

# UBC REPORTS

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RETURN POSTAGE GUARANTEED

## *UBC's NEW COMPUTER: Answers While You Wait*

Ten seconds will be a long time to wait for answers on the new IBM 360 Model 67 computer, now in full operation in UBC's civil engineering building. The main computer, used for research, teaching and some administrative functions, is also linked to remote terminals in other campus buildings for two-way "conversations." Programmer Garm Miske is shown below operating the main console of the machine. Details on pages ten and eleven.



# letters to the editor

## LEADERSHIP AND RESPONSIBILITY

Those of us who genuinely have the interests of the University at heart will welcome Dr. Ford's timely reminder that control of the public purse should not be in the hands of the faculty and students. UBC and universities in general suffer too much from the malady caused by the tail wagging the dog. Democracy has already been carried too far. The cumbersome process whereby so many decisions are made by committees has merely reduced the administrative process to the lowest common denominator. A committee is like a convoy. The speed of convoy is the speed of the slowest ship in the fleet. The decisions of a committee are reduced to those that are acceptable to the majority. Thus progress is stifled.

That faculty and students make up the majority of those directly concerned with university affairs is all the more reason to exclude them from the administrative machinery because their voice will be heard in any case.

What is needed most of all is leadership. Unfortunately those within the administration have been schooled by years of experience on endless committees into the same passive acceptance of the rule of the majority. Leadership is not something that is required only of the president. It must be felt all the way down the ladder so that the most junior department head responsible for the budget of the odd hundred thousand dollars per year exercises as much control over how that money is spent as the man at the top.

There is a great need for all universities to realise that they are in business for one reason and one reason alone. To produce graduates. All other functions are of secondary importance to this one goal. There may be a lot of talk about scholarly research but the number of professors who produce research of real value is very small. The bulk of research today is carried out by business, because business is the only section of the community which has sufficient control over its own purse strings to be able to afford to undertake research.

This analogy with business can be carried a step further. Much as it goes against the grain with academicians to compare them with a factory, a University is in business to produce graduates. But how much real regard is paid to the needs of the user of their products. How much do the users really consider what product they are getting. How much co-ordination is there between the consumer and the producer. Co-ordination is most evident by its absence.

By far the largest consumer of the products of the University is the business community. Government departments absorb some graduates, others go into teaching, some enter the professions (these themselves are becoming more and more like businesses). Some opt out of society and become artists, poets, hippies and beachcombers. But the bulk go into business of one form or another, whether it be the bright young science Ph.D. who is snapped up by the multi-million dollar chemical corporation, or the arts graduate in the general program who eventually gets a job as a hotel receptionist.

The consumer, the business community, has in the past been far too little involved, and given far too little thought to what he really wants for his dollar. It is not the Provincial Government or the Faculty Association or the alumnae or the student body who should be calling the tune but the business community. But the business community has been most lacking of all in coming forward and specifying the product that they want. When such approaches have been made they represent too often the pleas of such a narrow partisan attitude as to be ridiculed by the professors. We, says some wealthy businessman, would like you to put on a course in hyphenated-basket-making because basketmaking is vital to the community. Much as faculties try to avoid compromising their standards they are all guilty of cooperating in this pantomime to some extent.

Contrary to what professors generally assume, there exists outside the University a body of men very keenly interested in the prosperity and success of higher education. These men are not only those who happen to be alumnae of UBC, they may come from other universities, they may have no degrees themselves. But they all have two things in common.

## Look for New President Inside UBC

### THE NEXT PRESIDENT

Though I happen to be a member of Senate, it is not in that capacity that I write, but simply as an interested alumnus.

I ask: Isn't it time that the next President of UBC comes from within the ranks of UBC?

In asking this question I mean no disrespect to any of the presidents of the last 25 years, all of whom were selected from places outside British Columbia. Obviously Dr. MacKenzie and Dr. Macdonald were able and competent presidents and Dr. Hare, in his regrettably short stay, demonstrated qualities of leadership and scholarship from which the University would have benefitted.

But at this juncture surely it is a mistake to go on an extensive recruiting expedition. We simply cannot afford to spend six months picking a man, and then waiting maybe a year for him to arrive. When he did arrive he would have to spend another six months getting the hang of the place.

The University faces so many problems, arising from its particular situation in B.C., that I am convinced we need a man to face them who knows something about B.C.; who knows something about the B.C. political scene in particular and who knows something about UBC students. To get this sort of leader we should look to our own faculty first.

Without naming names one can think of at least several men on the campus any one of whom, if he could be talked into the job, would make an excellent president.

If it proves impossible to get a man from UBC, we should look elsewhere in B.C., but only then should we go outside the Province.

Yours truly,  
David R. Williams

First they have made their way in the outside world by their own initiative and risen to a position of leadership within their own sphere of activity. And secondly, they are all users, or potential users of the products of the University, the university graduate. It is high time there was closer cooperation between town and gown.

If the two communities, the world of the university and the world of business, were brought closer together great benefit could be derived by both. It is not sufficient to have a few representatives of business on the Board of Governors. At the risk of offending some people these are too often the arch status seekers in our society. Their link with the university must be closer than that.

What is required most of all is a reappraisal of Calendar requirements in terms of what the outside community wants. By this is meant the real needs of the community and not the pedantic clamourings of some small section. The real needs are far more basic than this, but they get so little attention that they are literally swamped by the torrent of course offerings that teach the student only one thing, how to please their professors. Too often today with growing Ph.D. requirements this defect is becoming more and more obvious. The university professor has so little personal knowledge of the outside world that he is at a loss to know what he should teach his students.

This is not a direct attack on anything in particular to UBC. All universities are tarred with the same brush. Of the courses the writer of this article took as

an engineering student at another university the great majority were of practically no value afterwards. The more complex and advanced the subject the more this was true. But even first year courses were often in the same category. Conversely the subjects that were pushed into the background and looked down upon by the faculty often proved to be the most useful afterwards.

All too often the university graduate finds himself at a disadvantage in the outside world. He has never been taught to think for himself. Over and over again it is found that the most successful businessman is the one who has *not* got a university degree. The university graduate is relegated to the secondary position of card shuffler for the people in between because he is conditioned to do what he is told. He is not conditioned, as he should have been, to make decisions for himself. Yet the world has been always short of leaders and the universities never more so than they are today.

It is too much to expect a radical change in the policy of a large provincial university such as UBC, but at least a start could be made towards getting stronger leadership from the administration and better relations between the University and the outside world by bringing the two closer together. Would it not be possible for the Extension Department to organise a series of seminars bringing together the two communities so that each may learn from the other? It is time we in Vancouver changed our concept of what a university really is.

Yours truly,  
John Crosse

### PREACHING TO THE SAVED

The comments of Dr. Denys Ford in the December 19 issue of "UBC Reports" struck me as rather ironic, coming as they do from a member of the medical fraternity. I would respectfully submit that of all areas mentioned in Dr. Ford's article—medicine, the military, highway construction, liquor sales, and education—it is in education where the fewest instances of overt conflict of interest have occurred. Dr. Ford is preaching to the converted—I suggest he direct his energies instead toward convincing his medical colleagues that they do not have the right to determine their own salaries at public expense.

Yours sincerely,  
Michael D. Wallace,  
Assistant Professor,  
Dept. of Political Science,  
UBC.

### NUMBERS CRISIS

The "looming numbers crisis" in institutions of higher learning within this province have been looked upon with growing concern. There are probably many reasons for this crisis, but one of the most important is that it is self made.

The institutions, whether community colleges or universities, for the main part have created this crisis—and for this they should be congratulated. And I hope the crisis is never solved!

The growing enrollment, amongst other things, indicates that higher education is now reaching out to the people. The universities and colleges are offering to the people the courses that have for so many years been missing and they are presenting these courses in a manner acceptable to greater numbers of the populace.

If there is a college or university not enrolling numbers to their absolute capacity, then I must ask 'What is wrong with the college?' My answer would be that they are not extending their services to the community.

In the future all our institutions of higher education must be continually filled to capacity, possibly even to over capacity. Then we know that the people of this province have been reached.

Long live the "numbers crisis."

Yours truly,  
G. Jones,  
Dept. of Political Science,  
Vancouver City College

**UBC**  
**REPORTS**

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# THREE ENGINEERS



**Sandy Robertson**, remembered as an outstanding athlete during the 1940's, graduated from UBC in 1946 with the degree of bachelor of applied science and now heads his own engineering firm in Vancouver. He has been active in civic affairs as a commissioner for the Vancouver Parks Board.

# LOOK AT THE IMAGE



**Dr. William D. Finn**, 36, has been head of the UBC civil engineering department since 1964. He was born and educated in Ireland, where he topped the graduating class in engineering on graduation in 1954. He holds the M.Sc. and Ph.D. degrees from the University of Washington.

# OF THE UNIVERSITY



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**Fraser Hodge**, 22, is currently the president of the Engineering Undergraduate Society at UBC. He is now in the final year of a program leading to the bachelor of applied science degree in civil engineering and expects to graduate in 1969.

**UBC REPORTS:** Sandy, can we start with a comment from you about the 'changing image' of the university student to the outside world. Our president, Dr. Hare, at a recent news conference, said that he had received from the 'outside world', as it were, a great many negative letters about student dissent, and in some cases cancellations of pledges to the Three-Universities Capital Fund. As a professional, practising engineer in the community, do you feel that anti-university feeling is widespread, and has the image of the university student of 1969 altered substantially from the image of the university student, say, in the year that you graduated, 1946?

**SANDY ROBERTSON:** I would say that in the last year the image of the student has changed considerably with regard to the downtown businessman's point of view. For the last 10-20-30 years the business world in B.C. has always been very fortunate to have a steady supply of first class engineers to incor-

porate into the economy. I know that the engineers that I have hired have been good graduates with a sound, basic knowledge of engineering. We have been proud of our UBC graduates and we hope that in 1969 there is not cause to change our assessment.

Unfortunately the overall student image has been distorted by a small percentage of activists. Whether or not the engineers are involved in the turmoil is questionable. I don't see how they can be involved because I know that an engineering student at UBC has always been a serious, hardworking student. If the engineers are not involved I think they should make it quite clear to the public that study leading to a modern engineering degree is serious business.

**UBC REPORTS:** Fraser, how do you feel about that?

**FRASER HODGE:** I feel the image the businessman has of the University is rather narrow and based on misinformation and a lack of understanding of the

problems which higher education faces in B.C. The attitude that a small minority is causing trouble on campuses results from frustration—it's an easy way of coping with an extremely abstract and complex problem. There simply is no concrete, cut-and-dried answer.

Many of the letters Dr. Hare received were based on the attitude that the University shouldn't get any further support until it "cleans up its act," as it were. I like to think of the University as an integral and essential component of society which will not be rejected when it appeals to the public and told to come back when it is healthier, in the public's view.

Industry is going to come to the conclusion very soon that it is destroying itself with pollution and at that time will probably come to the University for help. Naturally, it won't expect to be told to "go away and clean up your pollution problems before coming to the universities for help." The point I'm



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## FINN: The lack of buildings threatens educational standards

University among professors and students about this problem, just as there is a tension between the university and society.

Now downtown people deal, or believe they deal, in hard realities. There is a business to run, you've got to turn out certain products at a certain cost, there are production targets. The people who conduct this rather well-planned, sharply defined activity must inevitably be impatient with the university, which doesn't operate in quite the same way, which shows evidence that it doesn't know where it's going, that tolerates confusion, perhaps even looks like it's enjoying it, that business couldn't tolerate at all. But you have to ask yourself if there shouldn't be some social institutions in which this type of confusion, this type of tension may, in fact, be tolerated and even necessary.

**UBC REPORTS:** Fraser, would you say that campus problems have resulted in problems of employment for UBC engineers?

**MR. HODGE:** I don't think there's any evidence of that. There are usually more job offers each year than there are engineers and UBC graduates are generally offered salaries above national averages in their field. Of course, many engineers go on to graduate work at the top schools in the United States, and they wouldn't be accepted there if they weren't competent.

**UBC REPORTS:** Sandy, have you anything to add to that?

**MR. ROBERTSON:** Our experience is that UBC graduates are pretty competent. You'll find UBC engineering graduates developing resources in B.C. and abroad, and we can be proud of our engineering faculty at UBC.

**UBC REPORTS:** Do engineering firms feel the University is falling down anywhere in the education of students?

**MR. ROBERTSON:** I don't think that there is any real gap. Most companies want an engineer to fit into a particular spot and you may have to go through four or five graduates to find the one with the right interest and disposition to fit the spot, although they could all be quite competent.

As an employer the thing that worries me most is the possibility of the engineering faculty standards slipping because of lack of money for the facilities and professors required to continue a first class school. The profession would like to think that everything is progressing well, that our equipment is modern, that our professors are up-to-date and progressive and that our facilities are such that when special programs arise there will be enough space to do it in and enough money to do it right.

One complaint I have always had as an employer is the lack of the engineer's public relations approach—his salesmanship qualities. When he leaves university the first thing he has to do is sell himself to get a job and when he gets a job he has to sell himself to the people around him in order to get a promotion. I've always thought that one of the things that should be emphasized more is a course in public relations that would make the student realize that he has to sell himself and he has to sell his profession.

He should be taking a leading role in society; he should be taking part in politics. We engineers have a tendency to be too shy and retiring. I think our new graduates should come out of school like a tiger cat ready to sink his teeth into the business world. Besides his education he needs confidence. I think the engineering course should teach him this confidence.

## HODGE: Engineers could be more militant than the activists

**DR. FINN:** I'm not saying that a professional engineer shouldn't be a business man, but it seems to me that a business man who is not a professional doesn't operate under any code of ethics except his own moral conscience, whereas a professional man does have a code of ethics which might sometimes be in conflict with the canons of business. Well, perhaps an engineer running a business might find that his code of ethics might suggest to him that certain behaviour, which would be undesirable to a businessman, should not be indulged in.

You see, one of the things raised by certain students is that we are educating students for the business world, and that perhaps we should be educating them for citizenship in the world. Now most of us recognise that you've got to send a person out into the world ready to make a living, whether it's as a professional, or somebody with a certain education or skill that enables him to earn a living. Perhaps some of these people do have a point, that people who go through the university and go into the world and engage in business or any remunerative activity, should have a dimension to their behaviour that one would not expect of someone who did not have the university education. Now, if you're selling engineering services to clients, do you feel that there should perhaps be some difference in how you do it, compared with the man selling 100,000 pairs of shoes?

**MR. ROBERTSON:** Well I certainly think that there has to be ethics involved in the profession. The code we follow is written to strengthen the profession as a group and to foster the confidence of the public. If an engineer leaves the profession to sell 100,000 pairs of shoes he will have to contend with the tricks of his competitors. However, after his straightforward, logical education I'm sure he will find out quickly that to stay in business for an extended period requires the same moral ethic of fairplay as written for the professional.

**MR. HODGE:** On this point of training people for the business world vs. educating them for citizenship in the world, it's my feeling that training to enable people to make a living is best done in one's formal education and citizenship education is best derived from one's personal life and associations with other people in extracurricular activities. In other words, we are here primarily to learn engineering and after that to concern ourselves with sociology and world citizenship. I think this is a view pretty generally held by most engineers at UBC.

**DR. FINN:** One of the discussion topics suggested for this panel was the question of how the University should go about improving its image downtown. Assuming that we do certain things that are necessary to society, why is society so dissatisfied? Why does society give attention to the superficial disturbances and ignore the strong, deep sub-stratum of solid effort at the University? How does one acquaint society with this solid accomplishment?

**MR. ROBERTSON:** I think the reason the general public is confused is because a small group of agitators have made the headlines. These headlines should be counteracted. Possibly the service clubs would be a way of just telling people the way things are out here. I can recall as a student that the Engineers were quite capable of getting headlines in their own way before. I'm sure they still are capable of putting themselves on the record.



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trying to make is that what is needed is a conscientious attempt to understand the university and its role in society. If there are problems on our campuses today they are the result of frustrations which arise from inadequacies on every campus. And there are no signs that things are going to get much better. The student who goes into engineering is likely to approach University problems in a more analytical or rational way, but he is certainly aware of his environment.

**UBC REPORTS:** Dr. Finn, what have you to say to all that.

**DR. W.D. FINN:** Well, I think it would be unfair to lump the engineering students with the "activists" as you call them, and it would also be unfair to separate them completely. Like the activists, the engineering student is conscious of the environment in which he is studying and working, and he sees that certain improvements are necessary, and he pushes for them. To this extent, he must be considered perhaps not an activist but certainly a concerned member of the University community.

But I think that where there is a sharp distinction between engineering students and activists is that the engineer sees an immediate social use or value in his education. He's not confused about his future role, at least not in the short run. He is here to become an engineer, and when he goes out he knows exactly what an engineer is going to do.

Somebody in a general program in arts may not have the same sharp career identification. He may wonder about the relevance of his education; he's taking subjects which go rather deeply into concepts of justice and social order, and probably he's drawing distinctions between what he hears in university and what he sees outside. This dichotomy, this gap between the two realities, is probably something which he finds disturbing. This is not something that deeply disturbs the engineering student. I think the engineering student sees his role in society, but I don't think for a moment that he is dull or insensitive to the problems of society, but he sees a role for himself in helping to solve some of these problems. He doesn't feel that he's got to overthrow that society.

**MR. ROBERTSON:** The business man sees the activists as a group that wants radical changes but in the irresponsible rush to make these changes they are destroying things instead of bettering them. I hope the engineers are active and are seeking changes and that they are looking for better programs, better ways of doing things. I also hope that when the engineering students go about implementing their suggested reforms that they do it in a mature manner.

**DR. FINN:** Society has always been a little uneasy when one of its institutions begins to question some of the basic foundations or tenets of the society that supports it. The university itself is confused because it is not certain about its role either. It seems to reject a purely vocational role, to reject the idea that it's there only to turn out engineers, teachers, doctors and lawyers.

It seems to believe also that it's there for some other, perhaps even higher, purpose. But it hasn't articulated that purpose yet. There is a tension in the

**UBC REPORTS:** You would say, then that the students themselves have a responsibility in this and that the professional schools have a responsibility to clear their own name, as it were, with the public.

**MR. ROBERTSON:** Yes, I think so. I'd be damned mad if I had been tarred with the same brush as the radicals. If I were a student, here for an education, who worked all summer to pay for that education, and was putting in eight to ten hours a day in classrooms and labs and then going home and studying for another four hours, I'd be very upset to think the public considered me part of the unrest that's going on.

**MR. HODGE:** Well, once again I have to say that this sounds like a quick passing of judgement on those who are labelled troublemakers or radicals. There is no tarring to be done with any brush; there is really no group of students any more virtuous than any other group.

There are, however, variations in the way in which frustrations common to all students and groups of students manifest themselves. I can assure you engineers are not good, dedicated students who work eight to ten hours a day in classrooms and another four or five hours at night. We are very conscious of the antiquated and obsolete equipment in our labs, the crowded lecture rooms, the poor quality of some of the teaching and the difficulty, which I'm sure Dr. Finn can describe, in attracting qualified people to a faculty overcrowded and undersupplied in terms of research facilities.

The engineers and students in other professional faculties, if and when they decide on the source and cause of these problems, are potentially the most militant group and could cause more unrest than the present crew of so-called radicals. The likelihood of this sort of "mobilization" taking the form advocated by the radicals—strikes or sit-ins, for instance—is fairly small but it is not to be overlooked.

**DR. FINN:** I wouldn't like to give the impression that engineering students are holier and more virtuous than anybody else. I think that they are a very responsible group of students, helped by the fact that they know exactly why they're here and what they want to do. But they do share the concern of other groups on campus that some changes are necessary here. And the changes that engineering students have been pushing for are reasonable. They want a voice in matters where they legitimately have something to say. And they are going about it in a very businesslike way—they've made representations to the dean and to the faculty, and they've given us time to think about them, and some action is being taken.

But there are many students on campus who feel that the education that they're receiving is irrelevant to the life that they want to lead, or to society as they see it. These people also are taxpayers, their parents are taxpayers as well. I'm not saying that we should be in the business of catering to individual taste as opposed to group taste, but I do think these people are entitled to a hearing, and we should see what we can do about their requests. Because they're not insignificant in number.

The real activists, who cause trouble, are insignificant in number, I think, and they would like a freer form of education. Now if they're willing to accept the social consequences that go with a so-called "free" education, in other words the products may find themselves unemployable, I think society should consider whether or not it might not accede to some of their wishes. You know, Canada as a whole, and the government of Canada in particular, has shown this kind of sympathy in the past, and some of it makes you proud to be associated with Canada.

For instance, they gave a \$3,000 grant to Joachim Foikis. Now you can say that's silly and stupid, but there's something good about a society and a government that can do that kind of thing. And the same applies to those students who have different aspirations from the rest of us. I think the system should have enough flexibility to make a reasonable gesture, a reasonable recognition that other people may have different needs to ours.

This University, you know, has a solid basis of achievement, not just in engineering, but in chemistry, science, literature, and it's a pity that this is not recognised. We've had some of the leading poets in Canada, for instance, on the faculty, and we've won the National Research Council's Steacie Medal four years out of five.

**UBC REPORTS:** Dr. Finn, Mr. Robertson has said there is a general feeling in the profession that the standards of the UBC school of engineering are in

danger because of lack of physical facilities. It's public knowledge that the building program for engineering on its new site has been stopped because there are no capital funds. How long do you think the faculty can go on, half at one end of the campus and half at the other, before there is a decline in the quality of education?

**DR. FINN:** We in applied science feel that there is a real threat to the continuing high standard of education in the faculty because of the lack of new buildings. By being spread all over campus the morale of the faculty is beginning to suffer. Rather than operating as a faculty with a joint responsibility for professional education in the province we're beginning to act as separate departments scrambling to survive as best we can in rather antiquated and inadequate conditions. There are two departments, electrical and chemical engineering, which are reasonably well housed. Mechanical engineering is in dire straits, while civil engineering is in a very unusual position.

We share a building with the Computing Centre. We've just got a new computer costing over a million dollars a year, and no one can tell the Computing Centre that it can't employ this computer to capacity. Now we're in the same building with them, and we can't accept what might be the fate of a number of departments, namely that our growth may be stopped. If we don't get a new building, and computer use continues to grow, we've got only one option and that is to shrink. So for us it's a very serious problem in civil engineering.

It's serious in the sense that when I recruit faculty members, for which I have either budget positions or research money from outside sources, you have to give them a promise of a certain career and a certain development in their field. How can I do that, when I can't even guarantee that the department can remain the same size? So this puts me in a very difficult position when it comes to hiring.

**ROBERTSON: We should  
make what we now  
have first class**

We have tried to look at the needs of British Columbia in the civil department, and make some meaningful contribution towards meeting these needs. Some of the serious problems facing British Columbia are problems of pollution of water—rivers and lakes—due to the primary-type industries that we're indulging in, the problems of transportation within the province, the allocation of water resources between areas of water-surplus and areas of water-shortage, and the possibility of exporting water to other areas and other countries. These are problems which any government of British Columbia would have to make decisions which are financially, socially and politically defensible, and I think that it's very important some unbiased group or organization be working on these problems to provide the kind of information that can be interpreted not only by the government but by other people who have an interest in seeing that the government behaves the way it ought to.

Another special problem on the west coast is the problem of earthquakes, and while people may feel that we have earthquakes only occasionally, the fact of the matter is that all major structures have to be designed to resist earthquakes. This is costing us money in development, and one of the things that we have developed here is a rather good group in the earthquake engineering field. We're trying to come up with reasonable earthquake design standards and techniques. We've appealed to the federal government for help in this regard, and we've applied for a grant of about \$1,500,000 to establish an earthquake engineering centre here. So far as we can identify them, we try to tackle some of the overall major problems that we see are peculiar to B.C.

**MR. ROBERTSON:** The businessman is interested in seeing those things developed which will affect the growth of B.C. Special programs, it seems to me, should be developed in the existing institutions, with space and funds provided to do this. The present space shortage at UBC appears to prevent setting up such special programs. These same problems also raise

difficulties in recruiting faculty members who are going to accept posts only at those schools which can offer them the facilities and funds to get on with their work.

**UBC REPORTS:** Dr. Finn, do you have any comment to make on the possibility of a new institution of higher technology in B.C.?

**DR. FINN:** First of all, such institutes can be very successful. Two outstanding examples are the Massachusetts Institute of Technology and the California Institute of Technology. But I think we might have some problems in trying to create such an institute. It's something I would be reluctant to favour unless it was absolutely necessary, unless the idea was forced on us by neglect.

The problem I see in creating an institute of this kind is that there are certain departments whose work is immediately applicable to the environment—like civil engineering—and this is precisely because B.C. is still a pioneering province. But because we have little secondary industry, society would have to heavily subsidize the activities of other departments so they would be available when we arrived at the stage where they could be incorporated into the activities of society. M.I.T., for instance, has a host of secondary industries around it, and there's an immediate flow of research from the institute right into the industry. In fact, many of the companies are run by professors.



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But here, this is not the case. We might have difficulty in sustaining an adequate level of finance and it might degenerate into purely a teaching institution. It would be a step I would support only if it became patently clear that we were going to suffer, and there was a possibility that we might do better under this system. The problem for the University is one of future directions and how to allocate resources within the University. It does seem to me that some very hard decisions will have to be made about the role of the University because it's only when our role is clear that you can make meaningful decisions about enrolment.

**MR. HODGE:** I agree with Dr. Finn that institutes such as that suggested can be very successful, but a hasty decision to embark on such a program could be disastrous unless it was preceded by a very careful study to determine whether or not such an institution was compatible with B.C.'s needs. I'd certainly support the idea of a study to determine the feasibility of such a school.

**MR. ROBERTSON:** Well, I think we should make what we now have first class, or keep it first class before we start to do anything else.

The only advantage for a separate school would be its ability to govern itself by engineering standards rather than be lumped in with all the other faculties and ending up with the short end of the stick when it comes to funds.

HUMORIST HIMIE KOSHEVOY  
CASTS AN ENVIOUS EYE OVER  
THE NEW STUDENT UNION  
BUILDING AND REMINISCES  
ABOUT THE AMENITIES OF  
HIS DAY, WHICH INCLUDED A

# CATTLE CAR COMMON ROOM

By HIMIE KOSHEVOY  
(Province Columnist)

Whenever a university makes some progress and new amenities are showered on the students, there's always one ancient greybeard loon who writes to the press and sobs into the editors' wastebaskets about how different things today are from the state of affairs during his own miserable existence many years ago. The old grad's writing has been classed as emanating from "The Far Cry Division" and, after due research, the operators of this publication have decided that I am eminently qualified to head this department and be its spokesman.

"Would you care to compare the new Student Union Building with the facilities you had in your day?" I was asked. Would I? Would Pierre Elliott Trudeau like to date the entire Rockette chorus line all in one night?

It was back in 1927 when I entered the rather rickety but still determinedly hallowed halls of UBC. This wasn't long after the Great Trek and let me tell you there were mighty few amenities then. An undergrad had to make-do as best he could in a parked car, if his dad owned one, and beyond that it was necessity mothering sickly invention all the way.

Today a \$5 million building is being devoted to bringing creature comforts to the students. They can feast their eyes in an art gallery where we males had to get our human form kicks from Sun Bathing Magazine and our avant garde sketches from Ballyhoo.

There's a bowling alley. A bowling alley? How plebian. Isn't that a sport for Lunchbucket Harry and Bowlingbag Joe? At least we played at Pee-Wee courses and there was one of these tricky golf layouts just outside the gates down Tenth avenue. You could get close to it via the nickel fare on the bus.

And the SUB, I'm told, has a barber shop. This sets us veterans to musing whether the



poor hair clippers will starve, for the downtown view of the student is a hairy one with locks and beards blowing in the breeze or providing excellent protection in the freeze.

For the affluent undergrads of today there's a specialty shop where blazers, rings, records and other luxuries are sold. In the past the only luxury was splurging on a four-course, 35-cent meal in the cafeteria in the basement of the old auditorium building where a Mr. Frank Underhill was worshipped, not because of the quality of his food, which was good, but because he was in control of so much of it. Our stomachs were always bigger than our eyes. (It does sound odd when it's reversed, doesn't it?)

Whereas the present inhabitants of the campus can now play pool, listen to stereos or their own radio station and indulge in light reading in rooms devoted to this laudable purpose, we had the "common room."

This was an ordinary, small room where the male members of the 2,200-student body, who were even then complaining of overcrowding, gathered to indulge in the new-found freedom of smoking in somewhat cattle-car-ish crowded conditions. The braver ones ignored the packed room and solemnly played chess. And even bolder ones risked the odd crap game right back of the administration building.

These were modest amusements, but they seemed daringly adult to us. The whole country had yet to go to pot.

One of the crowning jewels of the SUB is the ballroom, which will accommodate more than a thousand persons. Perhaps ballroom is an ornate title considering the dances that now appeal to the young. I can see a mother admonishing her daughter as she sets off for a UBC dance date (that is if mothers still perform this ancient rite), with the advice to the sweet young thing, "Don't forget to writhe."

Our dances were all held in downtown palaces devoted to the gavotte, waltz, minuet and a brisker set of movements known as the Varsity Drag. The dance employed by most of us was called a Fox Trot, possibly so named by a Master of the Hunt who had observed a Hunt Ball in full caper and cry and decided the dancers looked strangely like the prey being pursued by the hounds.

Lester Court was one spot where we gathered, stiff in our unaccustomed finery. Another was LaFonda and, still another, The Auditorium next to The Arena. The Lester is still in existence but the others are all gone.

They tell me that The Ubysey offices now deserve the plural. We had only one which



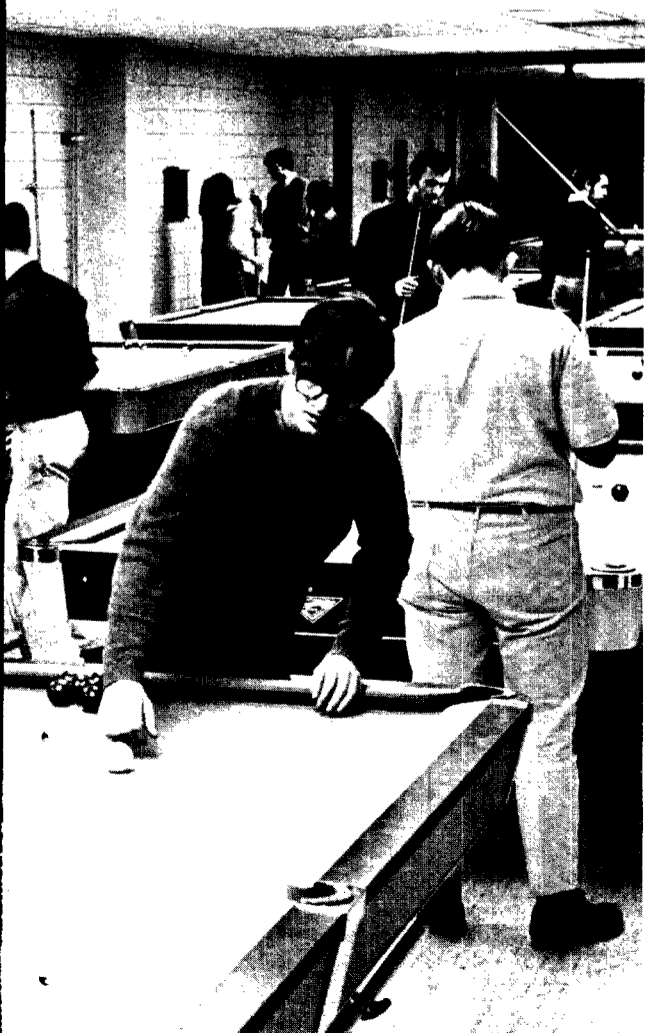


was quite redolent of a variety of breads and the meat and fish constituents of sandwiches as bemused writers forgot their lunches on the steam radiators and the wrapped packages baked there for weeks on end.

I also understand that the Ubysey now possesses more than one or two typewriters. This is astounding progress worthy of comparison with space feats.

However, I mustn't allow jealousy to rear its ugly head. May the students enjoy their new quarters to the fullest and may they revel in all its pleasures, almost as much as if it were the Faculty Club.

*Facilities in UBC's new \$5 million Student Union Building are a far cry from what was available in 1927, when newspaper columnist Himie Koshevoy entered University. During a recent week of events to mark the opening of the building, singers performed in the SUB cafeteria, above left, while downstairs students by the hundreds participated in a games room pool tournament, shown below left. Everything from beer mugs to blazers are for sale in the basement specialty shop, below right. Serious side of SUB is reflected in the faculty-student symposium discussion pictured above, one of a series staged during the week of special events. All pictures by Peter Hulbert.*



# H

## HERESY FROM A UBC PROFESSOR



Photo by B.C. Jennings

**W**ITH the prospect of 34,000 students at Point Grey in less than five years, the UBC family is beginning to look around for someone to blame, something to say, and, more hopefully, something to do about it. On November 1st, at a mass rally at the new Student Union building, students supported their Council when AMS President David Zirnhelt suggested that \$14,000 of surplus student funds could be directed to a province-wide educational campaign to tell the grass roots about the plight of British Columbia's universities.

At this meeting both faculty and students put the problem squarely before the large and interested audience. Question time was punctuated by the appearance of two old-time Trotskyites calling for world revolution first, and, presumably, a cure for overcrowding second.

Of all the causes of mass and infectious frustration on the campus the chief is overcrowding. It is easy to see why. Every morning by 8 a.m. the lines of traffic have started to converge on campus, sometimes after a snail's-pace progress over bridges. Then the fight begins to get a parking space—of which there are now 12,000.

Once parked, the students start on their trek through the rain—up to half a mile—to class rooms where several hundred students are closely packed. Some complain that even in third year they may find 300 "attending" one lecture. They use the term advisedly, for while some may see the teacher others may hear, none will ever speak to the scholar at close range.

The more enterprising may feel that self-education offers greater rewards than does the 300th seat in an amphitheatre, so the Library is given a whirl. This does not last long—if it even begins—for there is only one seat for every seven students on campus! This is the worst of all the frustrating things on campus. Food may be hard to get, but books are essential—and no student who wants to study in a library expects to find himself actively discouraged, by lack of seats and lack of books.

The annual report of the University Librarian this year is a sobering document. He needs some 2,500 more seats if he is even to begin to cope with the frustrating problems he sees. His are not forecasts but actual shortages, today so serious that all alumni must wonder how much longer UBC will continue to be a good university. Their hope was that in their lifetime it would become a great university.

What are we doing in this scholarly community now cryptically called "Academics Anonymous"? Is

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*Dr. William C. Gibson is professor and head of the department of the history of medicine and science in the faculty of medicine and special assistant to the President on University development.*

it any wonder that Senate is asked to consider such motions as: "That Senate inform the Board of Governors that the present academic facilities on this campus are adequate for approximately 13,000 students only, and that, in Senate's view, present and future overcrowding will destroy the University as a first class institution."

The first thing to recognize in all this is the fact that the problem is the problem of the people of British Columbia; it is not "the University's problem," as is so often said. Some regard the province's high national ranking in percentage of children finishing high school as a "disaster," though most see it as a great opportunity. These children have been born, they exist, and like their parents and grandparents they would like a chance to go to a university in B.C., to strive for a legitimate place in the sun based upon a sound education.

Any solution proposed to end overcrowding at UBC will have its opponents—and to date the "debunkers" have won the day—complacently knocking on the head every suggestion. The net result of all these armchair victories is that UBC goes on losing its battle against numbers.

The geographical isolation of the land beyond the mountains and north of the border tends to lead to philosophical isolation, with the practical result that every problem in the promised land is attacked with the bare hands of the pioneer, innocent of all knowledge of numerous solutions to identical problems in other parts of the world.

It comes as a shock to some to realize that in Ontario few freshmen can attend the larger and older universities; or that in some of the world's best universities freshmen can enter only if they have 80 per cent on entrance examinations. Some refuse to believe that hundreds of thousands of students pay an examination fee of \$25 or more to write standardized papers for entrance to universities. A student is very wise to spend this \$25 before he spends \$2,500 of his or his family's money on a college year for which he may not be adequately equipped.

**A**T UBC, where the entrance requirement is now 60 per cent on B.C. matriculation examinations, the last freshman class to be tested (in May, 1968) showed that of those entering with 60 to 64 per cent on B.C. matriculation, 27 per cent failed or withdrew. Only 32 per cent received a full year's credit, and 41 per cent obtained some credit.

It may be asked if this exercise was worthwhile for 27 per cent of the freshman class. Those who failed had lost a year of their own time, had wasted their own or their family's money—not to mention the professor's time—and the taxpayers' money. In arts a student pays for about one-quarter of the cost to the taxpayer. In medicine, the student pays approximately one-eleventh of the cost. For each student enrolled, the taxpayer has invested from \$6,000 to \$8,000 in capital equipment. So, all in all, we should perhaps ask ourselves the question, "For whom the overcrowding?"

I still harbor the quaint notion that, considering

the above facts, no student should be admitted to a university in this province unless he was gainfully employed for 12 months previously. To put something into the economy first might be a salutary prelude to taking something out of it. This is, of course, such rank heresy that it would never be considered.

Coming to the next quaint idea, it may be that no one in future can enter UBC until they have successfully completed two years at a junior community college. Possibly no assistant professor should be eligible for promotion to associate professor rank at UBC until he had successfully completed three years of teaching in such a 2-year college.

It seems to me that the rural areas of the province, many with low cash income constituents, have for more than 50 years sent their young people great distances to UBC at the coast. Possibly the time has come to redress this, and to build sufficient two-year colleges throughout the province to remove the un-supportable load of freshmen and sophomores now burdening UBC.

To continue the heresy even further, one might suggest that freshmen and sophomores should have to "earn" their right to a place on the Point Grey campus, either by gaining 80 per cent on entrance examinations or by completing two years in junior colleges. The terminology will give some of my critics apoplexy, no doubt, but the survival of UBC as a top university is a more serious consideration.

What we should never permit is limitation of entrance into UBC through escalation of tuition fees. It may be that non-resident fees will eventually be charged, as in many state universities in the U.S.A.

The goal is *not* discrimination against students capable of handling university work loads. The goal is the preservation of UBC, an institution into which two generations and more have poured their effort, affection and support; an institution which has played a key role in the development of the province and nation, and which has supplied the peace-keeping personnel of the world with some of its greatest figures.

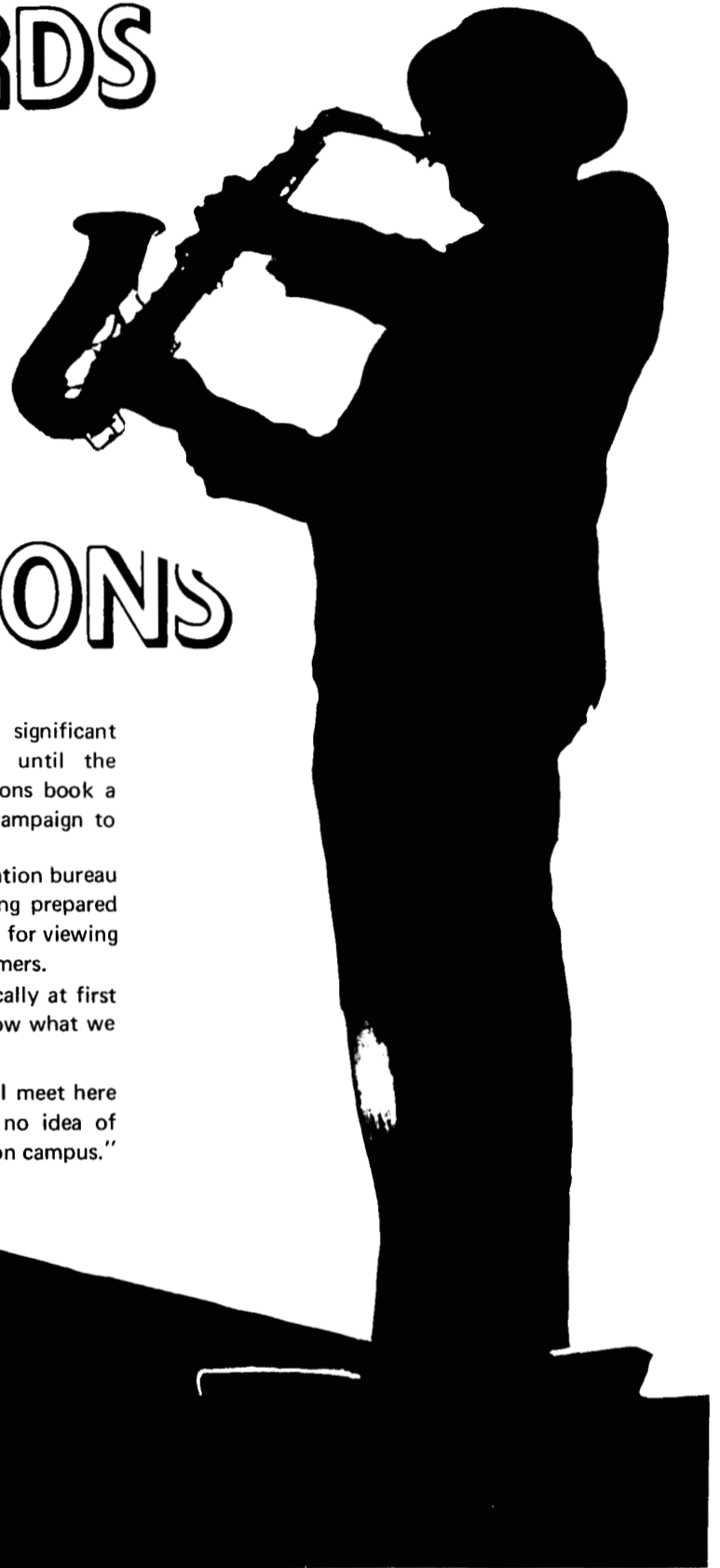
By overcrowding it 50 per cent beyond its capacity we are destroying its usefulness to the province. It must be kept at 15,000 students and must be properly financed to provide those critically important professional faculties which will give the province what its development requires in engineers, teachers, doctors, lawyers and other professionals.

**T**HE wave of students which UBC cannot possibly admit to first and second year will have to be looked after in less expensive and less bewildering 2-year colleges. These can bring to rural areas not only equality of opportunity for students in post-secondary education, but also the impact of colleges in the communities where they are built.

In summary, if the sheer weight of numbers is not lifted from the back of UBC, student frustration will increase to the point of explosion, with the destruction of a great institution. Let us take the preventive action now which will make this both unnecessary and impossible.



# DAL RICHARDS CALLS THE TUNE ON CAMPUS CONVENTIONS



UBC Extension Photo Services

A well-known Vancouver musician and entertainer is calling the tune on development of a major summer convention centre at the University of B.C.

Dallas "Dal" Richards has been appointed convention manager for the University, working on the staff of Housing Director Les Rohringer.

Richards' assignment is to promote the summer use of residence facilities by convention groups of all kinds.

"We have excellent facilities on this campus for meetings that are primarily working conventions interested in conducting the maximum amount of business at their sessions," he said.



"We don't expect to compete for the "fun" conventions as opposed to the working conventions. They are a different breed of cat. They'll always want the kind of luxury available at a first rate hotel and the availability of adjacent entertainment areas."

Richards said UBC offers the advantages of an attractive physical setting, the capacity to handle a large number of people—which hotels can't always do in the busy summer season—and prices considerably lower than downtown rates.

"Our accommodation is not as sophisticated as that available downtown, but its certainly comfortable and attractive," he said.

"We offer basically cafeteria service as opposed to banquet and restaurant service in hotels and we make it clear to conventions that their delegates won't find television sets and showers and tubs in their rooms."

Richards said other advantages UBC offers to convention groups include a complete audio visual service, bar service on a special permit basis and the opportunity for conventions of professional groups to have contact with faculty members in the same field.

Richards feels UBC can now handle conventions of up to 1,500 persons. One of this size is already booked for 1970, and this capacity will double when the new Wireless Site residences become available in 1971.

"The Wireless Site will add 1,200 beds to the 1,400 now available in the Totem Park and Place Vanier Residences," he said.

"It will be sophisticated accommodation in three high rise towers with such features as underground parking, baby-sitting service and a barber shop."



UBC's "convention" season runs from May 1 to Sept. 1.

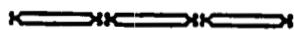
Facilities at Totem Park are available for the entire period. The Place Vanier facilities are also available except for the period between July 1 and August 15 when they are reserved mainly for students attending the University Summer Session.

Richards doesn't expect to see any significant change in UBC's convention business until the summer of 1970 because most conventions book a year ahead but he is now planning a campaign to publicize what the University has to offer.

Letters have been sent to every convention bureau in Canada, a descriptive brochure is being prepared and a colored slide show will be produced for viewing by service clubs and other potential customers.

"I also plan to do some travelling, locally at first and then further afield to let people know what we have to offer," he said.

"It's amazing how many businessmen I meet here in Vancouver and elsewhere who have no idea of what kind of facilities we have available on campus."



Richards has a lengthy background in the hotel and convention field as a bandleader and entertainment director and is a graduate of the British Columbia Institute of Technology's course in hotel, motel and restaurant management.

"I've been connected with the hotel and entertainment business all my life. I've produced the B.C. Lions half-time show since the club's inception in 1954 and I was entertainment director at the Hotel Vancouver for a number of years," he said.

"Several years ago I decided to take the BCIT course. It's an intensive two-year course with 40-hours a week of instruction in all aspects of the hotel business from setting up reservations and housekeeping systems to legal matters which arise."

During his BCIT course Richards led a "double life" as a daytime student and as a bandleader into the early hours of the morning.

"I'd never got up before 10 a.m. in my life before and the first six months nearly killed me but I learned to get by with a lot less sleep than I thought I needed," he said.

"I intend to continue working as a bandleader but only on the weekends which won't interfere with my University work. I've been a musician all my life and you can't just turn around and leave it."

# Computer

There's a calculating new mind on the University of B.C. campus these days with a marvellous memory and a positive talent for solving other people's problems.

It's the new IBM 360 Model 67 computer which took up residence last November in the UBC Computing Centre and is already in increasing use by a growing number of individuals and University departments.

The 360—which calculates 10,000 times faster than the first computer used by UBC and a million times faster than paper and pencil—will have three main functions.

## REMOTE TERMINALS

It will be available to faculty members as a research tool which will cut calculating time to a minimum and allow more time for study and analysis.

The computer will also be used in the teaching of students in computer science courses and students in other areas who need to know how to use a computer.

And it is likely to find increasing use for such administrative tasks as classroom and examination scheduling.

Vern Dettwiler, supervisor of operations for the computing centre, says the computer opens new possibilities for researchers because of its speed and easy accessibility.

"We now have about 30 remote terminals in operation on campus and connected to the computer and we may be able to install up to 50 remote terminals," he said.

"A computer user at a terminal can hold a two-way 'conversation' with the computer via a teletype which is linked to the computer by telephone lines."

Dettwiler said an individual can feed data to the computer, get answers in seconds to complex equations and decide on the spot what to do next on the basis of the results.

"Previously a man had to give us his punch cards over the counter, probably wait a day for results and by that time might have forgotten exactly where he was with the problem."

In addition to the teletype-style hookups which provide a written answer from the computer there are video screens which display data requested from the computer. The video screens have the advantage of being quieter than teletypes and the disadvantage of not providing a written record.

Dettwiler said the program used in the UBC computer was developed at the University of Michigan and put into operation at UBC with assistance from the U.S. university.

## ALTER WAY OF LIFE

"The system is designed around the idea that people who will use the machine may be experts in physics or history but are not computer experts," he said.

"We haven't had much trouble in teaching people to use the computer but just in case of mistakes the system is designed to query any instruction that might accidentally destroy information stored in its memory."

Dettwiler says that computers not only speed calculations but by their very existence influence and alter man's way of life.

"In sociological terms the main effect of this computer will be on the type of research that will be done and can be done at the University," he said.

"For example, sociologists can now take much larger samplings for analysis, crystallographers can

*UBC's new IBM 360 computer doesn't operate entirely on its own. It requires a lot of human assistance, as the photos on these pages show. At left, staff member Janet Thom is shown operating a card-reader printer at a remote terminal adjacent to the main computer room. Information prepared on punch cards by undergraduates is transmitted by this machine via telephone lines to the computer, which processes material and returns answers to the card-reader printer. UBC computer in-*

# Makes You Prove You're You

tackle problems of chemical structure which couldn't be touched before and civil engineers can do very precise structural analysis."

Dettwiler does not believe that computers are likely to develop any capacity for "thought" in the foreseeable future.

"Computers follow very straightforward instructions and the thing that does the thinking is the person that programs it.

"But computers have one particularly useful ability and that is to determine between positive and negative numbers and make a decision on what to do in either case. There are some schools of thought which say our human thought processes are nothing more than a series of such elementary decisions."

He said the computer is a serial machine which basically performs its function one step at a time and there is a limit to the number of steps that can be performed in, for example, one second.

"What the human brain does which the present-day computers cannot do is to consider things in parallel. The brain can look at this, that and the next thing and compare the overall picture," Dettwiler pointed out.

"Integrated circuits are now in use but circuits which could duplicate the complexity of the human brain are still in the realm of fantasy."

The UBC computer often gives users the impression of performing many jobs simultaneously. This is because it performs each task so rapidly and has the ability to switch back and forth from one job to another so that no user is kept waiting too long.

time span for a relatively simple problem involving half a dozen multiplications and a couple of square roots is measured in milliseconds.

## KNOWS YOUR NAME

Researchers who once took days or weeks on a complex calculation now think the computer is malfunctioning if it doesn't fire back an answer in 10 or 15 seconds.

At the moment faculty members have almost unlimited access to the computer for their projects but budgeting of computer time by department may begin next year.

Dr. James Kennedy, director of UBC's computing centre, says under this arrangement departments would submit budgets for computer time to a University-wide committee. This information would give the centre an estimate of demand on which to base its own planning to meet expanding needs.

Dettwiler says the centre's analysts can often assist a user in making maximum use of his machine time by checking on how he plans to use the computer.

"The computer is so fast that people don't think twice about doing something the wrong way. There have been instances where computer time has been reduced by a factor of 100 simply by finding a better way to tackle the problem," Dettwiler said.

"If you ask a first grader to multiply eight times eight he'll do it by adding eight to itself eight times if he doesn't know multiplication. There are often several ways of doing a problem with a computer."

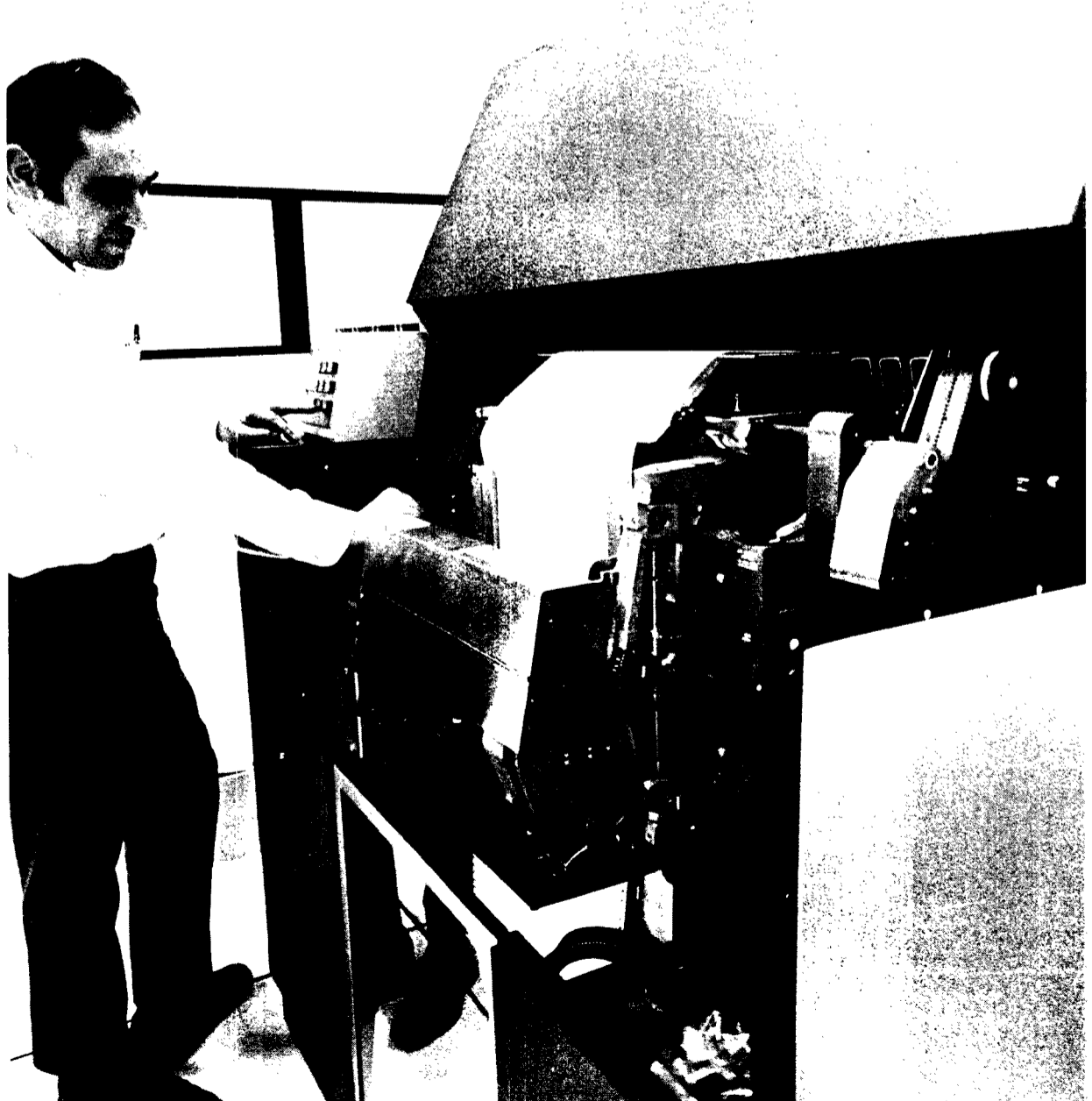
The new computer may have a marvellous memory and a talent for solving problems but it will not work for you unless it knows you by name.

Each individual user will be given a code name or password which will identify him to the computer and keep track of the amount of time he uses.

This is to defend against caddish types who use up their allotted time and get more time on the machine by using someone else's name.

If you happen to be that mythical creature—an absent-minded professor—and forget your password, the computing centre will refresh your memory but only after you have proved that you are really you.

cludes video display units which show data requested from the machine. Staff member Dennis Pervis is shown operating one of the units at top right. At bottom right, Vern Dettwiler, supervisor of operations at the UBC Computing Centre, is shown checking the high speed printer, the primary print-out unit attached to the computer. The computer's calculations print on this machine at the rate of 1,100 lines per minute. All photographs by Deni Eagland.



# CONTACT

A UBC Alumni Association Report



UBC Extension Photo Services

A free noon-time concert featuring *Tomorrow's Eyes* is part of SUB opening.

## Student Aid Scheme Proves Big Success

There's something symbiotic about big organizations and red tape: you can't seem to have one without the other. That's as true for universities as it is for governments and corporations. And as everyone is only too aware it so often means irritating delay and frustration when people want to get things done—and fast.

### SWIFT AID

About a year ago the UBC Alumni Association decided to do its bit in the battle against red tape and set up a special Contingency Fund designed to give quick help to worthy student programs. Backed with a \$5,000 allocation from the Alumni Fund, the Contingency Fund has proved a big success. "So many good programs just can't be planned a year in advance and this scheme has enabled us to move much more quickly in meeting student requests for help," said Jack Stathers, Executive Director of the Alumni Association. "Because we can move swiftly we have been able to support a variety of projects that otherwise might not have been able to get off the ground at all." A total of \$4,507 has so far been contributed from the Contingency Fund to help 11 projects.

Under the Contingency Fund procedure, each request for aid needs only the unanimous approval of the UBC President or his deputy, the Executive Director of the Alumni Association, and the Past President of the Alumni Association. Normal allocations from the Alumni Fund involve a more complicated and lengthy procedure. The Contingency Fund is designed to help projects for which aid is not available elsewhere. The whole idea is to provide some of the extras, some of the little things that go to make university a more pleasant and rewarding experience for students.

### SUB OPENING ASSISTED

The week-long festivities celebrating the formal opening of the new Student Union Building is the latest project to be helped by the Contingency Fund. The opening featured displays, dances, poetry readings, music and a seminar series. The fund granted \$500 to help the project after students

pointed out they needed help to avoid having to charge admission for part of the program.

Two UBC rowers participated in the Mexico Olympics with \$400 help from the Contingency Fund. The money paid the entry fees (\$200 each) of John Ullinden and Lyle Gatley. Unfortunately they just missed qualifying in the pairs by seven-tenths of a second. The fund also provided \$147 to help the UBC Commerce Undergraduate Society send a student representative to a congress of Commerce students at Loyola University in Montreal. And \$100 was provided to help buy books and periodicals for the Social Sciences Reading Room. The reading room serves graduate students in the Departments of Economics, Political Science, Sociology and Anthropology.

### FIELD TRIPS

Students in the new Arts I program were major beneficiaries of the Contingency Fund. A total of \$1,850 was contributed to facilitate student-faculty field trips. Group A of the Arts I program received \$500 for a weekend initiation retreat to Camp Elphinstone to talk about a novel and to get to know each other better. Group B received \$750 to help in a three day field trip to Vancouver Island to look at the forest industry as part of their study, "The Forest and the City." Group C was granted \$600 to assist a weekend symposium at Paradise Valley discussing Plato.

Among the earlier grants, the Faculty of Arts received \$500 to publicize a series of orientation talks and to provide refreshments during registration, in order to make that a more pleasant experience for freshmen. A symposium, "Africa: Conflict and Prospect," received \$410 to help with publicity and a Medical Undergraduate Society retreat was granted \$400. The Alma Mater Society Housing bureau was assisted with a \$200 grant which paid part of a field worker's salary.

While virtually all of the initial allocation has now been used up, this will likely not be the end. It is hoped that the fund will be replenished and that the program will continue.

## Viewpoint

By J.H. WARNOCK

Judging from the recent Vancouver civic election, some of our would-be educational reformers are really totalitarians in disguise. Theirs is the new dogma of freedom. The present approach to learning (as few would deny) is too rigid and too uniform. These reformers would change all that to offer *all* students a freer, more personalized style of education—thus neatly substituting one uniform system for another.

For example, two years ago, I sent my eldest child to a "free" school in order that she might become involved in an exhilarating educational experience. Now that she has returned to the public school system, I would hope that a similar classroom atmosphere might be made available to her there. Well, several of the candidates for Vancouver school board told me that, upon their election, it would be. They assured me the school system would undergo a *total* change. But not all parents want their children in "free" schools. However, it appears that such objections would be ignored by the new reformers and the children would be given what is good for them.

The pursuit of uniformity is present even in the attempts of school boards now to implement educational innovations. The school officials seem to feel that all students must benefit from the innovations, if they prove successful. There is, for example, one non-graded elementary school in Vancouver. And an incumbent school trustee has declared that in 10 years all elementary schools may be non-graded. But perhaps some parents want their children to attend such schools: now—others might favor a different style of learning. Surely, basic to freedom is the right to choose—even in education.

The new totalitarians inform us that all of our children will be permitted to attend a shiny new humanized institution. We'll like it; the students will love it; and the teachers will accept it—or else. Such an approach puts a premium on the infallibility of those proposing the changes.

I suggest that what we need instead is a school system based on "designated diversity." Under this system, the public would be informed as to the educational methods employed in the various schools so that they might choose which "type" of institution they wished their children to attend.

Those teachers, parents and students who wanted to establish a Dotheboys' Hall would be given the opportunity. Personally, I would favor a "play-centred" school in which "recreational activity" would be the core motivator to learning. But even most "progressives" would reject such a concept as an *overall policy* for the district. Vancouver is large enough to have a diversified school system in which many such different institutions would be viable components.

Certainly the universities now are also large enough to accommodate such a diversified approach to the means of attaining a higher education. It could be done through a college system or simply through developing different programs or streams, such as Arts I. Students who wish to continue to be "anonymous" paper-seeking members of the university could continue to do so in a program with lecture-oriented professors who also prefer that style. Those who wish to explore the potential of a "free" university should have put at their disposal like-minded faculty and facilities to develop and assess the feasibility of such an approach. There is no comprehensive traditional nor revolutionary plan of the "best" form of education. Only the totalitarians possess a master plan.

There are many paths to the mountain. It is the responsibility of the educators to show us where they begin.

Mr. Warnock, BA '55, teaches at Kitsilano secondary school.