes as much experience as could be obtained from real situations in several years. As a result, simulation should enable social scientists to determine more precisely the complex interrelationships of variables affecting human behaviour.

Teaching

Words such as "teaching machine" and "automated teaching" will not appeal to many academics. Nevertheless, these words describe nothing more than the use of computers as an aid in teaching, and there is good reason to think that they may some day become an important aid.

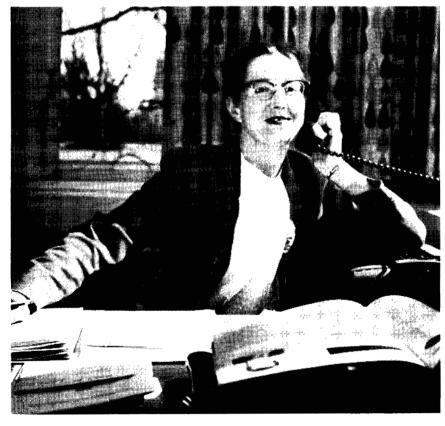
All that is involved in "automated teaching" is the transmission of questions on many subjects simultaneously to many students and the immediate correction of their answers by means of computer programs.

The advantages of "teaching machines" are best appreciated by considering some of the disadvantages of lectures. These include the frequent failure of students to participate, long delays in the appraisal of students' progress, and a lecture pace which is inevitably too fast for some and too slow for others. With "automated teaching" students may proceed at their own pace for the program may be designed to introduce additional questions for students who show by their performance that they need to do more work, and it may skip sections for students who show that they do not need the drill. Since overt responses are required, students must actively participate and, of course, the computer provides immediate appraisal of progress.

Teaching machines will never completely replace lectures in any subject if only because they are restricted to the kinds of questions and answers that can be programmed. They do, however, offer the possibility of relieving teachers of routine teaching tasks, and of devoting more classroom time to the creative activities involved in motivating and inspiring students.

From President's Office

Sheila Claire Buchanan, BA '37, BSA '46



"Senate Meetings only made sense to me," a one-time confused, bemused Convocation member of Senate told me, "when I received my copy of Sheila Buchanan's minutes."

For eight years out of the ten she worked in the President's Office Sheila Buchanan served as clerk to the Board of Governors and the Senate of the University, regularly producing monthly and bi-monthly minutes which "made sense." Early in that period she acquired such an insight into the intricacies of the University administration as to draw another tribute: "If no one else can tell you, ask Sheila Buchanan."

Miss Buchanan took a rather devious, and to me even surprising route to the Board and Senate Room of the University. To begin at the beginning, she is a native daughter of British Columbia and an alumna of UBC because her father chose to come west from the Maritimes. That was in 1887. After a period of years as a lumberman in the Kootenays he moved to the Fraser Valley, bought a farm at Haney and married-his second marriage. Sheila, child of that marriage, was born in New Westminster and received all her elementary and secondary education in that city.

Next came the undergraduate years at UBC and a degree in Classics in 1937, Classics because she felt it the best basis for a general education. "Though actually," Miss Buchanan elaborated when I talked to her, "I claim I majored in Professor Lemuel Robertson." Professor Robertson was then, and for many years, head of the

to Bolivian Mission Field

Classics Department. As this former student pointed out in explanation of her "major," there was nothing compartmentalized in his teaching, his lectures covered a wide range of knowledge.

With the basis of a good general education now in her possession, Miss Buchanan took a business course and then applied her training at Pacific Veneer in New Westminster, part of Canadian Forest Products today, drawn there almost inevitably because of her father's association with forest products. The company was formed coincidentally with her first job hunting and she was its first stenographer, a rewarding experience.

Somehow that led to a return to the University after a few years and a degree in Agriculture in 1946—Agriculture to satisfy her interest in science. With that second degree in her pocket Miss Buchanan went to Montreal and for three years worked for a pharmaceutical firm where she was able to use her science training. Back home then and a return to the campus, this time to the office of the Dean of Agriculture where she kept his files and correspondence in order for six years. From his office came the transfer to the President's, in 1955.

What does it involve, being clerk to the Board of Governors and to the Senate? So much that no secretary on campus dared put in an application when Sheila Buchanan's recent resignation was announced. I would put it more correctly if I said the job was being performed so perfectly by Miss

Buchanan that no one familiar with it dared offer herself as a successor. We have Dean Soward's word for that.

The clerk's duties might be said to start with a bulky docket prepared by her which each Board member receives, together with the agenda, about a week before the regular monthly meeting. It is sent through the mail, and as an indication of its proportions, on one recent occasion the postage on each docket was 85c. The clerk drafts the resolutions arising from the agenda which will be presented to the Board, takes the minutes, sends reminders to the Board of what should be done, attends to follow-up correspondence. In addition, she attends the meetings of the sub-committees of the Board.

All these, the Senate meetings (of which she makes sense for the uninitiated!) and other lesser matters have been in the hands of Sheila Buchanan "who is," Dean Soward, acting secretary of the Board says, "phenomenal on detail."

In April she turned her University responsibilities over to a successor and her attention to a new field.

"When I transferred to the President's Office," Miss Buchanan told me, "it was with the intention of retiring in ten years. By coincidence I am doing almost exactly that."

The coincidence is this: when she made that plan ten years ago Miss Buchanan had no thought of taking on the job to which she has now gone.

That is why she regards leaving the University at this time not as a resignation but as an early retirement. Retirement for her now simply means another sphere of activity, the mission field of the Baptist Church in Bolivia. There is a relationship, of course, to what she has been doing, her duties at first will be mainly in the office, but she expects these to expand as her knowledge of spoken Spanish improves. Her Spanish studies started when she was first living alone and wanted something easy to do while the kettle boiled. The Department of Education, Victoria, produced a correspondence course which she followed up to some extent with a Spanish discussion group of the Women's University Club. Together these two gave her a fairly good reading knowledge of the language.

Now Sheila Buchanan, clerk to the Board of Governors and the Senate has taken her leave of the University. Final leave, she called it, while adding, "Thirty years of association with the University means that it will always hold a high place in my affections."

Sheila has returned twice to her alma mater since taking her first degree. Perhaps we can hope we have not really said good-bye even now.

Nicol on Professors

(reprinted from The Province)

Our universities are engaged in a drive to collect several millions of dollars. I know exactly how many millions, but I don't want to scare you off right in the first paragraph. Let's just say that it is a tidy sum.

Some people may feel that the sum is a little too tidy, compared with the untidy professors that will inhabit the buildings. Despite the Open House programs of universities, the days when the public is encouraged to trudge through the laboratories and see for itself how many miles of glass tubing are required to siphon off a million bucks, many people have reservations about professors.

They balk at subsidizing a space program that involves boosting an egghead onto Cloud Nine.

This column wishes to reassure such persons. The professor is worth every dollar we put into him. The value may not show, indeed it usually doesn't. The average professor is not an impressive sight, even when seen in motion, which is of course quite rare.

It is the professor's very resistance to movement that is his most valuable property. I know a dean, for instance, who is so immune to physical activity, in his concentration on the mental kind, that he smokes cigarets with complete disregard for the ash. The ash grows to a droopy length that makes you want to scream out a warning—then drops on his sports jacket.

The sports jacket itself looks like the slopes of Vesuvius. Over the years the deposits of lava have so deepened that they nourish a lush, green vegetation. You gain the impression that, laid flat, the jacket would support a grazing herd of some smaller species of ruminant for several weeks.

Every undergraduate interviewed by this much-loved dean cannot fail to be struck to his innermost being by the fact that here is a person, a brain, completely oblivious of personal safety in its devotion to matters of the mind.

THE dean may set himself afire several times in the course of a single

meeting with a student who has been having trouble with his courses. The university fire department has learned how to put him out without, so to speak, his being put out.

Admittedly not all the members of faculty are as rich in potash as this dean. Some of the younger ones show distressing flashes of awareness of extraneous events in the world about them, such as the invention of television and the rise in the cost of living. But, properly looked after, most of them will develop into real scholars, unable to identify Sophia Loren but remembering the name of a student last seen in their class 20 years ago.

So when we subscribe to the fund



Eric Nicol, BA '41, MA '48

drive for those millions of dollars, we can remind ourselves that it is an investment in other-worldliness, the world where absence makes the mind grow faster.

I myself hope that the universities will collect enough money to be able to finance a research group to explore means of preserving from extinction the mouldy type of professor, the kind whose open mind extends all the way down to his fly.

This professor is in danger of disappearing in the flood of bright young PhD's, some of whom talk like busi-

nessmen and flick their cigaret ash accurately into an ash-tray.

By giving now, let's get it over with, all this expanding, building and hammering. Clear the air for serene cerebration—and those calm wisps of smoke emanating from the dean's office window.

As others see us

(The following letter was written by Sabina Prietz, an Agriculture student, to her home university student paper, the "Ontarion". Miss Prietz came from Guelph for a year's study at UBC.)

UBC's MOTTO is 'Tuum Est' (It's up to you) and they are not kidding. Everyone is on his own here; no one cares what we take, as long as we know something for the exams.

Whatever we do is our own responsibility. No two timetables are alike, and among fifteen thousand students, everyone goes his own way.

UBC has many more kinds of people than OAC. There are Aggies and Home Ec. girls, Engineers and Sciencemen, but also Arts students, and those in Education, Social Work Medicine, Forestry and others. It is nothing to have undergraduates, postgrads, even professors and elderly people all in the same class.

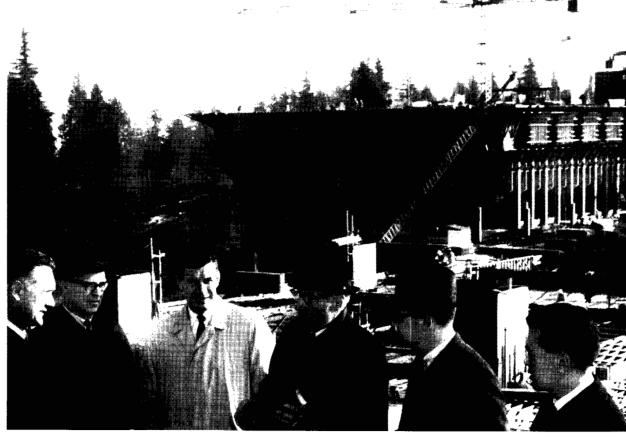
There is much more racial integration. International House, mentioned in the *Ontarion* a few weeks ago, is very much a success. All students are welcome there, and the foreign visitors try to give Canadian students some of the atmosphere of their own countries.

The Ontarion has tried to explain what Arts students would add to U. of G. We can see that so well here. I even want to use the word 'culture.' Every day at noon alone there are concerts, and films, and discussions on things from Fine Arts to Spanish to Politics

What has the large number of students done to school spirit? True, Homecoming (for example) has become more impersonal, when more than one Homecoming Dance has to be held to accommodate everyone; but it is still there.

UBC has residence problems too. We live in a camp of army huts. We are so far away from the main campus that the dining hall will give us bag lunches for busy days, it is too far to come back. But there are beautiful new residence blocks here too. Only never enough, just like at OAC.

U's C A M A G



Some UBC alums and others being shown SFU last February. L. to R.: D. M. Brousson, R. Watson, R. W. Macdonald, Dr. Shrum, V. Housez, R. H. Lee.

An army of volunteers 5,000 strong, is now out selling the cause, the cause of higher education opportunities for all qualified young people. Students are enlisted in this army, alumni, and citizens who rose to leadership in their communities without benefit of sheepskin. There is the special group of women volunteers, a cross-section of all three categories, whose symbol is a key and whose special project is to knock on the doors of smaller business firms with the university message.

This dedicated 5,000 is giving countless man-hours to ensure that no boy or girl now in high school shall be denied a university education for lack of facilities in the province's three public universities, and that the province shall not be deprived of the trained leadership the new age requires. They are the indispensable people in the 3 UCF program.

Board of Trade members examine their workers' kits. L. to R.: Bob Bentall, R. T. Rose, Dr. W. Persson, A. H. Cater.





Students of the three public universities plant symbolic trees at a ceremony in Victory Square.

Our Table Officers for 1965-66



R. W. Macdonald, LLB'50

Roderick Macdonald has taken over the president's gavel for the year 1965-66. He served the Association last year as 1st vice-president and for a twoyear term, 1963 and 1964, as AAG chairman.

Mr. Macdonald is a lawyer by profession.



Mrs. K. M. (Joyce) Walley

Second vice-president for 1965-66 is Mrs. K. M. Walley. Though a newcomer to the table officers Mrs. Walley was arts degree representative in 1957-59, member-at-large and chairman of reunions in 1962-64. Extra-curricularly she was district governor for Alpha Phi Sorority from 1955-57 and is currently a director of the Working Boys' Home Society.

Perhaps with a sigh of relief David M. Brousson has joined the honorable company of past presidents. Like all Association presidents of recent years he attended innumerable committee meetings and visited and addressed a number of branches during his term of office. He is vice-president and managing director of Century Sales Ltd.



D. M. Brousson, BASc'49



K. R. Martin, BCom'46

Another new table officer is Kenneth R. Martin, who was elected third vice-president. Mr. Martin served on the State of the University Committee and in 1963-64 as Commerce degree representative. As a leisure time activity he is secretary of the Hollyburn Sailing Club. His profession is management consultant (labour relations).

Mr. John L. Gray, last year's 3rd vice-president, has skipped a rung on the ladder to become the new 1st vice-president. He served for three years as chairman of the editorial committee, a post he has now relinquished.

Fraser Valley Milk Producers Association claims him as their public relations manager.



John L. Gray, BSA'39



D. McL. Anderson, BCom'48

Finally, but by no means least, comes the Association treasurer, Donald McL. Anderson. Mr. Anderson served as treasurer for the year 1964-65 and continues for another term.



It was A Sell-Out



Pierre Berton, BA'41

Over 600 alumni and guests were present at the Association's annual meeting and dinner on May 12, the largest annual meeting to date in our history.

The Alumni Merit Award was granted Dr. George F. Davidson and honorary life memberships were conferred on Mr. Allan M. McGavin, Mr. Cyrus H. McLean, and Mr. W. H. MacInnes, the last-named a donor of many university scholarships and prizes.

After hearing reports on the previous year's activities and electing the officers whose names appear on the opposite page, the audience settled to listen with critical attention to Mr. Pierre Berton on the subject of separatism in Canada.



Allan M. McGavin (L) and Cyrus H. McLean, chat with Mrs. "Ma" Murray.



Tim Hollick-Kenyon, BA '51, BSW '53, Director, Alumni Association

This time the director's desk is mobile. Since the last issue we have been visiting with the alumni and other citizens of British Columbia as part of a planned series of "University Nights." These events have the sole purpose of bringing the University to the people of the province, to inform them and to tell the exciting story of Higher Education in B. C. today.

The camera bug hitched a ride with me, and I'd like to share this odyssey with you.



from the director's desk



Ken Ross, BA '39, on left, chats with Portland alumni before dinner.

Chancellor Ross answers an alum's question after her address at the Benson Hotel, Portland.



Seattle alumni relive old times over dinner before discussing new developments at UBC.



Dean Ian McT. Cowan makes a point at a high school assembly in Vanderhoof.



At Williams Lake Guy Cawley, BCom '43, BSF '44 (L), the Rev. Dick Hunt and Jack Esler, BSA '49, go deep into Higher Education's problems.

Byron Hender, AMS president, at Summerland meeting.



Dr. Leonard Marsh, Faculty of Education, addresses V. I. University Association meeting.



Stop Press!

Alumni office has just learned that UBC has won 1st in the American Alumni Council's Incentive Awards.

This award goes to the public educational institution in North America that shows the greatest improvement in Alumni Giving.

A certificate and cheque for \$1,000 will be presented to Mr. R. W. Macdonald, president of the Alumni Association, on June 30 at the AAC conference in Atlantic City, N.J.

My congratulations to Rod Macdonald, Gordon Thom, director of Alumni Annual Giving, their loyal workers, and our alumni.

Degrees and more Degrees



Dorothy Somerset

Miss dorothy somerset, who for many years seemed to personify theatre at UBC, who has been associated with theatre training at this university for more than thirty years and has now retired as acting head of the department of theatre, was one of six persons to be awarded honorary degrees at the two-day Spring Congregation. Dr. Somerset, D.Litt., also gave the Congregation address on May 27.

Another to receive an honorary degree was UBC's own Professor Emeritus Harry T. Logan. Dr. Logan, LL.D., was an instructor in classics at McGill College, and was one of the original members of faculty of the new University of British Columbia. After service in WW I, he returned to teach classics until 1936. On his second return to the University in 1949 he became head of the department of classics. Since his retirement in 1953 he has continued to teach in the department.

Dr. Francis R. Scott, Macdonald Professor of Law at McGill University and a leading Canadian expert on constitutional law, was another recipient of an honorary degree (LL.D.) on May 27.

On the second day of the Congregation Gerard Piel, publisher of the magazine Scientific American, and Dr. Frank Forward, former head of UBC's department of metallurgy and now director of the new scientific secretariat of the federal government in Ottawa, were granted DSc's. Dr. Piel gave the address that day.

An honorary degree of doctor of laws was conferred posthumously on George Cunningham, late chairman of the Board of Governors, who died in office on March 7.

Some 2,000 first degrees were granted at the Spring Congregation and, in round figures, 175 graduate degrees, of which 25 were PhD's.

Arts Program Is Discussed

Discipline and Discovery is the title of a new conversation piece on UBC's campus. This 43-page booklet is subtitled "A Proposal to the Faculty of Arts of The University of British Columbia" and is the work of five professors—C. W. J. Eliot, Kaspar D. Naegele, Margaret Prang, M. W. Steinberg, and Lionel Tiger.

Although a great shout of joy went up from student editors who saw it (no more exams!), there is much more in the booklet than a suggestion to abolish examinations. It proposes some fairly radical changes in the program of studies that should be presented to first and second year students, discusses the philosophy underlying the authors' recommendations, and in a section entitled "Ways and Means" deals with the problems involved in implementing the changes.

Discipline and Discovery has been given a restricted circulation among those directly concerned with the academic and administrative changes that would become necessary if the proposed program should be adopted.

Dr. Mackenzie Honored

On June 10 a signal honor was bestowed on President Emeritus N. A. M. MacKenzie—and by extension perhaps one could say on this university—when Cambridge University granted him an honorary degree.



George T. Cunningham

(The following paragraphs were excerpted from the minutes of a Board of Governors meeting.)

THE MEMBERS of the Board of Governors desire to place on record in the minutes of the Board's first meeting since his death, their profound regret and deep sadness at the loss of their distinguished Chairman, George Torrance Cunningham.

For 32 years he gave the University unselfish and unstinted service. After an initial apprenticeship as an ordinary member of the Board, he served for years with distinction as Chairman of its Finance Committee, and latterly as Chairman of the entire Board. At all times he won the affection and respect of his colleagues by his fairness, his sound judgment, and his outstanding gift for reconciling different points of view on matters of policy.

No man could have served the University of British Columbia more sincerely, more modestly, and more affectionately.

But George Cunningham did not limit his devotion to public service to the University of British Columbia. At various times he served Vancouver as a member of the City Council, the School Board, and the Town Planning Commission. The Metropolitan Health Centre and the Health Centre for Children were two agencies to which he gave years of devoted service. Institutions as varied as the Board of Management of the Queen Elizabeth Theatre and the Vancouver Aquarium Association gained much by his advice and counsel. Recognition of his public service to the community was reflected in his being made a Freeman of the City of Vancouver.

CHAIRMAN OUTLINES BOARD'S GOALS

OVER FIFTY YEARS AGO the people of this province created our University for the purpose of improving the education of our young men and women. Under the University statute enacted by the legislature the responsibility for managing this new university was entrusted to the Board of Governors and the Senate.

At that time, save for the chancellor and the president, the members of the Board of Governors were wholly appointed by the provincial government. An important link between these two governing bodies was created when, in 1935, the Senate was allowed to elect three of its non-faculty members to the Board of Governors.

In 1957 the Act was again amended to allow for three direct appointments to the Senate by the Board of Management of the Alumni Association.

A number of studies of university government have been recently undertaken which will no doubt bring forth interesting suggestions regarding the constitution of our own governing bodies.

Among the constituent groups of the university family the alumni continue to play a prominent role. Their spirit, their drive, their loyalty have been the impelling factors that have helped the university in its present expansion. Without their support the university would not be able to carry forward its heavy program.

The Board of Governors sees great prospects ahead for the university. Architect planners have been employed who are preparing a master plan for our campus. Our program when completed will cost over \$50,000,000, this sum being in addition to the \$38,000,000 already expended on construction by the Board since April 1, 1956.

Among the most exciting prospects, however, is the utilization of two great gifts of money made to the university by Dr. H. R. MacMillan. The \$4,000,000 grant for the library will make it possible to more than triple its present size. By 1975 it is expected that it will have over two million volumes and will then be not only the largest but the best library in Canada.

Concurrently we have received some \$4,000,000 from Dr. MacMillan for

graduate scholarships. Students graduating this year will be eligible to enter the graduate school of this institution and apply for the annual awards of \$3,200 (with an additional amount of \$500 for the University).

Professors' salaries and benefits are now among the best in Canada and undoubtedly will keep pace with salaries in the other great universities on this continent.

Today we must look beyond the temporary confusion of building and



Mr. Justice Nathan Nemetz, BA '34

crowded classrooms to our goal of expanded opportunity for all, to the day when facilities will be such as to create an atmosphere of unhurried learning and where classes are so organized that professors will again be able to know and cultivate their students.

We hope that soon scholarships and living allowances will be available to every student who merits entrance to university and every student who has the ability will be searched out, in the interior of the province as well as in Vancouver, and given the opportunity of obtaining the benefits and privileges of higher education. These then are our goals.

-- NATHAN M. NEMETZ, Chairman, Board of Governors



Dr. David M. Myers

We lose a Dean

DEAN OF APPLIED SCIENCE Dr. David M. Myers has left us to head a new university in his native Australia. This university, La Trobe, will be the third in Melbourne.

Although La Trobe now consists of 700 acres of land, Dr. Myers expects it to open in 1967-68 and to build an enrolment of 10,000 students within five to ten years.

Dr. Myers was dean of the Faculty of Engineering and head of the department of electrical engineering at the University of Sydney before coming to UBC in 1960.

Dr. Ormsby

Named Head

ACTING HEAD of the history department since July 1963, Dr. Margaret Ormsby was appointed head effective last March 1. This appointment puts Dr. Ormsby into a select company of two, the only two women ever to have headed history departments in Canada. The other is Prof. Hilda Neatby of the University of Saskatchewan.

Another recent honor for Dr. Ormsby was her election as president of the Canadian Historical Association.

Alumni Association News



At the Student-Alumni banquet held last February eighteen proud young people were the guests of Mr. W. H. MacInnes whose scholarship winners they are.

Well known Educator dies

WILLIAM COCHRANE WILSON, BA'16, died on February 22 after a brief illness.

A native son, Bill received his early education at the old Mount Pleasant School (Broadway & Kingsway).

After graduating from King Edward High School he attended McGill University (B.C.) at the old Fairview shacks on 10th Avenue and was a member of the first graduating class of UBC. He served overseas in WW I with the 46th Battery of Queen's University, Kingston.

Bill was a dedicated and successful teacher and was the recipient of many of the highest honors awarded by the teaching profession. He worked tirelessly in numerous teacher organizations, on curriculum revision committees and in the Inter-High School Athletic Association. He served with distinction as a teacher for over 40 years, in a career that started in Vernon, moved to Cranbrook, then to New Westminster, and ended at King Edward in Vancouver. Because of his long

association with King Edward as a student, teacher and principal, he became known by the apt pseudonym, "Mr. King Edward."

A keen sportsman his activities ranged from "rugger," golf, basketball



William C. Wilson, BA 116

and track to baseball. He was a member of the championship Vernon baseball team in 1926.

Many of the old gang will long remember Bill's portrayal of Thisbe in A Midsummer Night's Dream.

Always a booster of the young people, he was unusually successful in guiding, counselling and understanding them. Until his death he remained active in numerous youth organizations

and as a lecturer in the UBC Faculty of Education.

Bill is survived by his wife Isabel, two daughters Mrs. A. (Isabel) Jones and Mrs. R. (Jane) Oates, a son W. L. (Laird), ten grandchildren, two brothers and two sisters.—W.F.M.

Galbraith

Double Winner

GORDON GALBRAITH, BA '64, was this year's selection for the Award of Student Merit, an award given for scholastic achievement, for service to the University, and for good character. A small reproduction of the large shield which records each year's winner was presented to Mr. Galbraith by Chancellor Ross at the Student-Alumni banquet in February.

This is the second time the award has been made.

Later in the spring Gordon Galbraith became first winner of the newly-established Alumni Graduate Scholarship in the amount of \$3,000. His field of study is economics.

Memorial Fund

A "Stella Shopland Memorial Fund" is planned at The University of British Columbia to commemorate the work of one of Canada's outstanding authorities on children's literature. (Miss Shopland's obituary appears elsewhere in this issue.)

Stella Shopland's lively and dedicated interest in children's literature had inspired thousands of student and practising teachers and for thirty years had profoundly influenced the school library movement in British Columbia.

Former friends and colleagues of Miss Shopland are invited to contribute to the fund by cheques payable to The University of British Columbia (Stella Shopland Memorial Fund). Cheques should be mailed to Prof. W. H. Gage, Dean of Inter-Faculty and Student Affairs, University of British Columbia, Vancouver 8, B.C.

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Lost to our records!

Here are the names of some old classmates who no longer have valid addresses in our files. Can you set us right on their present whereabouts?

1921

Alexander Ellanski

Miss Joyce M. Read, BSN 1924

Miss G. June Hagerman, BSW

1925

Ellen Hart, BA Mrs. E. J. Nelson, BA

Miss Joan M. Railton, BA

1927 Herbert F. Clarke, BA

1928 Arthur F. Rees, BASc

1929

Fred H. Maikawa, BA

1931

Christy H. Madsen, BA Mrs. W. H. Rae, BA

Herbert D. Falls, BSA Miss Edith Margo Magee, BA

Mrs. C. J. Powell, BA

Clifford F. Parker, BA Mario Pradolini, BA

A. B. Jackson, BA Mrs. William Prendergast, BA

1934

Edmund G. Edgar, BA

Tom B. Niven, BA

Winnifred W. Fair, BA Mrs. Michael A. Pollard, BA

1938

Miss Margery C. Porter, BA

1939

Mrs. Frampton B. Price, BA

J. K. Eadie, BASc

H. C. Poole, BSA

Dr. C. G. Patten, BA

John A. Rattenbury, BA

1942 Miss Hansi Nissen, BA

Mrs. Tom Parks, BA

1943

James H. Nevison, BA

1944 Miss Zelle Adcock, BA

Mrs. Albert S. Mallon, BA Miss Mary J. Piercy, BA

1945

Peter S. Adutt, BA

Donald J. C. Ralston, BA 1946

Blanche P. Clayton, BA Demetrie G. Elefthery, BA

Arthur L. V. Platt, BEd

J. A. D. Andrea, BCom Sheila K. Falconer, BA Miss D. C. Ellis, BA William J. D. Ironside, BA Miss Lorna E. Irving, BHE

Mrs. Charles Mah, BA D. A. Noble, BCom

Kenneth John Parry, BA Miss Olive C. Poyser, BA

A. J. Rampone, BA

William E. Redpath, BCom

Mrs. Mathew Reisser, RA 1948

Harry F. Fane, BCom T. P. Elder, BA

Capt. S. R. C. Elliott, BCom Miss Colleen V. Hadwen, BCom V. Mahadevan G. Iyer, MA Mrs. Andrew Malysheff, BA Robert E. Nelson, BCom

H. R. Pinchin, BCom Mrs. Douglas J. Rain, BA 1949

Seymour Adelman, BA Robert A. Ewert, BA J. A. Eddleston, BASc Mrs. L. D. Edmondson, BA Douglas G. E. Hadley, BCom Keith D. Hage, BA Melvin G. Hagglund, BA Miss Violet M. Parsonson, BHE Dr. John W. B. Redford, BA

Dr. David A. Aaronson, MA W. H. Allard, BSA Frederick W. Elley, BASc Miss M. J. Haldane, BA Allan R. Harvey, BA Mrs. E. F. Mahaffy, BA Howard C. Nicholson, BCom Albert Polsky, BA David N. Radcliffe, BSF

H. I. G. Ragg, BA

1950

Louis Albertson, BCom Capt. J. P. Faddegon, BSF James Economy, BSP Gordon Elliott, BA George G. Habke, BSA



Major J. A. Nickolm, BASc Lt. P. F. H. Nixon, BA Louis B. Nofield, LLB Mrs. Cyril Reid, BA

Bruce Alsbury, BA Mrs. Virginia E. Clement, BSW Calvin C. Easterbrook, BA Frederick Hartley, BA Jacob V. Neufeld, BEd Renaldo P. Renhegas, BA Donald M. Renton, BA 1953

Joan C. Churchill, BA Alan Clark, BA Edwin M. Neilly, BCom Mrs. E. P. Rankin, BHE

Mrs. Bonnie Adams, BA John. N. Antrobus, BA William J. Ciprick, BA Henry Ivanisko, BA Miss Verna Nilson, BA Ivor Parfitt, BA T. Blake Ramsay, BA John H. Redekop, BA Theodore A. Remple, BA 1955

Kenneth D. Abrams, BA Thomas J. Ciebien, BCom

Mrs. Donald R. Eaton, BCom George R. Rayment, BA 1956

Miroslav R. Fajrajsl, BSF Thomas W. Ebbett, BSA Simcha-Zola Ben Elasar, BSA Richard S. Nicholls, BCom Esmond R. Preus, BSF 1957

Miss Loretta M. Antonini, BA Roger K. Ewing, B'Arch Rev. Howard T. Ellis, BA Alexander S. Juk, BA Julian C. Julian, BA Miss Frances J. Nix, BA Thomas G. Pickett, BCom Henri J. Pigeon, BSF Edward Pahl, BA Barry A. Rand, B'Arch

Miss Lois K. Eckstein, BSc Selvester O. Eliuk, BA Dr. Joseph Halak, MD Mrs. Frank Madill, BSN Lajos Nemeth, BSF Arthur C. R. Newbery, MA Douglas L. Parkhill, MASc Mrs. Moonie Ramlogan, BA Leslie F. Renshaw, BSF 1959

A. Ernest Alexander, BSc Stanley Malic, BA Geza Pal Nagy, BSF Kent G. Niamath, BSc Miss Lorraine A. Pohl, BA Laszlo Popradi, BSF Jerrald A. Potts, BA Adrian W. Preston, BA Wladyslaw Radzikowski, BSc Jorg Rautzenberg, BA John P. Reecke, LLB Gunther Reith, BA

1960

Anthony A. Churchill, BA Rino K. Fabbro, BA Lt. Sidney E. C. Fancy, BA Barrie L. Hale, BA Ronald V. Jack, BSF Alvin E. Neumeyer, BA Frank I. Piper, LLB Frederick J. Pratt, BA 1961

Edward William Aho, BA Kamill Apt, BSF Michele Cianci, BSc Ronald W. Eaglestone, BSc D. Evans A. Ramnath, BSc Larry G. Rantz, BSc George P. Rawlinson, BEd James H. Renick, BSc Laszlo I. Retfalvi, BSF Gerald B. Reynolds, BA

1962

Anwar Ali, BSc Erich J. C. Hahn, BA Miss Gwyneth E. Judd, BA Mrs. Dale E. M. Irvine, BA Hajime Maeno, LLB Bryan W. Manley, BEd Miss Beatrice T. Nergaard, BA Allan F. Potter, MASc David R. Parson, BPE John L. Paynter, BA Peter Ramkay, BSc

1963

George R. Adams, BCom Gerald R. Clare, BEd Gilles G. Faget, MA Mrs. Kory Regan, BEd

Up and Doing

News of Alumni

Send the editor your news, by press clippings or personal letter. Your classmates are interested and so are we.



Theo V. Berry, BASc '23

Theo V. Berry, BASc, received the Fuller Award at a meeting in Halifax of the American Waterworks Association, Canadian Section. Mr. Berry was last year elected chairman of the Canadian Section.

1924

J. C. Wilcox, BSA, MSA'33 is the choice of the Sprinkler Irrigation Association for its "Man-of-the-Year" 1964 award. This is an award presented annually by the Sprinkler Irrigation Association to a person outside the industry



Margaret T. Gourlay, BA '29

Margaret T. Gourlay, BA, MSW'53 (St. Louis), was one of ten alumni honoured with an Alumni Merit Award at the 1964 Founders Week of St. Louis University. These awards are given to recognize alumni "who are exemplifying the university credo in their daily lives' and in Miss Gourlay's case was for distinguished achievement in social welfare administration. Miss Gourlay received a diploma in social work from UBC in 1939, and in her 25 years as a social worker in Vancouver she has served on countless boards and committees. At the present time she is Welfare Director of the City Social Service Department and in addition is busy with many activities of Catholic Charities, Canadian Welfare Council, Community Chest, and a number of others.

for outstanding contributions toward better irrigation. Dr. Wilcox's research work in soil moisture-plant nutritional relationship in the field of horticulture, which began in Summerland, B.C. in 1931, is outstanding and acknowledged throughout the world.

1925

Herbert Chester, BSA, Associate Director of the Canada Department of Agriculture Research Station, Lethbridge, Alberta, has retired after 39 years' service with the department. He had served at Lethbridge since 1934 and as Associate Director since 1959.

1926

Bert Wales, BA'26, BEd'46, Ed.D'58 (Ore.), who has been director of adult education for the Vancouver School Board since 1958, has been named head

It happens in the best of families! The Alumni office shelves lack a 1957 **Totem.** Have you one to donate or sell to fill this gap?

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1928

Wilfred H. Morris, BASc, writes that he and his wife Ruby E. (née Williams), BA'34, are returning to South America for another term of missionary service after having completed twenty-seven years' work there. They have served in Peru and Venezuela. Mr. Morris is registered as an engineer in Peru and Canada and both he and Mrs. Morris are ordained ministers of the Assemblies of God.

1931

A. D. Estabrook, BASc, who has served in various engineering capacities in British Columbia primary and secondary industries over the past twelve years, has been appointed sales manager of Canadian Car (Pacific).

Frank C. Hardwick, BA, MA'34, made a brief speaking tour to England recently, a tour arranged largely by Professor Gordon Batho of the University of Sheffield who was last year a visiting professor in the Faculty of Education at UBC. Mr. Hardwick, an associate professor in Education here, spoke at the University of Sheffield, Doncaster Training College, at grammar schools in the Sheffield area, and at the Sheffield Institute of Education, as well as at other colleges and universities elsewhere in England. His tour included a visit to

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Major Scholarships Won by Alumni

UBC alumni have been awarded a number of important scholarships in recent months. Among the recipients are the following and our heartiest congratulations go to them all.

Woodrow Wilson Fellowships, worth \$1800 and tuition costs paid at any graduate school in Canada or the United States were granted these 1965 grads:

Melvyn E. Best, BSc Dennis C. Bevington, BA Christopher J. Brealey, BSc Robert D. Diebolt, BA Timothy J. Le Goff, BA Angus G. McLaren, BA Timothy C. Padmore, BA Patricia L. Smith, BA Andrew R. Spray, BSc Patrick N. Stewart, BA

Bank of Montreal fellowships of \$3,000 were renewed for **Patricia Ellis**, BA'64 and **Andrew Pickard**, PhD'65.

Athlone Fellowships, which cover travel costs, living expenses, academic fees and a book allowance for a period of study in England, were won by Ronald E. Pike, BASc'63, and David A. Lloyd, BASc'62.

Wayne Lytton, BA'64, has been awarded one of ten Rotary Foundation fellowships for international understanding.

A \$9,000 International Mineral & Chemical Corporation scholarship for three years of post-graduate study in geology has been won by **David A. Mustart,** BSc'65.

K. F. G. Paulus, BSc'62, will spend the next two years in England on a Shell Postgraduate Scholarship.

Jack Block, BA'52, MEd'63, head of the science department at Moody Secondary School, Port Moody, will attend Stanford University this summer on a Shell Merit Fellowship.

Louis A. Hanic, BA'50, is the winner of a Ford of Canada 60th anniversary post-doctoral fellowship worth \$5,000.

Brenda Buller, BHE'64, a research fellowship granted by Iowa State University.

King Alfred's College, Winchester, where he was a visiting lecturer in Geography in 1956-'57.

Mr. Hardwick is president of the Vancouver Historical Society.

1933

Brenton S. Brown, BA, BASc'33, has been elected first president of the recently federalized Royal General Insurance Company. He formerly served as secretary and managing director when the company operated as a provincial insurer in British Columbia.

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Douglas V. Manley, BASc, took up a new position, that of engineer of the City of Revelstoke, in January this year. He had formerly been employed by the City of Vancouver as civil engineer III.

G. M. Volkoff, BA, MA'36, DSc'45, head of UBC's department of physics, attended by invitation the Second Texas Symposium on Relativistic Astrophysics held at Austin, Texas on December 15-19. This was an international meeting attended by over 200 experts from all over the world called together to discuss the recently discovered unusual astronomical objects to which the name of Quasi Stellar Sources has been given.

1935

Robert F. Christy, BA, MA'37, PhD '41 (Berkeley), received a distinguished scientific honor when he was elected a member of the National Academy of Sciences (U.S.) this spring. Dr. Christy is a professor of theoretical physics at the California Institute of Technology.

Alexander J. Wood, BSA, MSA'38, PhD'40 (Cornell), professor of animal husbandry, leaves UBC to take up a new appointment as Dean of Arts and Science at the University of Victoria. Dr. Wood, who has more than 50 publications in the field of science, has lectured by invitation in Scotland, Holland, Poland, Japan, China and Iceland as well as Canada and the United States.

1936

Lachlan F. MacRae, BA (Chem.), BA (Hist. & Eng.) '37, MA'37, BA (Librarianship)'37 (Wash.), has been appointed chief librarian at the University of Guelph. Mr. MacRae was chief librarian at the Fort William public library from 1945 to 1951, and since then has been director of scientific information services, defence research board of Canada. He was president of the Ontario Library Association from 1947 to 1949.

1938

George F. Gregory, BA, LLB'41 (Harvard), a former Liberal MLA, has recently been named a justice of the Supreme Court of British Columbia. Mr. Justice Gregory was appointed to the

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Charles H. Clay BASc'44

Rome, Italy, will be home for the next three years for Charles H. Clay, BASc. He has been granted leave of absence from his position of chief engineer and chief of the fish culture branch of the Department of Fisheries in Vancouver to accept a three-year posting to the fisheries division of the Food and Agriculture Organization of the United Nations. His duties will include technical administration of UN special fund projects in the fisheries field, some of which are establishment and staffing of several fisheries research institutes and training centres in the developing countries.

bar in 1941, and served with the Royal Canadian Navy until 1945, winning the Distinguished Service Cross.

James A. Macdonald, BA, a graduate of the Osgoode Hall Law School, Toronto and a former president of the Vancouver Liberal Association, has been appointed a judge of Vancouver's county court.

Clarence P. Idyll, BA, MA'40, PhD (Wash.), has written a book on the sea which has received enthusiastic critical acclaim. Dr. Idyll is the author of ABYSS: The Deep Sea and the Creatures That Live In It. While a student at UBC, Dr. Idyll was president of the class of arts 1937, treasurer of the Student Council, a reporter on the Ubyssey and active in other student affairs. He named the student athletic teams the "Thunderbirds."

Frank Raymond Jones, BA, BASc'39, MASc'46, was last autumn made manager of the Texas Gulph Sulphur Co.'s Timmins operation.

1939

John S. Kennedy, BASc, has been appointed sales manager of the Maritime Cement Company, Limited. He was formerly executive assistant—sales, at the head office of the company in Montreal.

George Wheeler Govier, BASc, MSc (Alta.), Sc.D (Mich.), has been added to the list of distinguished recipients of the R. S. Jane Memorial Lecture Award. His reputation as an engineer in Canada has been established through his association with the University of Alberta and the Conservation Board over a period of twenty-five years.

Dr. Govier joined the Engineering Faculty at the University of Alberta in 1940 as an instructor but became professor and head of the department of chemical and petroleum engineering in 1948. At the same time he was appointed a member of the Oil and Gas

Conservation Board. In his capacity as a member of the Board he participated actively in the development of Alberta's oil and gas conservation policy with respect to such problems as the regulation of well spacing and the proration of oil to market demand. He participated in the consideration of a long series of applications for gas export permits and contributed to their eventual resolution.

Ralph F. Patterson, BASc, MASc'40, PhD'42 (McGill), is the new manager of Eburne saw mills division of Canadian Forest Products Ltd. This is in addition to his duties as general manager of CFP pulp production.

1940

The news editors of British Columbia's daily and weekly newspapers chose



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the Hon. Ray G. Williston their man of the year last November. To make it official a framed scroll was presented to him by the previous year's recipient of the award, Dr. J. B. Macdonald.

1941

Stanley L. Harris, BASc, has received the appointment of director of marketing of Monsanto Canada Limited. He was manager of that company's western operations in Vancouver from 1950 until 1959 when he was made developments associate to their Santa Clara, California office.

Rhoda Walton Leonard, BA, is the author of "Wildlife Adventure Series," readers for grades three to five children in United States schools. The first four books in the series were published last year and a second group of four was due to appear early this year. Mrs. Walton, a native of Victoria and now a resident of Los Angeles, is a remedial reading specialist.

1942

John S. MacKenzie, BASc, has by a recent appointment become general superintendent of the plant production division of Alcan at Arvida. Mr. MacKenzie, who joined Alcan's staff on graduation, is well travelled. From 1947

to 1951 he served the company in British Guiana and was then lent by them to the Indian Aluminum Company at Calcutta where he remained for four years. He was most recently general superintendent of the chemistry division at Arvida.

Marion E. Murphy, BA, MSW (N.Y.S.S.W. Columbia), who has been on the executive staff of the Canadian Welfare Council for the past twelve years, toured the Atlantic Provinces on behalf of the Canadian Conference on Aging. The purpose of the conference which will be held in January, 1966, is to draw nation-wide attention to the problem of aging and the aged, and to stimulate further planning and action in promoting the welfare of the aged in Canada, on a co-ordinated basis. Miss Murphy has recently completed a study on living arrangements for the aged in Canada.

1943

Michael A. Haddon, BASc, was this spring appointed general sales manager, special products unit, of Canadian Johns-Manville Co. Ltd. Mr. Haddon, a member of the Association of Professional Engineers of Ontario, is past vice-president of the Automotive Ser-

vices Marketing Association and currently a director of the Automotive Industries Association and chairman of the AIA government relations committee.

1944

John Albert Burton, BASc, BA'47, by an appointment last April became chief engineer of Canadian Car (Pacific).

In January William T. Lane, BA, BCom'47, LLB'48, took over command of the B.C. Regiment (Duke of Connaught's Own). Colonel Lane is a lawyer and crown prosecutor in Richmond. He was a member of the COTC at UBC, joined the active force in WW II, and was commissioned in infantry.

1945

Donald Francis Griffiths, BASc, has been appointed acting general superin-

Your Homecoming Headquarters

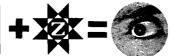


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tendent of the metallurgical division of The Consolidated Mining and Smelting Company. Mr. Griffiths joined Cominco in 1945 and has served in a number of supervisory capacities in the zinc and refining departments.

G. A. Johnson, BCom, by appointment last October became director of purchasing for MacMillan, Bloedel and

Powell River Ltd.

On July 1 Professor Douglas T. Kenny, BA, MA'47, PhD(Wash.), will take up his appointment as head of UBC's psychology department, succeeding Dean Emeritus S. N. F. Chant. Professor Kenny is currently a visiting professor of psychology at Harvard University.

1946

George W. McLeod, BASc, was appointed chief engineer for Letson & Burpee Ltd. last autumn. Mr. McLeod was for the previous five years plant engineer with a large pulp and paper company at Prince Rupert.

1947

Effective December 1 A. Douglas Belyea, BCom, became director of the aircraft branch of the Department of Industry and Defence Production. Mr. Belyea joined the Department of Defence Production in 1951 and in 1959 was appointed deputy director of the aircraft branch.

Bertram N. Brockhouse, BA MA, (Tor.), PhD(Tor.), is one of three Canadian professors elected fellows of Britain's Royal Society. Election to the Royal Society has been described as a



John O. Pollock, BA '47

John O. Pollock, BA, BSW'48, MSW '50, is the recently appointed business administrator for the National Council of YMCA's of Canada. With his wife and three children he has moved from New Westminster, where he has been executive director of the New Westminster YMCA-YWCA, to Toronto.

signal and relatively rare scientific honor. Dr. Brockhouse is a professor of physics at McMaster University.

Thomas Charles Grant, BCom, has been appointed director of merchandising and sales promotion for Avon Products of Canada Ltd. Mr. Grant was formerly vice-president of Claude Neon General Advertising Limited.

Expo 67 has announced that **Norman M. Hay,** BA, has been appointed head of the Design Division, Installations Department. He is the former executive director of the National Industrial Design Council, serving simultaneously from 1955 to 1960 as director of the National Design Centre.

After taking part in the North American Fisheries Conference in Washington, in May, **Donovan F. Miller**, BCom, MSc, '55(MIT), was off to the West Indies with his wife for a ten-day holiday. The conference was between Mexico, the United States and Canada.

Mr. Miller is president of the Fisheries Council of Canada.

Another Commerce grad., Grant K. Moreton, BCom, was recently appointed comptroller at the Vancouver General Hospital where he has been a member of staff since 1957.

1948

H. R. Webster, BA, has been appointed superintendent of Riding Moun-



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tain National Park. He first joined the National Parks Service in 1948, Most recently he was in charge of the Edmonton office of the Canadian Wildlife Service and carried out field studies in the Province of Alberta.

1949

president of the Vancouver Natural History Society is Katherine I. Beamish, BSA, MSA'51, PhD(Wis.). Dr. Beamish is the Society's first woman president. She is assistant professor of biology and botany at UBC.

Paul C. Gilmore, BA, MA'51(Cambridge, Eng.), PhD'53(Amsterdam, Holland), has been awarded jointly with another mathematician working for IBM the Lanchester Prize of the Operations Research Society of America for the best paper published on operations research in 1963.

Douglas W. Glennie, BA, MA'51, has been named senior research chemist at Crown Zellerbach Corporation's Camas, Wash., central research division. His chief study will be in wood chemical

In February N. C. Nolman, BCom. was appointed plant purchasing agent for Monsanto Canada Limited in Oakville and Woodbridge, Ontario. In this post he will be responsible for procuring raw materials and supplies for the company's vinyl and foam operations at the two plants.

An employee of Pacific National Exhibition, L. W. Matthews, BCom, has been appointed general manager of the Lethbridge and District Exhibition and Fair.

After spending the year 1964 with the FAO of the UN in the Republic of the Philippines, Charles M. Williams, BSA, MSA'52, is back at the University of Saskatchewan, Saskatoon, as professor and senior extension specialist. department of animal science.

Douglas L. Sprung, BASc, has been named vice-president, marketing, for Canadian Western Pipe Mills Ltd. and Alberta Phoenix Tube & Pipe Limited.

Fred Terentiuk, BA, is now responsible for co-ordinating programs within University of Alberta's summer and evening sessions. He is associate professor of physics at the U. of A., Calgary and his title in his new responsibility is director of continuing education. 1950

Thomas G. Cundill, BASc, is now chief chemist of International Nickel Company of Canada's Port Colborne refinery.

William E. Donnelly, BA, was recently appointed vice-president of Laurentide Financial Corporation Ltd. He will continue to work for the president on matters relating to the development of corporate policy, planning, budgeting and in the expansion of the corporation's foreign investments

In February last William H. R. Gibney, BASc, was appointed operating superintendent, Sullivan Mine, Mines Division of The Consolidated Mining and Smelting Company of Kimberley,

John L. Haar, BA, director of housing at UBC, has been granted a year's leave

of absence to act as director of the new adult education centre at Elliot Lake, Ontario. The centre is financed under the federal-provincial technical and vocational training agreement.

The area is said to provide "excellent summer and winter recreational facilities," so-is there perhaps method in John's madness?

John Klimovich, BASc, has been transferred from his post of chief engineer of the Portland office of Sandwell and Company Limited to chief engineer of the Vancouver office. He joined Sandwell in 1950 and has held a number of increasingly responsible positions on North American and overseas projects.

New manager of Ingersoll-Rand's Vancouver branch is Donald L. Nelson, BASc. Mr. Nelson joined the company in 1940, then served with the RCAF, and took his degree following the war.

C. G. Newton, BASc, has been appointed resident engineer and mine manager for Orecan Mines Ltd. at their iron mine on northern Vancouver Island.

Another UBC alum, Lolita N. Wilson, BA, MA'53, has joined the faculty of SFU. Miss Wilson will be Dean of Women and associate professor of psychology. She has been associate professor of psychology at the University of Alberta, Edmonton. During the war she served with the Canadian Women's Army Corps, retiring with the rank of

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captain. After taking her second degree she did further postgraduate work before joining the faculty of the U. of A.

1951

G. V. Lloyd, BA, has been named exploration manager of Canadian Homestead Oils Limited. This follows thirteen years' experience as a geologist in Petroleum exploration, mainly in western Canada but also in the Canadian Arctic and in South America.

Howard R. Nixon, BPE, MS(HEd) MS (PE) PED(Indiana), will head Saskatchewan's proposed youth department, it has been announced. Mr. Nixon is professor of physical education at the University of Saskatchewan, Saskatoon. He has served as director of recreation in Edmonton and Wetaskiwin and as a consultant with the Alberta Recreation Association and the Saskatchewan Fitness and Recreation Division.

1952

William G. Clarke, BASc, has been appointed mine superintendent of the Boss Mountain Division of Noranda Mines Ltd. He was formerly employed by Canadian Exploration Ltd. and Pamour Porcupine Mines Ltd.

Last December S. Ross Johnson, BCom, was promoted to supervisor of Western Canadian offices of the New York Life Insurance Company, from agency manager in Edmonton.

W. R. Johnston, BCom, became general manager of the family business, Johnston Motor Co. Ltd., in February

1953

Thomas S. Campbell, BASc, has re-

ceived the appointment of Acting Senior Mining Engineer, Sullivan Mine, Mines Division of The Consolidated Mining and Smelting Company at Kimberley.

assistant to the general superintendent at the Pacific Veneer and Plywood Division of Canadian Forest Products Ltd., has been appointed manager of Fort St. John Lumber Company, Limited, at Chetwynd, for the same organization.

New president of the B.C. School Teachers' Federation is **Rudy G. Kaser**, BA'42(U. of Alta.), BEd'55. Mr. Kaser is head of the social studies department at Lord Byng Secondary School, Vancouver.

1956

Sir Hugh Nicholas Linstead, LLD, has retired from the secretaryship of the Pharmaceutical Society (England), but will continue his work as secretary to the Franco-British Pharmaceutical Commission and as president of the International Pharmaceutical Federation. He holds an honorary degree of Doctor of Laws from Toronto as well as from this university.

1957

Vern J. Housez, BCom, MBA(Partial) '60, was appointed divisional sales manager and store manager of T. Eaton's main store in Vancouver. As divisional sales manager he assumes full responsibility for the Company's seventeen department stores in British Columbia and Alberta.

Mr. Housez was the 1964 Homecoming chairman and is currently AAG chairman.

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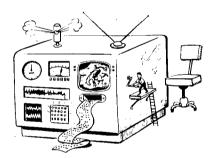


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John C. McDermid, BCom, in January received the appointment of vice-president of Bowell McLean Motor Co. Ltd.

Following eight years with the company C. Clare MacSorley, BCom, has been appointed sales supervisor—Western Canada of Nabob Foods Limited.

1959

On April 1 Edgar Willis Epp, BSW, became superintendent of the Prince Albert Correctional Institute. From August 1961 up to the time of accepting his new appointment Mr. Epp served as executive secretary for the Prince Albert Council, John Howard Society.

A member of the Okanagan Indian band, Leonard S. Marchand, BSA, has been appointed a special assistant to Immigration Minister Jack Nicholson. He is the first Indian graduate of the Faculty of Agriculture and the first Indian to be appointed to the personal staff of a federal cabinet minister.

Hugh C. Redwood, BArch, was recently appointed an architectural consultant of the newly established Sweet's Canadian Construction Catalogue File. In this post Mr. Redwood will assist manufacturers of building products with the design of their product literature which will be bound into the pre-filed Sweet's Canadían Construction Catalogue file.

In January William David Thomas, MD, received his FRCS in obstetrics and gynaecology from the Royal College of Physicians and Surgeons.

John Franklin Ogilvie, BSc, MSc'61, MA'64(Cantab.) writes us that he was elected to a Research Fellowship at Emmanuel College, Cambridge, as of October 1963, and was appointed assistant in research in the Department of Physical Chemistry from January 1, 1964.

1960

Clifton W. Healey, BCom, has been named marketing research manager of the Western Division of Molson's Western Breweries Limited. During the past four years Mr. Healey has been engaged in marketing research for national companies in Ohio and California.

1961

In March last **David James DeBiaso**, BASc, became plant superintendent, Indium Plant, Metallurgical Division of The Consolidated Mining and Smelting Company at Trail.

John Wright Productions is the brainchild of **John Wright**, BA, and this summer his Klondike Company goes to Dawson City, commissioned by the city's Klondike Visitors' Association to produce shows in the Palace Grande Theatre and in the restored Yukon steamboat, the SS Keno.

Mr. Wright is a graduate in theatre.
1962

G. Grant Clarke, BA, MA'64, who has been a research associate with the Alcoholism Foundation in Vancouver for the last three years, recently left to take up a position with the Association of Canadian Medical Colleges in Ottawa.

This new post will involve travel to all Canadian medical schools.

1963

John Skelton, BSA, sends us his change of address with the explanation that he is now employed on that exciting (our word), all-Canadian project Expo 67. He is head of the Amphitheatre Unit of the Entertainment Branch and will be living in Montreal for several years to come.

1964

Hans Foerstel, MSc, a planning officer for the City of Halifax, has been presented by the Town Planning Institute of Canada with a certificate of distinction for "excellency in the study of town planning, 1964."



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Marriages

CHADWICK-HERZOG. George Brierley Chadwick, BA'53, MA'55 to Andrea Schafer Herzog, in Oxford.

FROMSON-PETTIS. Douglas Arthur Fromson, BASc'59, to Shirley Jane Pettis, January, 1965, at Truro, N.S.

SCRIBNER-MCLEOD. Franklin Charles Scribner, BA'61, to Donna Marilyn McLeod, BHE'61, on December 29, 1964, in Vancouver.

Births

DR. and MRS. THEODORE E. CADELL, BA '57, MSc'61(Mass.), PhD'63(Wisc.), (née LOIS CARLEY, BA'57), a daughter, Meryn Andrea, December 4, 1964, in Brooklyn, New York.

MR. and MRS. ROBERT CURRIE, BA'45, (née sylvia lees, BA'45), a son, Callum MacKenzie, on January 28, 1965, in Guelph, Ontario.

MR. and MRS. WALTER R. FLESHER, BA'50, LLB'52, twins, Paul Walter and Mary Eileen, February 20, 1965, in Montreal, Quebec.

MR. and MRS. JOHN FRANKLIN HUT-CHINSON, MA'63 (née PATRICIA MARY WATTS, BCom'63), a son, Gordon John, on March 11, 1965, in London, England.

DR. and MRS. WILLIAM N. HOLSWORTH, MSc'60, a son, Mark Stephen, on February 21, 1965, in Saskatoon, Sask.

MR. and MRS. ROBERT B. MACKAY, BCom '64 (née GAIL G. CARLSON, BA'63), a daughter, Theresa Melany, on April 1, 1965, in Montreal, Quebec.

MR. and MRS. L. J. THIBAULT (née ANN GLADSTONE, BSP'61), a daughter, November 5, 1964, in Vancouver.

Deaths

Mrs. Harry Barratt, BA (née Margaret Maud Thomson), of Vancouver, died on April 3, 1965.

William Henry Taylor, BA, PhD (Calif), for many years a member of the staff of the International Monetary Fund, died on January 8, 1965, in Washington, D.C. He is survived by his wife, son and daughter.

1934

Harry Katznelson, BSA'34, MS(Wash. State), PhD(Rutgers), died on February 10, 1965, in Ottawa. Dr. Katznelson, who was a Fellow of the American Association for the Advancement of Science and a Fellow of the Royal Society of Canada, was director of the federal department of agriculture's microbiology

research institute in Ottawa at the time of his death. He is survived by his wife, a son and a daughter.

1936

Mrs. R. A. Francis, BA (née Margaret Ecker), died in Spain where she had gone to visit her student daughter, on April 3, 1965. Mrs. Francis, a well-known newspaperwoman, helped cover the invasion of Normandy for The Canadian Press and was the only woman reporter at the German surrender and armistice signing in Rheims. In the summer 1956 Issue of the Chronicle she contributed "A Tale of the Pub—and After," a lighthearted account of a lighthearted springtime pubster's prank which must have touched a nostalgic chord in many alumni hearts that now mourn an old classmate.

1945

Miss Stella Shopland, BA, MA(Wash), an assistant professor in the Faculty of Education, died on April 25, 1965. After taking a diploma in library science in Toronto, Miss Shopland worked for six years in the Vancouver Public Library. She then became a member of staff of the Vancouver Normal School where she served from 1936 until the school became part of the College of Education at UBC, at which time she moved with it to the campus.

At the time of her death Miss Shopland had very nearly completed her work for a PhD degree from the University of Washington.

She is survived by one brother, Harold of Ganges; three sisters: Mary of Vancouver; Mrs. John (Dorothy) Deacon of Duncan; Mrs. Leslie (Norah) Garrick of Mayne Island.

1946

John E. Stephen, BA, BCom'46 died in Montreal in early January of this year. Mr. Stephen was a vice-president of William M. Mercer Limited at the time of

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his death. He is survived by his wife, a daughter Barbara, two sons, Andrew and Robert, and his mother, Mrs. Ida Stephen.

1949

Brian R. Baal, BSP, died in Duncan, B.C. on December 21, 1964, after a prolonged illness. Mr. Baal had been associated with his father in pharmacy in Sidney and for the three years prior to his death had operated a pharmacy in Duncan.

1950

John Richardson Dymond, DSc'50, died at his home in Toronto on February 1, 1965. He was vice-chairman of the Federal Fisheries Research Board from 1947-53, and director of the zoology department at the University of Toronto from 1948-56.

1954

Bruce K. Morrow, BA, BCom'57, an administrator of a Winnipeg hospital, died in Winnipeg on February 10. He is survived by his wife and his parents, Mr. and Mrs. John Morrow.

1957

Robert E. Duggan, BSF, was the victim of a plane crash on Bowen Island which occurred last December 5. He is survived by his widow, Margaret, a daughter, Sandra, a son Geoffrey, and his mother, Mrs. L. Jean Duggan.

Kenneth George VanSacker, BASc'57, died in a car accident on December 23, 1964, at Shalalth, B.C. At the time of his death he was assistant plant superintendent, Bridge River area, for B.C. Hydro and Power Authority. He is survived by his wife Gail, four children, his parents, Mr. and Mrs. A C. VanSacker of Duncan, and a brother Maurice of Oakland Calif.

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