

UBC ALUMNI
Chronicle



A Guerrilla Guide
To Graduate Studies

1 PARNALL JOHN E 311
REGISTRAR

The Future of
University Government
...see p. 4

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UBC ALUMNI Chronicle

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FEATURES

- 4 IT'S YOUR UNIVERSITY
How Do you Want It Governed?
Clive Cocking
- 7 TRIUMF:
A Candid Camera On The
Sub-Atomic World
Clive Cocking
- 12 A GUERRILLA GUIDE
TO GRADUATE STUDIES
Michael Mercer
- 20 COMET KOHOUTEK:
An Unexpected Celestial
Visitor
John Braddock
- 23 ON THE GOLDEN ROAD
TO SAMARKAND
Hanna Kassis

DEPARTMENTS

- 30 NEWS
- 34 SPOTLIGHT

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Bremer Commission Proposes Changes



It's Your University....

How Do You Want It Governed?

It's your university — how do you want it governed? As graduates your views should be made known and they should be considered in any changes in the system of governing the universities. And there *will* be changes. The Committee on University Governance, chaired by John Bremer, B.C.'s Education Commissioner, has presented a working paper advocating a series of significant changes in the *Universities Act*. The most significant appears to be a reduction in the role of alumni in internal university government.

Briefly, the Bremer committee has proposed the following:

- **Creation of a Universities Council of B.C.**

The council would essentially coordinate the development and financing of the universities. It would be composed of 11 lay persons appointed by the government, with the university presidents, an education department representative and a community college representative as non-

voting members.

- **Establishment of a purely academic senate**

Membership in the senate, which sets university academic policy, would consist of 25 per cent administration representatives, 25 per cent students, and 50 per cent faculty members. The 15 senators presently elected by the UBC convocation — faculty and alumni — and the representatives from a few educational organizations (including three representatives appointed by the Alumni Board of Management) would be eliminated, reducing the UBC senate to 72 members.

- **Renaming and increasing the size of the board of governors**

The board would be increased from 11 members to 15 and renamed, the board of trustees, in keeping with its function as trustees for the financial administration of the university. The board presently consists of six government appointees, three representatives elected from senate (in ef-



Your Opinion Please...

1. Should university alumni have specific representation on the proposed Universities Council of B.C. which is to be composed of 11 lay persons?
2. Should alumni be directly represented on the university senate and, if so, to what extent?
3. Is the Bremer committee's proposal to give alumni five members on the university board of trustees adequate?
4. In principle, should alumni have greater or less direct representation on university government bodies than non-alumni lay persons?
5. What, in your opinion, is the most important change/s that should be made in the system of university government?

Comments (feel free to enclose a separate sheet)...

fect, alumni since faculty and students are barred) and the president and chancellor. Faculty and students would continue to be barred under the Bremer committee proposals, so the membership would consist of: five elected by convocation (in effect, alumni members) and eight appointed by the government, with the president and chancellor continuing as non-voting members.

The Bremer committee's basic concern was one of modifying the system of university government in order to ensure public accountability of the universities while preserving the essential academic autonomy of the universities. The basic question for alumni, as people who have had first-hand experience of higher education, is whether we should have more direct involvement in university government. The UBC Alumni Association would accordingly like to receive your answers to the following basic questions and any other comments you wish to make. □

Mail to: Higher Education Committee, UBC Alumni Association, 6251 N.W. Marine Drive, Vancouver 8, B.C.

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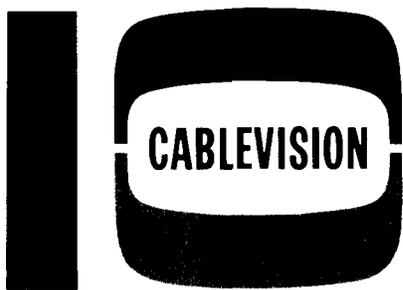
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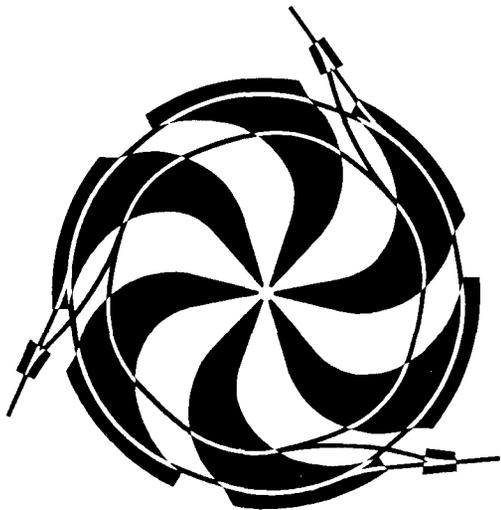
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TRIUMF:

A Candid Camera On The Sub-Atomic World

Clive Cocking

Down among the trees of UBC's southeast campus there are two big, stark green buildings that probably only a tiny fraction of the university community know anything about. The first glimpse of these relatively-remote structures comes as a surprise to the uninitiated. They're so different from any of the academic buildings elsewhere on the campus. So severely functional — and faceless. And, ultimately, mysterious.

What goes on in them?

The small sign to one side reads simply: TRIUMF. That stands for Three Universities Meson Facility. Which, unfortunately, doesn't really clear up the mystery. Nor is it easily discernible what it's all about once you're inside these cavernous buildings.

The interior of the largest structure is dominated by what appears to be a towering, massive press (the world's largest wine press?) all painted in pastel yellow, green and pink. Out of it feeds a shiny tube down the long building, connecting with several pieces of exotic apparatus. Another silver tube twists up out of the press-like device to the floor above and into what resembles (part of a science fiction movie set?) two large, glistening vacuum bottles with wires protruding everywhere. Next door there are banks of blue

computers and control panels dotted with lights and switches...

This is Big Science — the biggest, most advanced scientific project ever developed in western Canada. TRIUMF is a \$30 million research facility, the cooperative venture of the federal government, four (originally three) western universities and 50 scientists in pioneering in the new field of intermediate energy physics. It consists of a cyclotron which will produce high-energy protons and sub-atomic particles called mesons. An instrument primarily for basic research aimed at increasing knowledge of nuclear processes, it is expected also to be used for applied research in materials science and cancer radiotherapy. TRIUMF is one of only three meson research facilities currently nearing completion in the world, the others being a linear accelerator at Los Alamos, New Mexico, and a cyclotron in Zurich, Switzerland.

"From the point of view of Canadian science policy, TRIUMF is a real milestone in that it is the first time a major scientific project has been undertaken jointly by a group of Canadian universities with both provincial and federal support," said UBC deputy president Bill Armstrong, a former member of the Canada Science Council and chair-

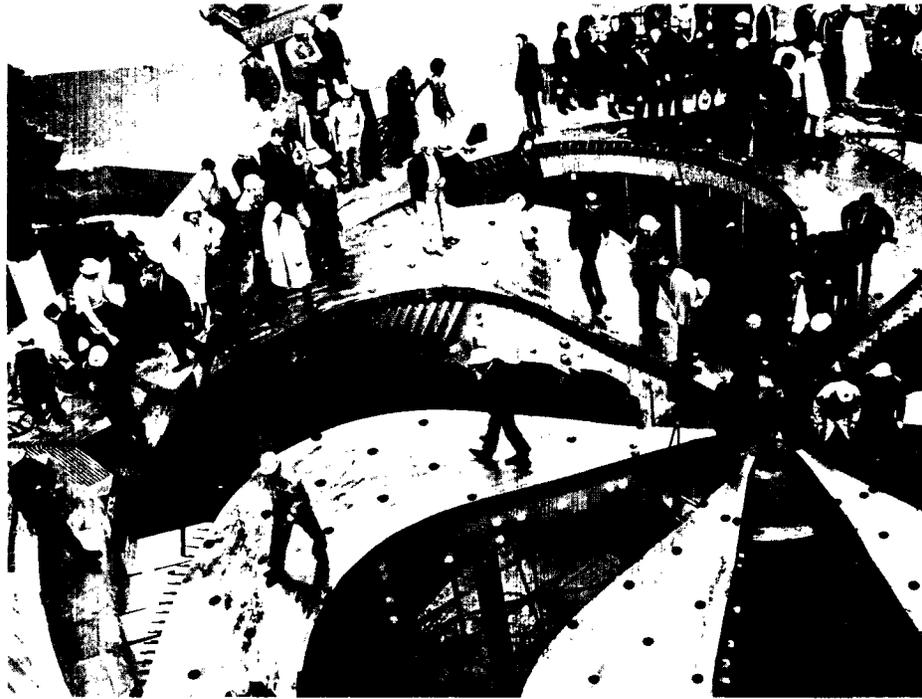
man of the TRIUMF board of directors. "In recent years, Canada has lagged behind a bit in particle physics as most universities have had to operate with antiquated facilities. TRIUMF will bring Canadian particle physics into a lead position in world science."

Pioneering it may be, but to most laymen TRIUMF is obscure, esoteric, almost completely incomprehensible. That seems to be a perennial problem of science: the gap in understanding between laymen and scientists. Science has increased in complexity far faster than knowledge of science has spread. The gap in understanding is thus probably as wide in this post-Einstein era as it ever was in the time of Galileo.

Not surprisingly then, TRIUMF has had its share of doubters among those who have heard much about it. You used to hear periodic grumbling — from faculty (non-physics) as well as laymen — that TRIUMF was "just a \$30 million toy for the physicists", but now that the project, after seven years in development, is nearing completion that is seldom heard. Still, it's unlikely that skepticism has completely disappeared since, in addition to a lack of understanding, the public seems to have a bias against basic research in favour of that which is immed-

Designers, dignitaries, technicians and workers stroll around the huge spiral leaves of the TRIUMF magnet during construction.

Vancouver Sun



ately useful.

"Canada has been one of the world's leaders in nuclear research for almost 30 years," said Dr. Erich Vogt, UBC professor of physics and one of the prime movers behind TRIUMF. "This research has not only increased our knowledge of nuclear processes, but it's also produced some very practical things: the cobalt radiation treatment which has saved thousands of lives was developed in Canada and the Canadian reactor program has been very successful. TRIUMF has grown out of this tradition."

Behind the project, clearly, there is a drive to stay in the forefront of a science whose importance will only grow in future. And in a country often criticized for fostering mediocrity, this concern for excellence should not be taken lightly. The project has big backers. The federal government, through the Atomic Energy Control Board, put up the lion's share, \$23.3 million for the cyclotron and ancillary research equipment and is contributing over \$4 million annually in operating funds. Of the participating universities, UBC, University of Victoria, and Simon Fraser University together contributed \$4.4 million for the buildings, UBC donated the 7-acre site and the University of Alberta has contributed \$1.25 million to the facility.

Such support by the government and the universities represents a major act of faith and it puts a heavy responsibility on the scientists involved. They seem, however, more than confident that TRIUMF will be worth the investment, although they admit that very little is predictable about the outcome.

Dr. Vogt puts it this way: "For several centuries we looked at the sky with optical telescopes and we learned a lot about the sky. Then people had the idea a few decades ago of using radio waves at different frequencies. And when they first built these big dishes that were capable of taking photographs of the sky they learned some very surprising things that hadn't been learned with the optical telescope. In fact, it has revolutionized astronomy. If you look at the sub-atomic world,

at nuclear physics where we have been photographing nuclei with protons and electron beams, this facility will provide us with a completely new kind of beam — mesons — to take pictures of these systems. We expect we will learn completely new things with it, just as we did in astronomy with radio telescopes."

TRIUMF will be a pioneering facility not only in its research but in its design as well. Other present cyclotrons produce protons in periodic bursts and at a fixed energy level. TRIUMF is unique in that it will produce protons in a continuous, intense beam and will be able to vary the energy of the beam — from 150 to 500 million electron volts — and even to emit two beams at differing energies simultaneously. The intensity of the proton beam will be such that TRIUMF will produce 1,000 times more mesons than any existing meson facility anywhere. These features are expected to make TRIUMF a very versatile instrument for providing scientists with the answers to their many questions about nuclear physics.

Scientists know that each atom resembles a miniature solar system. Its basic constituents are a heavy central nucleus surrounded by electrons which orbit like planets. The size of the atom is about a million times smaller than things we can see with the naked eye.

The nucleus of the atom is 10,000

times smaller still. Its basic building blocks are protons and neutrons, with the proton differing from the neutron in having an electric charge. Electric forces between unlike charges hold the electrons in orbits around the nucleus just as the forces of gravity hold planets in orbit around the sun. And it is out of the collisions of high energy protons or electrons with other protons or neutrons or electrons that a whole hierarchy of short-lived (one millionth of a second), sub-atomic particles are created; mesons are one type.

"Although we're very confident that atomic nuclei are made up of neutrons and protons, we can't at present describe just how the neutrons and protons move inside the nucleus," said Dr. Vogt. "We know that a proton is bound to the other neutrons and protons by very strong nuclear force and that it moves through the nucleus in a rough orbit not unlike that of the electron in an atom. But up to now we haven't been able to take an instantaneous photograph of the arrangement inside a nucleus. The new meson and proton beams from TRIUMF will bring us much closer to achieving a proper instantaneous photograph of the structure of the atomic nucleus."

Two innovations make it possible for TRIUMF to achieve an intense, continuous flow of particles out of the cyclotron. The first was the unusual shape of the magnet — the



core of the cyclotron which accelerates the particles — consisting of six spiral sectors which keep the particles in step with the energy-boosting mechanism and which allows an unbroken stream of particles to pass through the machine.

The second innovation was to replace the protons customarily injected into cyclotrons with negative hydrogen ions. Negative hydrogen ions are produced from ordinary hydrogen (which consists of a single proton with an electron around it) by adding an extra electron instead of removing one to leave a proton. The application of this concept to large meson facilities

was the brainchild of TRIUMF director Dr. Reg Richardson, an Edmonton-born cyclotron expert currently on leave from UCLA; he developed the concept during a holiday on Galiano Island in 1962. The use of negative hydrogen ions makes it possible to get almost all of the accelerated particles out of the cyclotron — something other facilities have been unable to achieve.

It all works like this. Those two objects resembling vacuum bottles, mentioned earlier, are TRIUMF's ion source: they produce the negative hydrogen ions. The negative hydrogen ions stream out through a long tube and are deflected down into the centre of that massive pastel-painted press-like apparatus — which is, in fact, a 4,200-ton magnet and one of TRIUMF's crowning achievements. The negative hydrogen ions flow down into a horizontal vacuum chamber 56-feet in diameter between the huge spiral leaves of the magnet. Magnetic force keeps the negative hydrogen ions focussed as they circulate inside the vacuum chamber while a radio frequency system gives them a kick of energy each time they go around. The result is that they spiral to the outer edge with ever-increasing energy.

At the outer edge of the machine a very thin sheet of carbon strips the two electrons from each negative hydrogen ion changing it into a proton. And since the proton has an electric charge opposite to that of the negative hydrogen ion, the

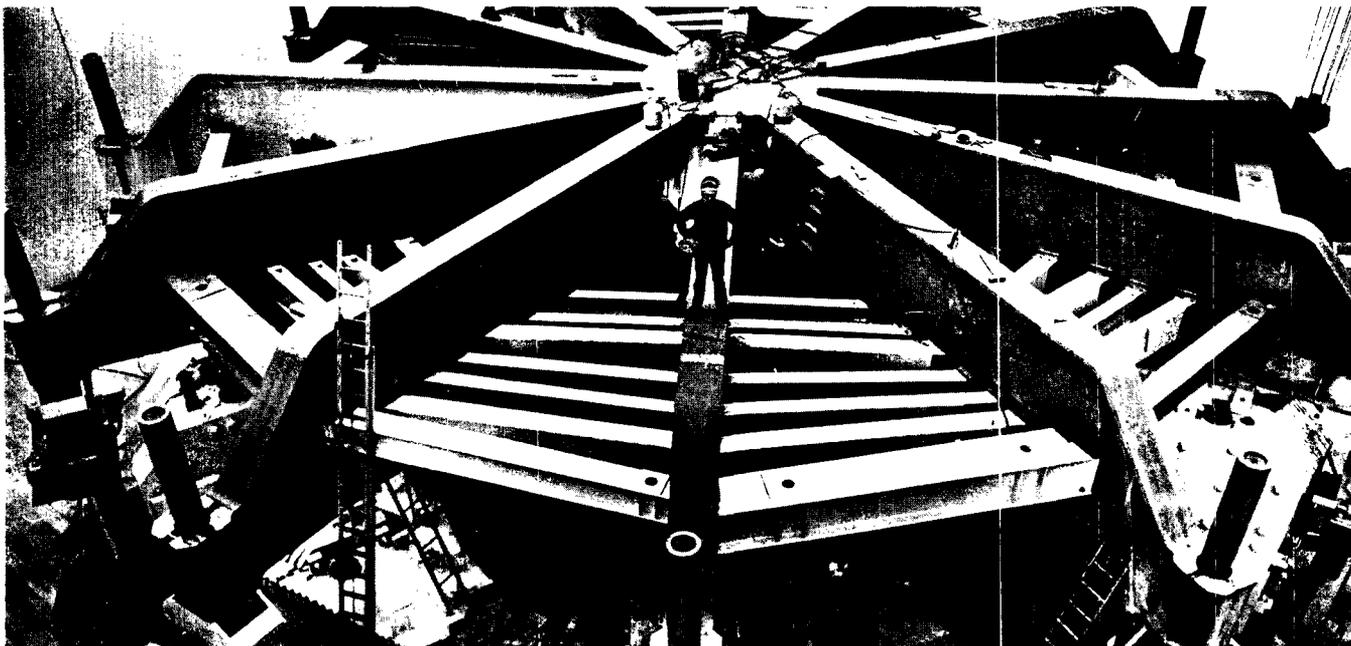
magnetic field makes it reverse direction and — *voilà!* — spin out of the machine. "By this very simple means we're able to extract over 99 per cent of the beam," said Dr. Vogt. By placing stripping foil at various points inside the vacuum chamber they achieve the emission of streams of protons at various energy levels.

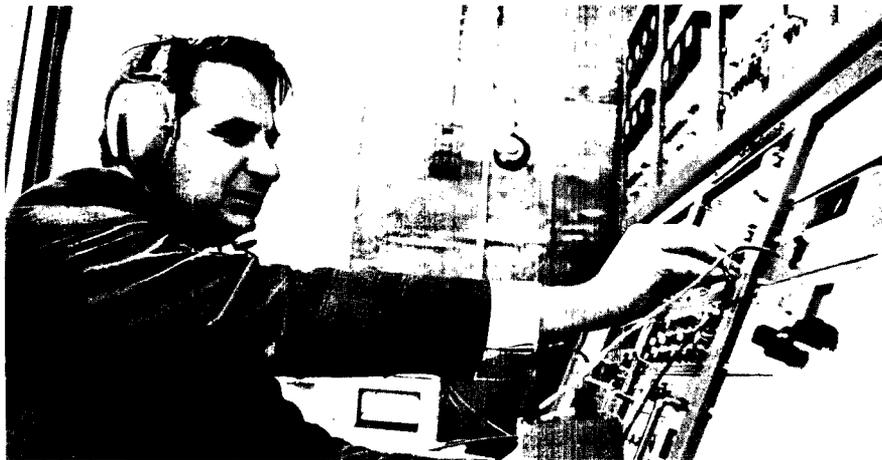
The engineering work that has gone into translating these design concepts into a soon-to-be functioning reality has also been remarkable. And the majority of it was done in Canada. "We have made a rough analysis of the expenditure of funds involved in TRIUMF," said Dr. Richardson, "and between 80 and 90 per cent was spent in Canada. Approximately 70 per cent of it was spent in British Columbia. This includes a number of development contracts which have greatly increased the expertise of local industry in doing technologically-advanced things."

TRIUMF scientists were particularly pleased with the "superb job" a Richmond fabricating plant did in constructing the vast vacuum chamber in which the particles accelerate within the magnet. The steel lid of the chamber, about 1/20th of an acre in size, had to be built completely flat, with many

A welder pauses in his work as the huge spider-like form of the TRIUMF magnet installation began to take shape.

Vancouver Sun





UBC grad Dr. David Axen, (above) assistant professor of physics, works on calculations related to his work in designing TRIUMF's vacuum chamber. (top, left) TRIUMF director Dr. Reg Richardson and physics professor Dr. Erich Vogt (right) look over a scale model of the central magnet of the massive TRIUMF cyclotron. (below, left) Checking the controls of TRIUMF's radio frequency system is alumnus Dr. Karl Erdman, professor of physics, who was responsible for design of the system.

portholes for equipment, and yet capable of being sealed completely vacuum tight — only 1/100 billionth of the air could be left in the chamber during operation. Never having done anything as complex before, the Richmond company learned new welding techniques developed by the space program and did the job to perfection. They also built the radio frequency system. A Quebec company did an equally fine job in building TRIUMF's huge, spiral-shaped magnet which weighs about as much as the Port Mann bridge. The TRIUMF developers were also pleased with the electronics work done in Canada, notably the building of the specially-designed computers which ultimately will monitor and control the operation of the facility.

The decision to have as much of the components built in Canada as possible was entirely TRIUMF's. Incredibly, the federal government neither insisted on, nor encouraged such a policy. "Canada is one of the only countries in the world

where the government doesn't have a specifically Buy Canadian policy for such difficult technical projects," said Dr. Vogt. "They are not prepared to say that either you must buy in Canada, or that you must buy in Canada unless the price is cheaper by a certain percentage. I think this is one of the things that has acted against the development of many kinds of secondary industry in Canada."

In any case, barring complications, the long-awaited day will occur this spring. The day when TRIUMF is switched on, sending a stream of protons down the long tube to bombard targets of carbon or beryllium and thus to produce mesons for the first of a wide variety of experiments. TRIUMF will not have full intensity initially — it will be built up gradually — but it will have enough to enable western Canadian scientists to begin their deeper probings of the mechanics of nuclear processes.

One of the first studies to be undertaken will be concerned with

the interaction between protons and neutrons and between protons and protons within atomic nuclei. Another study, aimed at discovering more about how nuclei are held together, will look at how pi mesons are produced when one proton hits another proton or a simple nucleus. Some of the research to be developed at a later stage is expected to involve experiments in examining the structure of mesons themselves, the photographing of atomic nuclei with meson beams and the formation of new atomic and nuclear systems with added mesons.

These are all basic and quite esoteric lines of research, but other types of projects are being planned, some with more immediately practical value. A group of physicists and metallurgists, for example, are planning to use TRIUMF for materials research, particularly for investigating the properties of alloys and semi-conductors. Chemists are hoping to explore TRIUMF's value in rapid and accurate analysis of air, water and soil pollution sam-

ples. It is also anticipated that TRIUMF will be used to produce radioactive isotopes for medical diagnostic use.

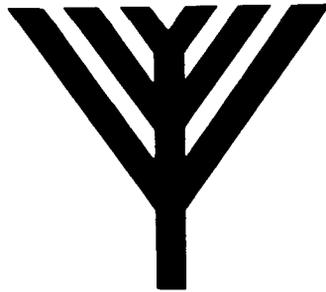
Probably the most exciting prospect for laymen, however, lies in TRIUMF's potential use in cancer radiotherapy. A special medical annex, funded jointly by the British Columbia Cancer Treatment and Research Foundation and the federal Health Resources Fund, has been built in the TRIUMF complex to investigate this potential. Negative pi mesons are believed to have great value in radiation therapy, particularly in treating deep-seated malignant tumors.

"The advantage of these — if I can oversimplify a little — is that with present forms of radiation you basically drill a hole to deposit radiation in the patient and you kill the overlying tissue as well as the tumour you're aiming at, because you deposit energy roughly uniformly along the path which the particles follow," said Dr. Vogt. "The mesons are unstable particles, they last a millionth of a second and then they give up all the energy which made their mass, they give it up like a little bomb. You can select how deeply you want these mesons, or little bombs, to penetrate and you can deposit them in a tumour and then they release their energy there. And they won't do as much damage to the overlying tissue as present forms of radiation."

The possible value of using TRIUMF in this way will be investigated first by using tissue samples and animals, before being tested on humans. It might take three years to complete this research, but there is a good deal of optimism that the meson facility will prove to be useful in cancer therapy.

Beyond these few initial lines of research, the possible future use and benefit of TRIUMF becomes less clear. Just as the radio astronomers could not predict what they would learn when they turned their first radio telescopes to the sky, neither can the TRIUMF scientists predict what they will learn with their new scientific instrument. What does seem predictable is that people are going to hear much more in future about the work underway in those stark green buildings down among the trees of UBC's southeast campus. □

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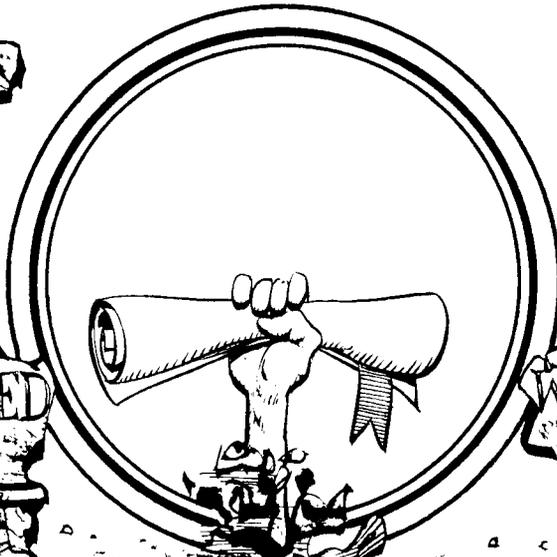
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A Guerrilla Guide To Graduate Studies

Michael Mercer



THE
DIVIDED

MENT
WE STAND

Peterson

I recall, at the outset of my graduate career not so many years ago, strolling over the campus for the first time, and being struck by the exquisite mute, scholarly peace of it all. The grey hulk of the library brooded as silently as the books within it and late summer sunshine fell down through the clouds so slowly, I felt I might have combed out the rays like hair. Down the corridors of trees, I could see the years before me unfolding in languorous succession. Other afternoons in the abstracted air of brown studies. Convivial conversations over a drink. Time, above all, to pursue my academic interests in the monastic setting about me, untroubled by the shrill ways of the world.

Such thoughts and feelings act as mild ego-suppressants, and I vowed then and there to follow the ways of a humble scholar. At the end of my period of studies, I would fulfil my obligations with a dissertation — a modest contribution to my field — and shuffle away with my degree a wiser and more complete human being.

Ten minutes later I was sitting in the graduate office listening to a faculty advisor trumpeting out my course of studies like an Emperor Swan in heat. "The department prefers candidates to complete their course of studies as quickly as possible, so I advise you to get your course requirements out of the way in the first year. You will, of course, write the examinations immediately after and then buckle down to the thesis ..." Sometime later I emerged with a teaching assistantship, three seminars chosen from something that suspiciously resembled a menu card, a handful of computer slips and a case of shattered hopes that would have made a killer out of Thomas More.

The second part of my indoctrination was a snappy little number called an orientation conference — a euphemism, I suspect, for an up-

beat marine corps parade. While we all sat in those grim classroom seat-and-desk combinations that some demented elf designed for Matthew Arnold, selected faculty took turns raising our collective hopes for the future. The final act of the day was an imposing woman with the frame of an earth mother and the voice of a tenor saxophone.

"Look at the person on your right," she said. "Now look at the person on your left." All our heads swung obediently, less from a desire to please than a general tremor of that age-old fear of bygone shrews who would cancel a chocolate milk ration, and even recess, at the slightest provocation. "Neither of those two people will make it through graduate school successfully!"

The reaction was restrained, but perfect in timing. A pause. A moment of realization. A polite musketry of laughter. I had heard the identical remark made four years earlier when I was beginning my freshman career in Montreal, and time had done little to improve it. Far from cheering me, the remark urged a flush of sadness for all the faces I had seen on the left and the right in that other, more distant room — the faces that had fallen by the wayside for reasons of poverty, disillusionment, confusion, or just plain boredom.

The gathering ended that day with a question period, and predictably enough, the regimentation, cramped school desks, and Donald Duck directives from the podium, had levelled us all into an aspiring "A" level Romper Room mentality. Graduate students well past the age of consent shook their hands in the air frantically in order to make profound and penetrating requests. Can the TAs use the staff washrooms? (the room exploded with applause when the reply came back in the affirmative!) Can we use departmental letterheads? Is it ok to

smoke in class?

There was an insipid, musty, glue-pot classroom smell in the air that raised a disparate parade of images in my mind: ink-blot termites, cinnamon hearts, and the pre-pubescent anarchy of Billy the Bandit shooting holes in a rubber-stamp impression that reads: THIS BOOK IS THE PROPERTY OF THE BOARD OF EDUCATION.

Five years have passed since that day I first trod upon the sod of UBC — five years of frustration, disillusionment, conflict and occasional triumph. From it all I have wrested a respectable MA and three unremarkable years' progress toward a PhD. (If you wish to know how unremarkable, I might add that one full professor had to be physically restrained from doing violence upon my comprehensive examination — I had written the entire paper with a felt-tip pen that was just a size smaller than a Minuteman rocket!) When I strode into the department this fall to formally — if not somewhat dramatically — take my final leave, everyone from the graduate committee to the office secretaries was singularly unmoved. In fact, it was news to many of them that I was registered in the first place.

I mention these jaded snippets of biographical information to save the idle, the curious and the indignant, precious hours of their own time scratching through records looking for ways to discredit me; and thus leave myself freely open to the charge of being nothing more than an embittered failure. I will even go one cooperative step further and admit at the outset that I take full responsibility for all of the errors of my academic ways. Now I can't be much more open than that, can I? I entered graduate school with a conception of university so remarkably naive — my monastic retreat from the shrill ways of the world — that I confess

now with embarrassment, that I wonder I got as far as I did.

With almost terrifying consistency, I precipitated one minor catastrophe after another. If there was an unpolitic comment or alliance to be made, I made it. If someone made a mistake, I was the first on the scene to praise his actions. Whenever a student-faculty sherry party was declared, I usually materialized next to the bar before the corks had cleared the bottles, and with unerring accuracy, later bounced cheerfully across the floor to button-hole the most important, most abstemious and least amused professor in the department.

As a partial retribution for the glaring errors of my ways, I would like to leave behind me — as a swan song, if you like — the following guide to survival in graduate school, for those pathetic and misguided individuals who, pure of heart and untaught in the paths of reality, may foolishly repeat my mistakes. I call this a “Guerrilla Guide”, not to suggest any manifest form of aggression or conflict; I merely wish to use the designation in the manner of a tempo character in music — a *vivace*, if you will, to urge a defensive pulse that is so alien to the thin blood of these sad innocents.

A Guerrilla Guide To Graduate Studies

Objective: To obtain a graduate degree.

Qualification: To achieve objective with minimal loss of time, minimal conflict, minimal expense of dignity, identity and bitterness.

Weapons: Intelligence, native cunning and an animal instinct to survive.

You Are Alone

As a graduate student, you stand among the most unselect and undesired force in existence. The faculty of your university has little use for you (*cf.*: “Know Your Enemy”) and chances are good that your own family regards you as an arrogant, opinionated wretch riddled with unreality who would better serve community needs cleaning up garbage on a *LIP* grant. You might consider that these nice people are not so

far wrong. With an incomplete graduate degree, you would barely qualify as an organ grinder’s monkey, even if you brought your own cup.

Remember: as a graduate student you stand and fight alone. The competitive system of education has long ago separated you from your fellow students. You learned back in those Red Cross collection tin, pencil-box, blue milk for lunch days, that you were the average that the whole educational system was based on. Anyone who got higher marks than you did, was a “suck,” a “brown,” and those that got lower would be doing the whole trip again next year.

By the time you outgrew this Dick-and-Jane syndrome, you were sitting under the hallowed arches of a university, listening to the somnolent drone of a resident catastrophe with more initials after his name than a Mexican customs official. As if the process of distrust-your-fellow-student was not sufficiently indoctrinated into you, the drone urged you sagely to specialize, thus completing phase two of the alienation process.

Remember: specialization is the key to your isolation. Ultimately, it is the act of acquiring a narrow and specific knowledge to such profound depths that only three or four people in the whole academic community are capable of understanding a blind word you say. Although this does not restrict your social contact with fellow graduate students, it impedes to the point of incommunication, any exchange of academic information. If, as occasionally happens, you are introduced at a gathering to a fellow student who is working generally in the same area as you are, the two of you will, in all likelihood, stand like bears with rectal itch and pace about suspiciously silent. The only people then that you will openly discuss your ideas with, are the faculty advisors — and they, ironically are the ones who are in the best position to benefit (shall we say) from your inspiration. But the system is so structured that you have no choice but to impress them, cater to them, win their approval and finally recommend them for graduation. Specialization has made you absolutely dependent upon them — so much so, that if you later run into personality difficulties or just plain difference of opinion, there is no arbiter

you can turn to who is sufficiently qualified in your narrow field, to settle the case.

To repeat: as a graduate student you stand alone, totally without the support of your peer group. Your only hope and salvation lies in knowing the terrain and the disposition and habits of your enemy.

Know Your Enemy

Are there any departmental politics I should know about? This is a question that too many graduate students develop the wit to ask while waiting in line at Canada Manpower. It’s like asking “How can I be saved?” two weeks after the Day of Judgement. In truth, there is little in the conventional sense of partisan politics in most university departments. A graduate student may be a self-acclaimed phone booth worshipper or a member of the Bedlam Liberation Front, and he will in no way be discriminated against or otherwise shunned. One professor, in fact, heard the word “Liberal” so frequently, he finally worked up the reckless courage to ask a friend what it meant. In this man’s defence, I might add that though a member of the department for ten years he had maintained his American citizenship in order to protect his bookstore charge account in Seattle (I might add, moreover, that it’s to this man’s credit that even after receiving a full explanation of Canadian Liberalism he still could not understand what it meant — which puts him in a class with Pierre E. Trudeau, and slightly above Mitchell Sharp).

The graduate student should be aware, however, that there is a very real political division in most departments that perpetuates an atmosphere that makes election week in Caracas look like a bookbinders’ convention. It all boils down to a “left” and “right” polarization on the matter of international reputation. The “right-wing” urges the now familiar “publish-or-perish” philosophy in the belief that a glut of books bearing their names is both a valuable contribution to their respective fields, and a guarantee of a place in history. The “left”, on the other hand, don’t really care if their fame goes beyond Spuzzum, and insist that the chief emphasis in a univer-

sity should be placed on teaching.

In your simple-minded way, you might now ask why the "right" doesn't publish and the "left" teach, and never, as it were, the twain conflict? The answer lies in the fact that much of the material published by the "right" is of such abysmal quality that only alcoholic librarians in a cataloguing quandary ever look beyond the first page; and in a number of cases the books were actually remaindered while still in the galley-proof stages. Bitter and unfulfilled, these unhallowed academics resolve to make the best of a bad situation and use their work to batter the heads of the "left" in the secretly cherished belief that these virmin deter students from using the library and the valuable books therein. It should not demand a great storehouse of intelligence to recognize that the "right" will benefit vastly by a promotion and seniority system based on publication (one professor, it is rumoured, urged a "published only" washroom in Buchanan to prevent contamination by the "left").

The "left" give their full attention to teaching on the undergraduate level, and value above all radicalization of curricula. In its more negative phase, demented exponents of this position espouse such heavyweight objectives as "blowing the minds" of eighteen-year-old freshmen (my apologies to the Woman's Caucus, I mean "freshpersons") — which even in teaching terms, surely is what Lenny Bruce would call "a cheap victory." In the ranks of this "wing" you will, of course, find a number of first-rate teachers, but through careful examination, you will soon realize why it also contains a sizeable force that couldn't teach a dog to scratch. Self-evidently, any new lecturer who dislikes writing and anticipates a career unembellished with articles and publications, will take up the cause of the "left" immediately as a form of self-protection, even though they personally prefer golf to teaching. Though such people radically weaken the argument of the "left", it should be stated in their favour that even the worst of them are better in a classroom than a major portion of the "right" — most of whom are such sententious bores they could lull a near-terminal



Know Your Enemy (Right)

speed-freak to sleep.

As a graduate student, you will quickly recognize that you play no role in the major political division of the department. The "left-wing" rarely consider seminars as testing grounds for teaching abilities (which to their way of thinking is based primarily in the proscenium-arch-holding-forth lecture technique and has little or nothing to do with sitting through three hour debates with graduates). The "right-wing" on the other hand, presumes that every graduate student is sufficiently radicalized in this post-Berkeley world, to support the "left" automatically, and unless you are willing to do some of their menial research jobs for them, they will initially regard you as a slug in the garden. Even if you work with the "right", chances are good that you will only come to grief. In their private souls, most of them are obsessed with the idea that graduate students are spying for the "left" and hence are capable of doing little more than writing memos on their behaviour patterns.

You must remember: as a graduate student, you are only a transient member of this academic com-

munity, and as such have the rights of an alien with a moth-eaten visa. Actively, you can do nothing to advance the cause of the "left" or the "right", but both of the resident factions will have no hesitation in using you to assist them in their perpetual war. The machinery of the whole thing should be blatantly obvious. If you select a "right-wing" member of the faculty as your thesis advisor, he will dogmatically impress the value of "true" scholarship upon you, flatter your sense and discretion in coming to him or her, prime you with the short-comings and sloppiness of the "left" and hope that you will, with temporary conviction, bad-mouth these unscholarly folk. He or she will, of course, at best stall you with thesis revisions until the next ice age, or at worst fail you in oral examination — all in the firm belief that his or her standards are loftier than anyone else's (this is known as the "right vs. right" split).

If you select a "left-winger" as your advisor, he or she will prime and use you against the "right" and press you to declare your enmity toward them openly. All this hope-

Know Your Enemy (Left)



fully to give the impression that a major portion of the graduate school actively supports the "left." Your chances of successfully completing your degree are better with this faction, but, in keeping with the master plan, you still can't win. In almost all departments the "right" holds the ultimate sway, so if you have been particularly vociferous in support of the "left" — either through idealism or the plain human desire to have somebody (or anybody) support *you* — you run the risk of having your research grant requests bottom-listed, or finger-wagging letters added to the top-secret file that the department allows only your future university employers to see.

But surely — I hear you protesting — there must be some neutral outlet where a graduate student can find a helpful and sympathetic ear. As it happens, there is. Realizing that a strict polarization would likely rip the department in half and soon urge near violence from graduates, both the "left" and the "right" have encouraged the emergence of the "centre" — a body of faculty to act as a neutral aid to the student, thus preventing strong

graduate feelings from upsetting the delicate balance of power.

The "centre" is composed of a number of ineffectual faculty who out of sheer terror of conflict refuse to support openly any of the existing factions. Because of their fear, indecision and silence, they are judged as objective and neutral, and are promptly placed where they will do the least harm — on committees dealing with graduate student problems. This group avoids using words whenever possible. If they wish to communicate a negative message, they shrug helplessly and spread their hands in a mild token of recognition to the purblind forces of fate. If they have good news — which is exceedingly infrequent — they will hire a plane with their own funds, to write it in smoke in the skies over Point Grey.

Little wonder, then, that few graduate students have ever managed to extricate themselves from the spider-web of "left-right" intrigues, once they unwittingly stumble into it (in truth, in my five years at UBC, I have known of none who did). Poor devils, half out of their minds, under the weight of politi-

cally fragmented dissertation committees that months ago have forgotten who wrote the thesis they are arguing about, stagger deliriously into the offices of the "centre" faction, and receive for their pains a purblind homage to fate.

The Way To Salvation and Victory

Attitude: The only way for a graduate student to survive is to recognize the reality of his predicament, and that of the department he is working in. He or she must not allow sentiments, ideals, love of discipline or knowledge, and friendships to cloud the issue. As it now stands, graduate schools do not possess an atmosphere conducive to serious studies, and because of interminable faculty disputes they are not even efficient processing machines. You are thus entitled, in all fairness, to take as callous an attitude as you wish.

Remember: Not one faculty member, "left" or "right", is aware or interested in the fate of those he has failed, or has even a lively awareness of the time, money, and psychic energy these people have expended in pursuing graduate studies. The graduate faculty firmly believe that it is their task to "weed out" the poor scholars, and yet, through perpetually encouraging internal strife create an atmosphere that encourages only mediocrity.

The Steps to Victory

Step One: Upon registering, you will be asked what area you wish to specialize in. Don't provide a direct answer to the question. Which ever area you choose, you will automatically be limiting yourself to a particular group of faculty specialists, and be placed in the untenable position of having to accept them, regardless of your own feelings. Remember: if you discover later that you can not work with them, and return to inform the graduate office that you are switching to another area, you will be immediately judged uncommitted to your studies and frivolous in your attitude.

It comes as a singular disappointment to many new graduate stud-

ents that they can not work in the field they prefer, but personalities and politics over which you have no control rule the expedient of caution.

Step Two: Take a complete list of the faculty, and through discrete inquiries, separate them into various shades of "left," and "right" and "centre". If this seems foolish, you must remember that this is the way they regard each other; and the way they regard each other is, unfortunately, going to radically effect your relative success or failure in graduate school.

Step Three: Once you have assembled the list, memorize it entirely. Upon meeting one of the faculty, you should instantly raise the political stand in your mind, and represent yourself as vaguely sympathetic with their particular position. *Never* commit yourself with opinions: stick reservedly with subjects. With the "right" discuss the relative merits of the research facilities in the library. Announce confidently that you are "frankly pleased" with UBC's resources, adding that any present shortcomings will undoubtedly be corrected in the next few years (perhaps adding further than you find the library is just a little tardy in its cataloguing — it's a safe bet, it is!). When the faculty member asks for specifics on the "shortcomings", deprecate yourself gently as a "bit of a nit-picker" and slip politely away before the subject can be pursued further.

With the "left", your best bet is to stick to teaching anecdotes. Beware, however, not to criticize or comment on the teaching of any other member of the department. This will immediately "fix" you in his or her mind as being of a particular political leaning. The one thing you must harden yourself against are whispered confidences. Both political extremes will, once they feel comfortable with you, confide unspeakable evils about their opposites. Under no circumstances can you register surprise or shock, for this will quickly "type" you as a sympathetic listener. Remain aloof, but attentive, and respond with a curious, but flat, "Is that so?" The moment you receive information of this kind, return to your list and record the subject of the unspeakable evil as an enemy of the speaker. In this manner, and



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“Once you have selected your advisor, or chairman, postpone making your choice public until the last minute.”

through a series of gatherings, you will more sharply define the lines of aggression in the department — information that will later allow you to play one off against the other if, and when, the circumstances arrive when you have to defend yourself.

Remember: as long as you are in a holding pattern, you are safe. If the “right” and “left” are uncertain of where you stand — and you don’t foolishly become dedicated in a seminar and start spouting personal opinions — they will both cater to you, and provide endless “low” anecdotes about one another. However, the moment you commit yourself, you will have more enemies than you can handle.

Step Four: When the time comes to select a thesis advisor, carefully check your list, and see who has received the least amount of bad-mouthing, and determine which of two categories he or she falls in. Such a person is either so weak, insipid and stupid that no one cares about insulting them; or, as is the case in some departments, so powerful no one dares utter a bad word for fear of it reaching the subject’s ears. (Don’t make the mistake, by the way, of presuming that such a person might be so pristine that there is nothing anyone *could*

say about them; if there isn’t a juicy current story about them the speaker will make it up on the spot). If the faculty member falls into the latter class, create a thesis topic that he will accept and win him over as quickly as you can.

If no such Moses figure exists in your department, the next best bet is to choose the “left-wing” faculty member who received the greatest number of insults from the “right”. Chances are good that he is the most imposing figure, and probably also the most rational. Such is the case because if the “right” faction had solid evidence of his being a mediocre scholar or a third-rate mind, they would announce it hourly from the bell-tower. They whisper criticisms against him to relieve their frustration at not finding his real weakness. The more unspeakably vile the stories, incidentally, the more likely he is to be rational. If you are told in confidence, that a particular member of the “left” was arrested six years ago for “flashing” in the toy department of Eaton’s, he’s likely to be the most dependable advisor.

Step Five: Once you have selected your advisor, or chairman, postpone making your choice public until the last minute. You might take a page out of the book of any

department head here. Whenever the head has an unpopular policy announcement to make, he generally waits until a day or two before the summer holidays then drops it into the middle of the department and splits for England. You might do the same thing, for it will allow you, without difficulty to avoid confrontations with the political faction of the opposite side. Write your thesis over the summer, in the case of an MA, and return in the fall and whip through the oral process before anyone but your committee knows what’s happening. With a PhD the problem is more complex, but again, do the major part of your research and preparation before announcing the selection of a chairman. Don’t give anyone time to build a case against you.

Step Six: When you are selecting your committee, don’t make the mistake of hand-picking them all yourself. If your list is not up to date, you are quite liable to find you have a hostile band together, and you, in the final analysis, will be the only one to suffer if your examining body doesn’t get along. By far the most effective way of achieving a harmonious committee is to leave the choice up to your chief advisor chairman. This should

be done covertly, because members on the "right" become outraged at the thought of anyone having a "rigged" committee that they personally didn't have a hand in "rigging." When you meet your chairman, confess to him that you don't know very many of the faculty because you've led a sheltered life in the library since you first enrolled. Ask him to suggest some to you, and carefully put to memory, the order of names as he presents them. If he mentions a name that you know is a sworn enemy of his (and many will because they feel ethically bound to provide other names that are recognized in their field, regardless of how they personally feel about them), you will know it immediately because of the list you have taken so much trouble to assemble. At this point interject, in the strictest confidence, that you have had a bit of a personality clash with that particular person. Chances are good that your advisor will let out a secret sigh of relief, and continue with a list of more compatible people.

Step Seven: If along the tedious road to your degree you get un-

necessary flack from one direction, don't hesitate to use the confidential comments that you have been collecting. Such a statement as: "Professor you speak to me of academic standards and professional ethics; and yet you could stand before me and insinuate that Professor was nothing but a storefront flasher," if delivered loudly, and directly in front of him or her, will instantly defuse their power to harm you. Be sure, of course, that your facts are correct and you have witnesses. Later, if he or she attempts to block, damage or otherwise impede your progress, you can have ample testimonials at your disposal, to prove both that Professor is capable of harbouring distasteful and irrational attitudes, and that you gave him or her ample reason to do so.

Remember: As a graduate stud-

ent you stand alone. The purpose of a graduate education is to equip you to enter the academic profession. The best way to do so is to take the exemplar of your own department and begin to act like a faculty member now. Place self-interest and self-preservation before the pursuit of knowledge and education. By doing so now, you will reduce the cultural shock of entering a department as a faculty member — if and when you ever get an appointment.

So I hand this modest "Guerrilla Guide" over to those who follow me, in the hope that those few innocents who will surely come, will not err as I have done. And to the faculty I leave this word: you were absolutely right. I am not PhD material!

Vancouver freelance writer Michael Mercer, MA'70, is a recent dropout from doctoral studies in English at UBC. Behind the irony of his "Guerrilla Guide To Graduate Studies" there is a serious criticism of how the program functions. It is a criticism which, admittedly, may not apply universally to all departments, but is serious enough to warrant discussion. The Chronicle looks forward to the opportunity of printing other viewpoints on this question. —Ed.

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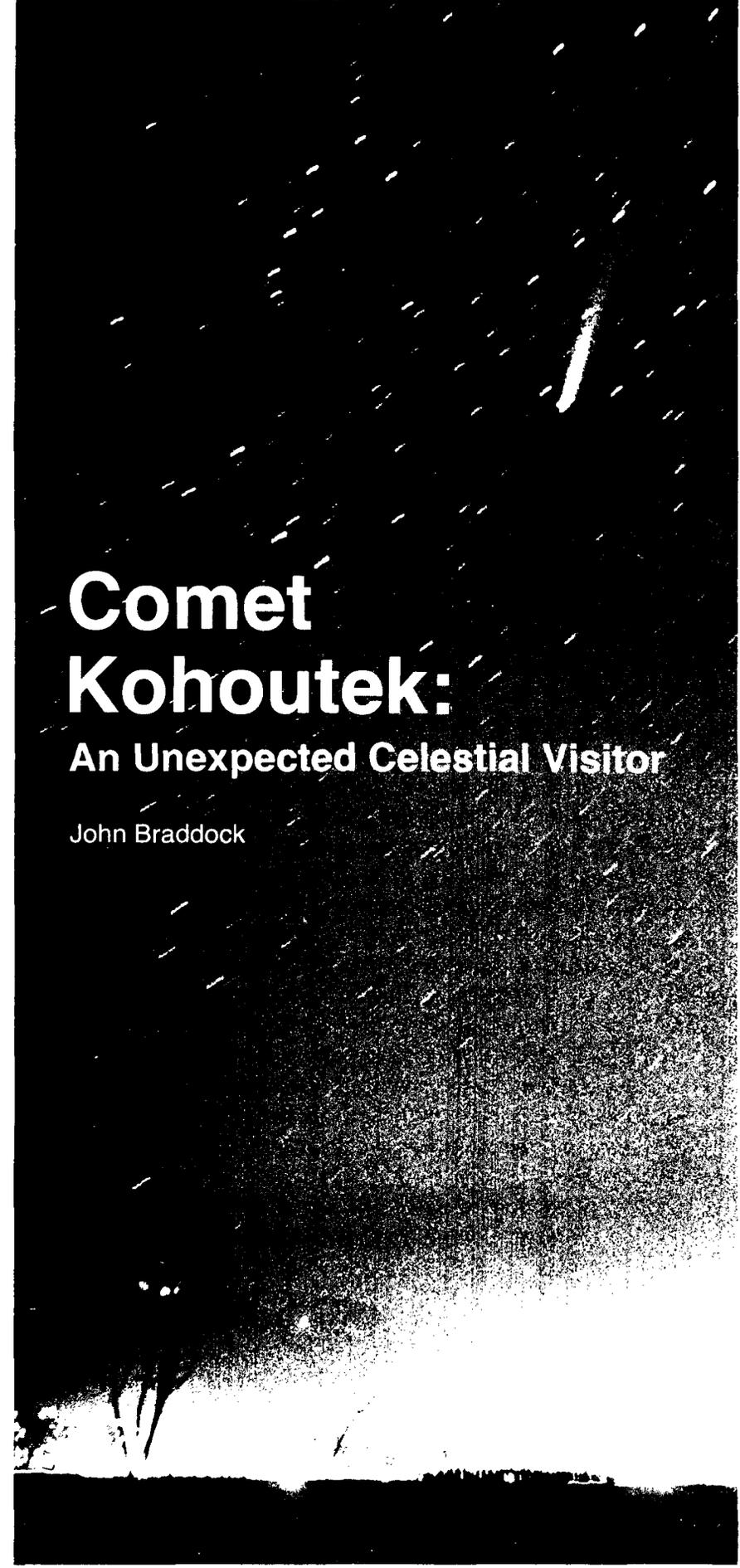
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Comet Kohoutek:

An Unexpected Celestial Visitor

John Braddock

A fiery new visitor from space has recently flashed into our skies riveting the attention of both superstitious and scientific minds. It is called, Comet Kohoutek. And in these days of Watergate and crisis in the Middle East, the coincident appearance of this comet has prompted — much as comets did in the past — dire predictions about the future of man. But at the same time, appearing in our solar system for the first time in recorded history, Comet Kohoutek has given astronomers fresh opportunity for pressing back further the boundaries of the unknown in our universe.

Comet Kohoutek is visible now to the naked eye if you go out in the early morning and look towards the bright star Spica in the constellation of Virgo. But as December progresses it will fade into dawns. It will swing about 13.2 million miles behind the sun, then reappear in our evening skies at the beginning of January. And from then until February it should provide a fantastic sight.

It's expected to be one of the brightest comets of this century, possibly outshining the famous Halley's Comet — which is due again in 1986. But whether Comet Kohoutek will be brighter than Venus or brighter than the skies of the day, as some authorities have predicted, remains to be seen.

Aside from the brightness, it will be an important comet because it was detected early and will be in view a good three months, dimming only as it recedes in March. So there will have been time for elaborate research programs to have been set up and — more important — carried out with a meticulousness rarely available in comet watching.

For instance, Comet Kohoutek will be studied by the third crew in Skylab. It will be analyzed by scientists aboard NASA Lear jet aircraft and it will be dissected spectrographically at the Cerro Tololo

Comet Kohoutek will be bigger and brighter, than the Comet Bennett that crossed Vancouver's sky on April 11, 1970. Retired dean of science, Vladimir Okulitch, caught that comet with his camera at 3 a.m. on Spanish Banks.

Inter-American Observatory in Chile (politics permitting) and detected by infrared means by various observatories throughout the world.

If this all sounds like a totally professional operation, you're wrong. Amateurs can play a greater role in this than in any other aspect of astronomy, with the exception of meteor showers. To give just a couple of examples, Seattle airline pilot and amateur astronomer A. Stewart Wilson was the first to photograph a comet in 1961 and telegraphed his report to Harvard Observatory — the clearing house for comets seen by observers in the western hemisphere — 24 hours before six other sightings confirmed his report. Ten years later, in 1971, Nobuhisa Kojima, a 37-year-old junior high school teacher of Okazaki in central Japan, spotted a previously unknown comet in the direction of the constellation Virgo. It was named, as is the custom, after the finder — Comet Kojima.

Comet Kohoutek, admittedly, is named after a professional astronomer. Dr. Luos Kohoutek, born in Czechoslovakia, was busy at the Hamburg Observatory in March of this year trying to trace once more the new asteroids he'd discovered in October of 1971. His photographic plates picked up a faint, fuzzy image that shifted during the sequence. It was soon proved to be a comet.

Amateurs can play a particularly important role in their observations, for as Dr. Gordon Walker, director of UBC's Institute of Astronomy and Space Science, says, comets have an interesting tendency to change shape often. Besides the configuration of their tail, or in some cases, tails, the head of a comet will spurt gases, wobble its outline, dimple its surface in whorls and spirals. Dr. Walker adds that many of these details can best be recorded by sketches; many of the subtleties are lost through over-exposure of film. And they really need a continuous watch.

Incidentally, you don't absolutely need a telescope to see the comet — although the possession of one is an obvious advantage. A good pair of 7 x 50 binoculars should be sufficient for general observations. And as for photography, you should be able to get good results from time exposures using a moder-

ately good 35 mm. camera mounted on a tripod.

Where should you look for Comet Kohoutek? Well, if it is as bright as predicted at the time of writing this, it should be readily visible to the naked eye. And if you want to know where exactly *that* is, you should consult an elementary star map. From the map you'll see that many of the major constellations lie close to the ecliptic, which is an imaginary line drawn around an imaginary "dome" of the sky. The ecliptic is the path followed by the sun as seen from the earth.

It is calculated that Comet Kohoutek will remain close to the ecliptic, for it's hurtling in towards the sun at an angle of only 14 degrees to the equatorial plane of the earth. This means that on December 4 it will be just below Virgo, on December 19 it will cut through the tail of Scorpius, on January 3 it will reappear in Capricornus, by January 18 it will be south of Aquarius, and by February 17 south of Aries. The elevation above the horizon will vary from about 15 degrees in the morning skies of December 4 to 0 degrees on December 19, and will rise to about 52 degrees on February 16 in the evening skies.

All this is predictable. Whether Comet Kohoutek will predict fear-some disasters or the decline of princes (or presidents) is another question. Comets have had that reputation in the past and undoubtedly some people still think that way about them today. Halley's Comet for example has been well documented over the centuries and was believed to have been an omen of: in 11 B.C., the death of Agrippa; in 451, the defeat of Attila the Hun; in 1066 the invasion of England by William the Conqueror; in 1222 (believed to be the same comet) the death of France's King Philip Augustus; in 1456 the Turks overrunning south-east Europe after the fall of Constantinople three years earlier; and — to make a sorry story short — the omen in 1910 of the outbreak of World War I.

Coincidence? Dates stretched a bit? Sure! But superstition was a sufficiently serious factor in the Middle Ages for European churches to be crammed with hysterical crowds seeking refuge during appearances of comets, and even as recently as 1910 there were straight-faced suggestions that

Halley's Comet meant the end of the world. So we could be excused if we're caught wondering — just wondering, mind you — if both George Orwell and Halley's Comet are trying to tell us something about conditions here in the years 1984 to 1986.

And while we're on this digression, there's that Star of Bethlehem puzzle. Comet or conjunction of planets? Probably the latter. Computer run-backs show Jupiter, Saturn and Mars close together in 7 B.C. and 6 B.C. "A conjunction of planets would be very impressive," says Dr. Walker, "especially if the distance separating them was indiscernable to the naked eye."

But let's return to comets. Halley's is of historical importance for scientific reasons, which sounds a bit odd. However, it was named not after its discoverer, like other comets, but after Sir Edmund Halley, the second Astronomer Royal, who predicted the return of the phenomenon in late 1759 or early 1760. Halley died in 1742. The comet appeared on schedule on Christmas Day, 1759, and thus confirmed the Astronomer Royal's calculation of its orbit and supported the gravitational laws of celestial bodies set out in Sir Isaac Newton's *Principia*.

Halley's Comet is popularly considered to be the most frequent, for it reappears about every 76 years. But, like many popular notions, this is false. The honour for frequency goes to Encke's Comet, named after the 18th century German astronomer, which pops up every three and one-third years. It has been recorded 40 times to Halley's 29 or so.

There are two, possibly three, types of comets according to current theories. First, those trapped in the solar system and travelling in elliptical or parabolic orbits inside the orbit of Pluto. Secondly, lumps of material that have "dropped in" the solar system from inter-stellar space, supposedly to fall in an open hyperbolic orbit around the sun and be thrown out again. (But Dr. Walker says there is no evidence of this happening). And thirdly, a suggestion made first by the well-known Dutch astronomer, Jan Oort, and supported by Dr. Fred L. Whipple, head of the Smithsonian Astrophysical Observatory in Cambridge, Mass., who said in

1965 that there may be a spherical outer cloud of comets around the solar system "extending perhaps 100,000 times the earth-sun distance".

It is now speculated that comets do not come into our solar system from deep in outer space to pass around the sun and to be flung out again. It is suggested instead that slight perturbations in the motions of planets, and even the changing effects of closer stars, may trigger pieces of material from this vast spherical belt to fall inward toward the sun and to become comets.

Astronomers have to be content with catching comets as they can. And since some comets, like Comet Kohoutek, are either orbiting deeply into space or may have been trapped from inter-stellar travel into closed solar orbits, they provide useful tools to determine conditions elsewhere.

As one example of this, Dr. John Glaspey, UBC visiting instructor in geophysics and astronomy, says they hope to obtain a detailed spectrogram of the gas cyanogen (C_2N_2) on Comet Kohoutek. "Then it may be possible to separate out species of cyanogen in which carbon 12 is involved and in which carbon 13 is involved."

Carbon 12 and carbon 13 are isotopes of carbon; only slight variations in the element of carbon but extremely important ones as far as the nuclear physics of stars are concerned. The sun, for instance, is considered to be burning primarily on hydrogen-plus-hydrogen nuclear fusion as first suggested by Charles Critchfield at George Washington University in 1938. It's a complicated working in which neutrinos and protons of hydrogen snooker into each other but the end result is the "burn" of hydrogen into helium.

Now, alongside this — and some physicists give it first place — is what is called the carbon cycle in which carbon, nitrogen and oxygen act as catalysts to the hydro-into-helium transformation. But at the end of the cycle the carbon and nitrogen return to their original states. Yet since the carbon switches from carbon 12 to carbon 13 and back again in the process, the $C^{12}C^{13}$ ratio can give a good indication of the nuclear processes at work and the age of a star.

The ratio in the sun can be pretty

well predicted, says Dr. Glaspey. So what if they find the C^{12}/C^{13} on a comet quite different? Does it mean the comet was formed at the genesis of the solar system? Or that it's composed of particles derived from an explosion of another star, from a supernovae that's scattered its material far and wide? Or does it mean that the nucleus of the comet is explainable but has picked up a coating of a different C^{12}/C^{13} from particles in space?

"There are always these arguments", says Dr. Glaspey, and laughs. Just one of the problems yet to be unravelled.

Comets are useful tools, too, in determining certain factors about the sun, particularly the emission of particles and radiation that composes the "solar wind". The solar wind makes the tail of the comet stream backwards during the approach to the sun but forward on the return. The interaction of the radiation of the gases tells something about both.

Recently, however, comets have been considered interesting entities in their own rights. Drs. Walker and Glaspey say infrared detection technology has only just become sufficiently sophisticated for use on such difficult sources. Infra-red analysis will help to determine, in the case of Comet Kohoutek, the temperature and solidity of the nucleus in the head and whether the rock-like material is unified or travelling in an aggregate of lumps.

But of what stones and gases are comets made? The most common analyses list certain radicals (simple molecules composed of two atoms) such as oxygen and hydrogen (hydroxyl), nitrogen and hydrogen, carbon and nitrogen as well as the more complicated carbon dioxide and cyanogen. An article in *Sky and Telescope* of September, 1952, argued that the comet's nucleus contained not the radicals observed in the spectrogram but parent molecules such as ammonia, methane and — believe it or not — plain old water.

It was a good article for on April 5, 1971, Charles Lillie of the University of Colorado, an astrophysicist connected with the NASA space program, was reported as saying the Orbiting Astronomical Observatory had "turned up evidence that comets are made mostly of water...This evidence is really a

fundamental breakthrough in understanding cometary physics."

Significantly, Dr. Whipple also has referred to comets as "dirty snowballs". The title is no doubt reasonably accurate and only a degree less prosaic than "hairy star" — *stella cometa* of Latin, from which our name "comet" has come.

Today the orbits of about 500 comets are known. Unlike the planets, which all have orbits close to the plane of the ecliptic, comets zoom every which-way.

So it's reasonable to ask: "What of the likelihood of the earth being struck?" After all, Encke's Comet is estimated to have a head three kilometers in diameter and a tail many hundreds of thousands of kilometers in length. Frank W. Cousins, a British astronomer, in his recent book, *The Solar System*, estimates one collision in 50 million years as a high possibility.

Whether one did, indeed, hit the atmosphere above the Tunguska region of Siberia in 1908 is still hotly debated. V.C. Korobienikov, an expert on shock waves and a member of the Steklov Mathematical Institute in Moscow, is a strong supporter of the comet theory. Certainly *something* caused the two resounding booms and the flattening of the forest for miles around. And no traces of meteorite have been found. A small comet, or a piece of a comet, would disintegrate in the friction of the atmosphere yet impart a formidable shock to the ground.

While the chances of a direct hit are mercifully rare, the possibility of the earth rolling onwards into the dust and gases of comets' tails is a far stronger possibility. We could then expect to see a fine display of "shooting stars" as the particles burn up in our atmosphere.

This is unlikely to happen with Comet Kohoutek. It's too far off and its orbit comes in too high above that of the earth. But fret not; there'll be much more to see.

"In watching Comet Kohoutek," says Dr. Walker, "we must remember the old adage that information is conveyed only by the unexpected. And investigation is furthered only by those people prepared to realize something unexpected has occurred."

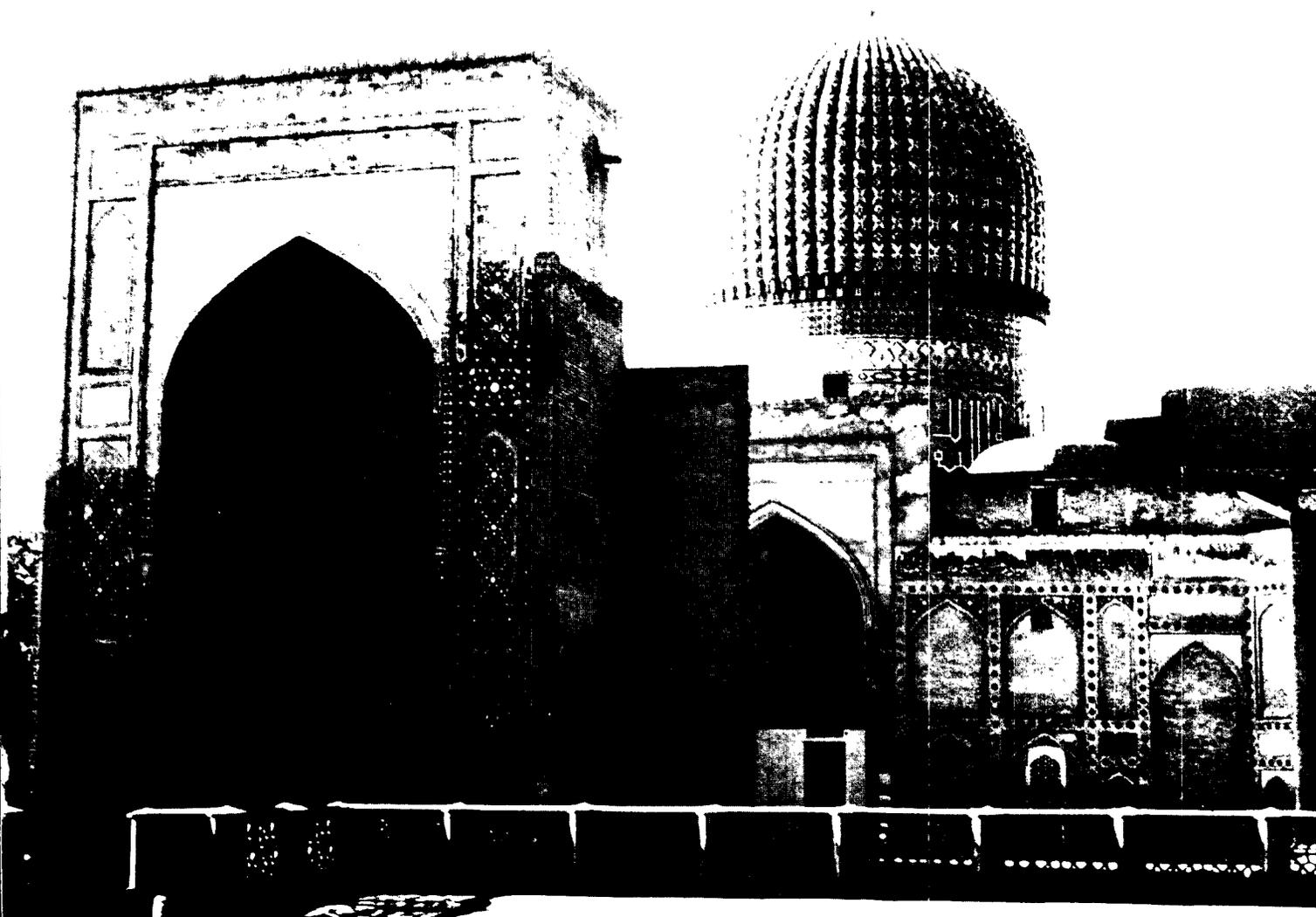
John Braddock is medical and science writer with *The Province*.

On The Golden Road To Samarkand

Hanna Kassis

Armed with the desire to learn through travel, twenty-three of us zigzagged our way to Teheran, Iran (by air via London, Paris and Moscow) to commence our journey along an ancient route that has linked China with the Mediterranean since the second century B.C. But neither the road we took nor our means of travel were ancient. Our aim was to study the architectural edifices of Islam in Iran and Central Asia and examine aspects of the culture that governs a world whose shores are washed by the Atlantic in the west and the Sea of China in the east. In my memory lingered the lines of Flecker which I learnt in childhood:

*"We travel not for trafficking alone:
By hotter winds our fiery hearts are fanned:
For lust of knowing what should not be
known,
We take the Golden Road to Samarkand."*



Who has read the accounts of the past and has not yearned to travel into and re-live the past? Hosts of glorious figures have been there before us. There was Darius the Great, King of Kings, King of the Medes and the Persians, building a network of roads that linked the centres of his empire from the shores of the Mediterranean to India. There were Xenophon's Greek mercenaries, winding their way secretly back to their homeland after an unfortunate career in Persia. There was Alexander of Macedon bringing Greek civilization to a world that already had its own. Inebriated by his swift successes (and the datewine of Mesopotamia) he arrived in Sogdiana (Afghanistan) and married Roxane, the baron's daughter. There was the elusive courtesan Thaïs, who in her thirst for vengeance induced the drunken Macedonian to set Persepolis ablaze (a story much doubted by historians). There was Valerian, that miserable Roman Emperor, taken captive for life by the king of Persia — a country of the east with which Rome could never come to terms until both were thoroughly exhausted. There were the horsemen of Arabia who in the seventh century swept over Persia and Byzantium to spread the word of God and to acquire from their conquered subjects their wisdom and their knowledge. There were many travellers and men of learning: Marco Polo of Venice, Clavijo of Spain, Ibn Batuta of Morocco. There were the Chinese travellers and Indian pilgrims. There was Tamerlane, that mighty hero of one's romantic youth. And there was his glorious capital Samarkand. Five thousand years of rich history, like a full laden pomegranate tree waiting to be picked:

*Away, for we are ready to a man!
Our camels sniff the evening and are glad.
Lead on, O master of the caravan,
Lead on the Merchant-princes of Bagdad.*

We had twenty-eight days at our disposal and twelve cities to examine in depth. The pace and content were not intended for the casual tourist. Participants attended eight lectures (which, like the tour itself, were under the auspices of UBC's

Photograph, p.23: One of the highlights of the tour was a visit to Gur Amir, the mausoleum of Tamerlane in Samarkand.



Centre for Continuing Education). They were responsible for a considerable amount of reading on the history, literature, religion, art and architecture of the region we were to visit. All came fully prepared. No cultural shock was going to be a hindrance. One participant, a UBC librarian, came prepared to observe the birds of the region. Group travel is not everyone's "cup of tea"; but study travel in a group with a definite and specific purpose is something different. It was indeed, for me, a pleasure.

We had three countries to visit: Iran, Afghanistan and the Soviet Socialist Republic of Uzbekistan.

Young Iranian students in the Wakil Mosque in Shiraz involved in the national pastime – reading.

Our first station on the "caravan route" was Teheran, the capital of Iran. Iran, which is nearly the size of B.C. and Alberta together, has six times the population of the two provinces. The common addiction of the Iranians is literature. Whereas in some countries the best known historical figures are political and military persons, in Iran even the poorest and the non-literate know and memorize the poetry of Sa'adi (d. 1291) and Hafiz (d. 1389). The Iranian, like other people of the

region, is very proud of his past, without chavinism. He is an avid learner. He seemed to us, no matter what city we visited, to spend his free time reading — in public gardens, in the mosque, on the street.

The younger people's desire to learn a foreign language would make the supporters of bilingualism take a fresh look at our approach. "Do you speak English?" asked a young man in the Khalili Garden in Shiraz. Discovering that we all did, he asked for assistance. "What exactly is a prepositional verb?" It is advisable to review your English grammar before you visit the Middle East. If it is your language, they expect you to know it.

But in spite of Iran's glorious past she has a considerable leap to make to achieve a fulfillment of her aspirations. Poverty and traditionalism still prevail. The line dividing the rich from the poor, in spite of attempts at change, is still clearly visible. And in spite of the fact that Islam has crystalized the Iranian culture, there is a tendency toward secularism that, at times, attempts to deny the legacy of the past thirteen centuries. Politically, the Iranians are still searching for the golden mean between east and west. To the visitor from the west the sense of internal political insecurity is felt only at airports — where one is closely searched before boarding the plane. But, on the other hand, there is so much the Iranians give in return: their rich heritage and their warmth.

Each one of its cities has its own treasures to unfold. Teheran, the capital for the past 150 years, is by far the least significant of Iranian cities. One, however, may enjoy a visit to the Golestan Palace (we missed it as it was occupied by the President of Pakistan). The neighbouring village of Rayy (where visitors usually enjoy the sight of rugs being washed and dried in the sun) has a more glorious past. Here, the last Sassanian king took his stand to halt the advance of Islam. Tradition has it that his daughter married Hussain, the son of Ali (cousin and son-in-law of the Prophet Muhammed) who is venerated in Iran. Her shrine stands here and is open only to believers. The demise of Rayy came with the Mongol invasion in 1220. Rayy became a reminder that wherever we were going the savage hordes of Genghis

Khan, the Mongol chief, had preceded us with ravaging destructiveness seven and a half centuries earlier. Swooping down from Central Asia, the Mongols descended on the Muslim world like a curse. The lands they passed through have not recovered since.

Shiraz, the city of roses, welcomed us with the fragrance of roses along the boulevard leading from the airport. Beside the Vakil Mosque, one visits the shrines of the poets Hafiz and Sa'adi. Situated in pleasant gardens, they are visited, especially on Fridays, by many Iranians of various social stations. The visitor places his hand on the marble tomb, reads the *Basmalah*: In the Name of God the Merciful, the Compassionate, Praises be to God the Lord of all being, etc. Then he recites some lines of poetry:

A rose blooms within me, wine is in my hand.

And my beloved embraced —

This day the world's king is my slave.

O how many vows of repentance are undone

By the smile of wine and the tresses of a girl

Like the vows of Hafiz?

A pilgrimage to the shrines of the poets was an excellent point of departure for our visit that evening to Persepolis. It must have been a most elegant city between the sixth and fourth centuries B.C. One climbs the grand staircase leading to the Gate of the Nations. Sir Henry Morton Stanley walked through this gate and left his graffiti: "Stanley, New York Herald, 1870". The staircase leading to the royal reception hall, carved with the images of Medes and Persians, Phoenicians, Cappadocians, Lydians, Bactrians, and others — citizens of a vast empire, the most tolerant in the ancient world. A few miles away the tomb of its founder, Cyrus the Great, still stands. Tombs of the other Persian kings, fire altars, palaces and fortresses are all scattered in the vicinity.

Nearly three hundred miles to the north is Isfahan, sometimes called the "Pearl of Islam" or "Half the World". During the Elizabethan Age, it was a rival to London. The beginning of Muslim rule in A.D. 642 ushered in the beginning of the rise of the city to prominence. In the eleventh century the Seljuk Turks made Isfahan their capital. A beautiful mosque, The Friday Mosque, was built at this time using

burnt brick as the medium of architecture. Visiting this mosque, one sees the validity of Schroeder's statement that the Seljuk architecture "solved the problems that Wren avoided". This mosque still stands, improved upon and added to by later dynasties. In 1388 Tamerlane attacked the city and eventually killed more than 70,000 of its inhabitants. This, rather than architecture, is his legacy in Isfahan. The city began to recover under the Safavid Dynasty. Shah Abbas created a city centre (the Maidan-i-Shah) and surrounded it with fabulous buildings that are still the landmark of Isfahan. There was the Royal Mosque, the "Ladies' Mosque", the Royal Palace (of which only the facade survived) and the grand entrance to the *bazaar*, the roofed market place. The city glittered with magnificent buildings. A delicate structure still standing is the *medreseh* (college) built by the mother of Shah Abbas. Then, between 1720 and 1722, the Afghans descended on Isfahan and destroyed it. Enough architecture survived to tell a story of a golden age.

Meshed, in the northeast corner of Iran, is not a tourist city. Two tombs make it famous: the tomb of Al-Ghazali, one of the greatest minds of the Middle Ages, and that of Imam Riza. Imam Riza was named as successor to the caliph of Islam. His premature death as a result of a sudden illness raised suspicion among his followers that he was poisoned. As a result, he was looked upon as a martyr and his burial place became the most sacred locus in Iran and a centre of pilgrimage. I sought permission for our group to visit the shrine. The authorities extended us a courtesy and allowed us to visit the shrine, which normally is not open to non-Muslims (strictly speaking, only Shi'ite Muslims are permitted). Our women were each wrapped in a *chador* which covered them from head to toe. Pilgrims are alike, it seemed to me, wherever the shrine and whatever the religion. They are so moved by the fervor of their faith to bring their supplications before the Deity. In a manner of speech, the pilgrim stripped himself naked before God. And that was no place for a curious student. I was anxious to leave. We solemnly walked out of the shrine. But the temptation to explode with laughter was great

when coming out of the sacred locus the first glimpse in the secular world to greet my eye was a sign that read in the Arabic script: "Coca Cola"!

Officialdom on the boundary between Iran and Afghanistan is extremely slow but equally courteous. The passport officials wanted to know our professions. How do you explain that an artist is not an artiste? Or how do you explain to the health officer that one may have forgotten to have the health certificate stamped? How do you explain to young people on another "pilgrimage", who speak your language that they have to wait in turn until your twenty-three passports are cleared? All these problems become insignificant once you are in Herat. The hotel — Russian-built — greeted us like an oasis in the desert. A young French lady was

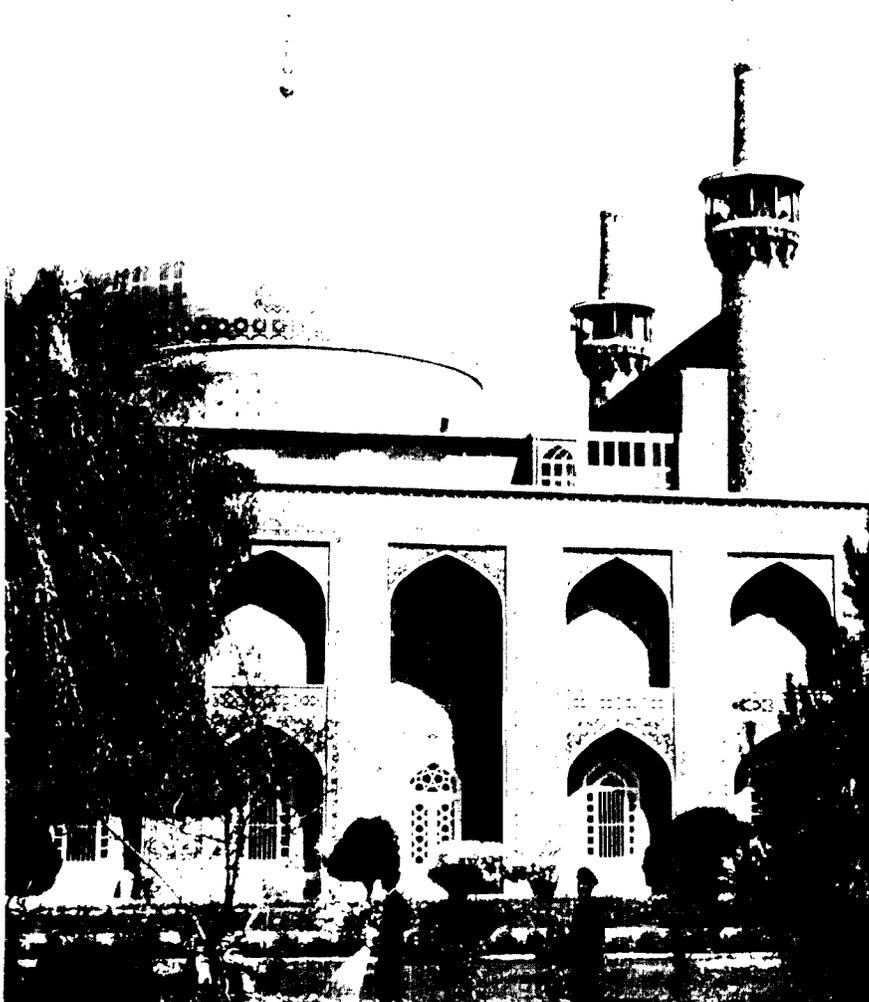
The UBC tour had the good fortune to visit the Shrine of Imam Riza, in the city of Meshed — the holiest place in Iran. Below, is the Gawhar Shad Mosque, part of the shrine.

rudely demanding Coffee-Mate! In Herat? We took our time and were rewarded. The hotel staff entertained us at dinner. They sang and danced and finally brought the chef to give us his specialty: a beautiful dance. Herat was once a most colourful city. It is, like the Afghanistan to which it has belonged since 1856, a mosaic of peoples of different cultural and ethnic backgrounds: Hazara, Baluchis, Pathans, Turcomans, Uzbeks, Tajiks, etc. There are nearly twenty languages being used in Afghanistan. Most of these have not as yet been studied. The main language, Pashtu, is written like Persian, in the Arabic script.

Divided as they may be, the Afghans share one common characteristic: they bear themselves with dignity. They do not bemoan their extreme poverty nor the near total lack (except in Kabul, the capital) of the basic necessities. But neither do they submit fatalistically. The educated among them become revolutionaries, motivated by a desire to improve the conditions in their

hometown. We could sense the revolution in the air. One young man, educated in Britain, convincingly argued that there was no other course for Afghanistan to follow but that of revolution. The past regime was standing still. What marred the scene in Afghanistan was the sight of some westerners (mainly of the younger generation) whose demeanour contrasted sharply with the dignity of the Afghans. They came to seek salvation through hashish (legal to grow but illegal to traffic). Many gave the Afghans an illicit way of life in return. Muhammad, our guide from Afghantour, the official travel bureau, kept asking me, "What do you do to your children to cause them to be like that?" He offered to take me to the prison where several Canadians, I was told, were imprisoned for trafficking and prostitution.

Afghanistan's tumultuous history always takes precedence over its architectural heritage. One is struck by the contrast between the architecture that tells what the country was and the poverty that speaks for what the country is. But the past was glorious. In Herat, the golden age came under the rule of the successors of Tamerlane. From this period comes the Musalla and the *Medreseh* of Gawhar Shad, the wife of Shah Rukh, the son and successor of Tamerlane. She was a "patron" of the arts. Her mausoleum in Herat, like her mosque in Meshed, testify to her taste. In Herat one comes in contact once again with the love for poetry. Two of Afghanistan's most distinguished poets are buried here: Ansari (d. 1088) and Jami (d. 1492). Their tombs are national shrines. But the shrine *par excellence* in Afghanistan has, since the fifteenth century become a centre around which a city was built: Mazari-Sharif (the Noble Shrine). Here, according to incorrect Afghani tradition, the remains of the Caliph Ali were interred (in reality, he was buried at Najaf in Iraq). Tradition suggests that the tomb was miraculously discovered in the twelfth century. The building — a blue mosque — which houses the tomb, was first built during the Timurid period (the age of Tamerlane and his successors). It has since been enlarged and rebuilt, but the plan and design remain Timurid. As the centre of a new city, it contributed to the demise of the



neighbouring city of Balkh.

After the conquests of Alexander, Balkh became the centre of Greco-Bactria. At this time it was protected by a great city wall. But Balkh's history predates Alexander. According to tradition it was the home of Zoroaster, the Persian Prophet of the fifteenth century B.C. Here Alexander married Roxane. Here his general Seleucus married Apama, another Bactrian princess. In the vicinity of Balkh, Alexander exchanged the horses of his cavalry for the swift horses of Central Asia. In later years Balkh was an important centre of the Kushans and Hephthalites. When the Muslims, therefore, conquered it in A.D. 663 they were well acquainted with her long and rich history. She had an enviable location, situated on the silk route to China and the branch trade route to India. The Muslims called her "The Mother of Cities". It took Genghis Khan 100,000 men to bring her to her knees. All her inhabitants were massacred. All her buildings were destroyed. But her memory lived on. By the time of the Timurids the city had sufficiently recovered, only to be partially destroyed again by Tamerlane. His son Shah Rukh embellished her with architectural masterpieces. But her end was at hand. The "discovery" of the tomb of Ali in the vicinity (Mazar-i-Sharif) brought about Balkh's rapid decline. Today, the "Mother of Cities" is a village of about 3,000 inhabitants and a handful of ruins.

Balkh contrasts sharply with Ghazna, 360 miles to the south. The road to Ghazna runs via Kabul through the spectacular Hindu Kush range. The Russians built the road and dug a tunnel (altitude 11,100 ft.) which made it possible to travel from Kabul to the north of the country (the road, in fact, runs to the Soviet Union but is not open to ordinary traffic). From Kabul to Ghazna, then curving to Herat, the road was built by the Americans. From Herat north to the Soviet border, the road is Russian-built. Some Afghans told us that the Russians built their roads to accommodate tanks; the Americans planned them as landing strips and that the whole affair is a British conspiracy! This reflects the attitude the Afghans have toward Britain. The three Anglo-Afghan Wars (indeed, a dark chapter in British



history) are still fresh in the memory of the Afghans.

Ghazna (once an important Buddhist centre) gains fame as the centre from which Muslim attacks on India were launched. Ancient Muslim geographers mention that Ghazna was a resort for wealthy merchants and that its inhabitants enjoyed a life of prosperity and ease. The city, these geographers tell us, had a citadel with an adjoining palace. The main part of the city was surrounded by a wall with four gates. The wealthier members of the community (in the tenth century) lived in the suburbs, where there were also superb markets. Archaeologists excavating in the city discovered that these suburbs were located on the slopes of the hills to the east of the modern town. Beside the palace of Sultan Mahmud (998-1030) which is under excavation, there are two ornate minarets still standing, the only monuments of a once powerful city. In the twelfth century it was sacked by Aladdin Ghur, nicknamed the "World-Incendiary", who was avenging the treacherous murder of his brothers. When the city recovered, it was — as it remains today — a station on the road to India.

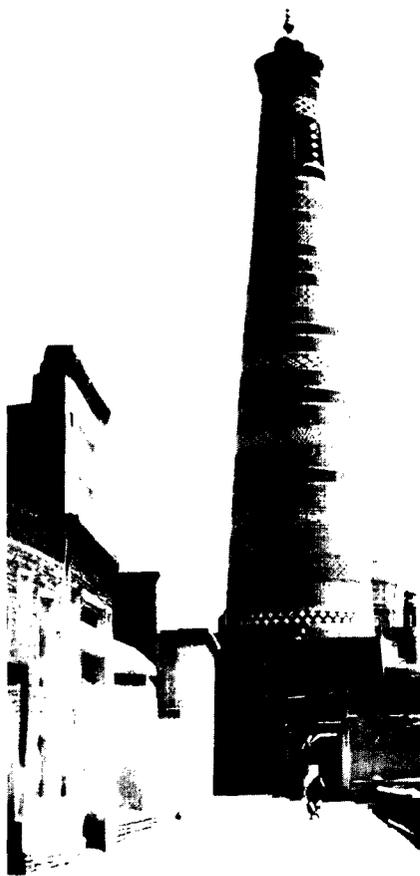
No visit to Afghanistan is complete without the pilgrimage to Bamiyan. This city is first mentioned in the writings of Chinese travellers in the sixth century. It is described as a great centre for Buddhism with ten monasteries and over 1,000 monks. The focal points were two colossal statues of the Buddha (175 and 120 feet high, respectively) carved in the natural rock. Once a thriving centre of Buddhist pilgrimage, Bamiyan today is a spec-



Some of the UBC tour gathered (above) on the mound of what remains of the "city of tears", Bamiyan. It was so called because Genghis Khan had it destroyed as a result of the king's daughter betraying her father. On the road to Bamiyan, (below) the travellers encountered this pleasant, leathery-faced man, a member of the Hazara tribe of Afghanistan.

tacular but unpretentious resort. Located in the heart of the Hindu Kush range, the drive there is an experience in itself. As you drive along the narrow strip that hesitantly rests on the side of the mountain, you would not wish to yield to the oncoming traffic of goats and sheep, nor would you attempt to pass a slow-moving vehicle overloaded with both people and herds. An Afghani driver, however, would not let such a challenging occasion pass.

Uzbekistan is nearly half the size of British Columbia with four times the population. And although it is



separated from Afghanistan by the Amu Darya (Oxus River), it nevertheless is an extension of the region of Afghanistan north of the Hindu Kush.

The early history of Uzbekistan remains shrouded in mystery. It was probably penetrated by the kings of Persia in the sixth century B.C. Alexander of Macedon crossed the Oxus into this region and it is from his era that we have the earliest mention of Samarkand as Maracanda. The second century B.C. saw the Huns here who were supplanted by the Chinese after the disintegration of the empire of the Huns. During the fifth century A.D. the Hephthalites (White Huns) occupied the region and engaged the Sassanian rulers of Iran in fierce fighting. Turkic peoples moved into this entire region during the sixth century A.D. and, when the Muslims extended their authority beyond the Oxus in the eighth century, the people of Uzbekistan adopted Islam as their faith. Of the various Muslim ruling houses that *A lonely Muslim winds his way through scorching heat towards a beautiful minaret in Khiva.*

dominated the area, two have left an indelible mark on the cultural scene: the Samanids with their capital at Bukhara (A.D. 819-1005) and the Timurids with their capital at Samarkand (A.D. 1370-1506).

Since the October Revolution (1917), Islam has followed an interesting course in Uzbekistan. En-nobat, a young, soft-spoken school teacher who showed us the way around Khiva, saw no difficulty in being a Muslim and a Marxist at the same time. The problem of the belief in God (basic to Islam) was, for her, irrelevant. It is how you live, she argued, rather than what you believe that makes you a Muslim. She agreed to take us to an active mosque (a Muslim place of worship) but would not go inside with us. But she may not be representative of the Muslims of Uzbekistan. Contrary to my expectations, I met with young university graduates who were enrolled in the Muslim theological college in Tashkent. The college is not interested in quantity but quality. The students are few but are carefully selected. We could communicate in Classical Arabic and I met with no hesitation

DOES THE NEWS HAVE TO BE BAD TO BE REPORTED?

Some people claim that newspapers tend to feature the sensational, the violent and the controversial... that the only news to get reported is "bad news". There's some justification in the charge for the simple reason that so many of the events which affect people all over the world are, indeed, shocking and violent. Wars, earthquakes, floods, acts of political terrorism: events of this kind have occurred with alarming frequency in recent years — and when they do occur, they rate front-page coverage because they affect so many people so deeply. These are the news stories you tend to remember — but if you analyzed those front-page features over a period of time, you'd find a great deal of news coverage that was rather ordinary in nature. Stories on the new tax structure, on the calling of an election, on the opening of a new National Park. These are just as important, in their own way, as major world events — and they rate serious consideration from this newspaper. But until the world becomes a saner place, we can't ignore the events which cause shock and outrage. Not unless we give up on the basic job of a daily newspaper.

 **The Vancouver Sun**

An Uzbek Muslim, Ali Omarov, publicly worshipping in Bukhara. Below, Muslim women descend the long staircase at the entrance to Shah-i-Zindeh, in Samarkand. To count all the steps and remember the number after touring the shrine is regarded as a test of intelligence.

on their part to be open. Their criticism of the state was minimal. It was the Muslims, it should be remembered, who brought the Revolution to Uzbekistan, first in 1916 (when the Tsarist forces crushed it with extreme cruelty), and then in 1917.

In Bukhara, I met Ali Omarov. He had completed offering his prayers in the open air in front of the Samanid Mausoleum. By law I am permitted to attack his religious beliefs, and by law he is not allowed to proselytize. Yet, since 1970, the Muslims have been publishing a monthly journal (*Muslims in the Soviet East*) in two editions, Uzbek and Arabic. I am not suggesting that religious practices are unimpeded in the U.S.S.R. The picture is however, quite different, it seemed to me, from what we are made to believe on this side.

At last we came to Samarkand. I had been advised to walk around the city on my own at dawn. At the Shah-i-Zindah, the necropolis, as well as at the Registan — a square surrounded by three *medresehs* — I saw pilgrims paying homage to the past. They were peasants from the countryside. I learned that they came daily, especially to the *medresehs*, to touch the bricks and door knobs of the buildings where at one time their Muslim heritage had been taught. It is these people, I was told by the students in Tashkent, who finance the Muslim institutions of the Soviet Union on a voluntary basis. Here, as in other buildings of Samarkand, one could see in brick and tile, the tender lines of a type of decoration that characterized the age of Tamerlane. Each fragment was shaped to fit the place for which it was intended, to create a perfect, coloured design. The domes, dressed in blue glazed tiles, towered over the mosques and tombs. The city must, in fact, have been a spectacular jewel to behold. But Hafiz, the poet of Shiraz, had another priority:

*If that Turk of Shiraz would hold my heart
in her hand,*

I would give Bukhara and Samarkand for



the mole upon her cheek.

Two edifices are outstanding. The first is the observatory of Ulugh Beg, the man who was indeed a philosopher-king. Excavations at the beginning of the century unearthed part of his sextant. His astronomical results were remarkably accurate. He had an error of 1.6 seconds in the length of the astronomical year, and 0'32" in his calculation of the angle of the ecliptic. On the other end of the city is the Gur Emir, the mausoleum of the Timurids. The mausoleum was intended for Tamerlane's grandson who was killed in war. It also houses the remains of Tamerlane's teacher, as well as those of his son Shah Rukh and his grandson Ulugh

Beg. Tamerlane was called "the eternal king" and "world conqueror". He left for posterity his comment on both; he commanded that he should be buried at the feet of his teacher and that on the drum holding the dome over his tomb should be inscribed: "Only God Remains". □

Dr. Hanna Kassis, associate professor of religious studies, is a specialist in Near Eastern Studies. The Golden Road to Samarkand, which Dr. Kassis conducted from May 7 - June 2, was one of several education-travel programs sponsored during the spring and summer by the Centre for Continuing Education.

Alumni Concerts Draw Praise — And Crowds

"Overwhelmed. That's the danger in attending a concert in which not just one, but nine excellent performers are featured. And when I walked away from the University of B.C. music department's first Alumni Concert Thursday evening at the Recital Hall, that's the way I felt."

That's how *The Province's* music critic, Ray Chatelin, began his review of the opening performance, on October 18, of a new fall series of faculty and student concerts co-sponsored by the UBC Alumni Association and the music department. Lloyd Dykk of *The Sun* described the same event this way: "The concert was a variety night of decidedly professional calibre, a consistently enjoyable thing presenting some of music's brightest possessions and performers fully capable of putting them on display."

The first concert featured faculty performers, the second featured two students. And it also drew rave reviews. Lloyd Dykk again: "Each (student) had already shown himself rooted in solid competence with a genuinely musical imagination at his disposal. Polish, expertise and an increasing grasp of musical problems on the part of either musician point to an eventual maturity that should justify all hopes."

The five-concert series has not only drawn the plaudits of critics but a strong audience following as well. The concerts offer both vocal and instrumental pieces, classical and modern. The program has been designed to serve as a showcase of the musical talent being developed on campus.

The final concert in the series will be held at 8 p.m., Thursday, December 6 in UBC's Recital Hall. Admission is free.

Home Ec Alumni Plan Nutrition Seminar

Is the average Canadian overfed and undernourished? A day-long conference being planned by the home economics alumni division for February 16 at Cecil Green Park should provide some answers to that question. "Overfed and Undernourished" is the topic of the conference being planned under the chairmanship of Mrs. **Nadine Johnson**.

The conference will feature talks by top professionals in the fields of health and nutrition, demonstrations and films. Highlights include discussion of child nutrition, food supplements and substitutes, health food

30



Perry Goldsmith

(there will be a health food lunch) and physical fitness (complete with demonstration of physical fitness testing). Home Ec alumni are invited to come out and participate.

Elsewhere on the active alumni divisions scene, one of the youngest and fast-growing divisions, dental hygiene, is charging ahead with its new program, under the chairmanship of Mrs. **Sandy MacIntosh**. A newsletter has been produced and a very successful fall dance — to the music of "Just What The Doctor Ordered" — was held at Cecil Green Park. The commerce and nursing divisions are also planning events.

New Flights For Alumni Travel Program

Visions of palm trees, rolling surf and sun are luring a large number of alumni to Hawaii this year as part of the new alumni travel program.

The program features vacation packages at bargain rates for alumni and their families, with frequent departures, 747 jet flights by regular airlines and good hotels. There are reductions for children and a U-Drive car and breakfast are included in the Maui package.

Two additional flights to Hawaii have been added for the Easter vacation period, April 12 to 21 and April 12 to 28. Perfect timing for teachers and students. For additional information call or write the alumni office 6251 N.W. Marine Dr. Vancouver V6T 1A6 (228-3313).

Hugh Sandilands, music 3, performs on classical guitar at one of the recent, popular Alumni Concerts.

Writing Contest Closes January 31

Fancy yourself a budding Shakespeare? If so, take pen in hand and enter the Chronicle Creative Writing Competition.

Cash prizes will be awarded to three students submitting the best pieces of writing. Their submissions will be published in the *Chronicle*.

The competition is restricted to full-time registered students, who may submit any piece of previously unpublished creative writing to a maximum length of 3,500 words. More than one item (poetry, for example) may be combined in a single entry providing it does not exceed the maximum length. A committee of local writers and critics will judge the submissions.

The cash prizes will be in the following amounts: first, \$175; second, \$125; and third, \$75. The money for the prizes has been contributed by the UBC Alumni Fund.

The deadline for entries, which must be typewritten, is January 31, 1974. The announcement of winners is expected to take place in March, with publication of the winning entries in subsequent *Chronicles*. For further information contact: Creative Writing Competition, 6251 N.W. Marine Dr., Vancouver V6T 1A6, (228-3313).

In a classic picture of squash, Rod Heidenreich (left) and Harry Steck (right) struggle for control of the court in the finale of the Chronicle squash tournament. Heidenreich emerged the victor. A motley bunch of Chronicle squashers (below) enjoy a post-tournament beaker of the bubbly.



Social, Sports Events Mark Reunion Days '73

What is Reunion Days? It's when a bunch of alumni get together to swap memories of the old days, have a few cheery glasses and a fine dinner and maybe play a little golf or a little squash. That, in a nutshell, was Reunion Days '73 and that's the way the graduates liked it.

The Reunion Days program, under the chairmanship of **John Parks**, was a big success, involving more than 600 people. It all began with some of the real UBC pioneers, the class of 1923, getting together for three event-filled days in early September. The main Reunion festivities were held at UBC on October 20 and they involved the classes of 1933, '38, '43, '48, '53 commerce, law, engineering and architecture, '58 commerce, law and engineering, and '63 commerce, engineering, nursing and law. The physical education types from the years 1960-65 held a joint reunion on the same day.

On the athletic side, the annual women's alumni golf tournament was held at the McCleary Golf Course on October 5 and the men's tournament on October 12. In spite of

John Mahler



CANADA LIFE

When you graduate, you may become... a doctor, a manager, a secretary, a wife, a husband, ...you hope.

"It's a funny thing, you work all your life toward a certain goal and then somebody moves the posts on you."
Herb Caen.



Guest speaker Dr. Gordon Shrum (right) talks with alumnus Oscar Anderson at San Francisco branch meeting, while Stuart Dickson (left) and alumni branches chairman Peter Uitdenbosch (right) enjoy a hearty joke.



At the Los Angeles branch meeting (below, left to right) Owen and Grace Govier renew acquaintance with Betty-Jean Prosse and Larry Fournier.

At recent alumni awards and scholarships winners reception, alumni president George Morfitt (centre) chats with N.A.M. MacKenzie scholarship winner Bryce Bartholomew (right) and (left) Tommy Tagami, winner of John Owen Memorial Athletic Award. (bottom)



the unfavourable weather, a good time was had by all participating.

The Second Annual Chronicle Squash Tournament and Bunfeed was also held in conjunction with Reunion Days on October 13. A fun-loving, motley group of 32 squashers were attracted to the all-day tournament in the UBC Thunderbird Sports Centre, which was climaxed by an excellent bunfeed.

When the last ball was bashed, the winner of The Squashed Cup, emblematic of Chronicle squash superiority was an Australian student, **Rod Heidenreich**. In a hard-fought finale, he beat out political science professor **Harry Steck**, who received The Up-Runner Award. Other award winners were: The Cliff-Hanger Award, **M. Chaplin**; The Flailer Award, **R. Argue**; Order of the Pink Elephant, **R. McDiarmid**; Male Chauvinist Pig Award, **A. Ryder**; and The Golden Racquet, **R. Lougheed**.

Stimulating Speakers Visit Alumni Branches

Good food and good company — what more can you ask for? Nothing. Well, that was the situation around the alumni branches scene this fall where a variety of functions had the best of both.

First, on November 2 it was Seattle's Annual UBC Alumni Potluck Dinner at the home of **Bet and Stu Turner** on Mercer Island. It was a sumptuous repast attended by 40 alumni and highlighted by a very interesting guest, **Edward C. Shelly**, Canadian Consul and Trade Commissioner in Seattle.

On the evening of Friday, November 9 over 100 alumni from the San Francisco area partook of a gourmet dinner at Sabella's Restaurant on Fisherman's Wharf, while the following evening a band of 60 Los Angeles area alumni enjoyed some fine fare aboard the S.S. Princess Louise. The good company at both functions was **Dr. Gordon Shrum**, retired UBC dean of graduate studies, chancellor emeritus of SFU and former chairman of B.C. Hydro. Branches chairman **Peter Uitdenbosch**, gave a brief report on UBC developments. Dr. Shrum's talk as always, was an entertaining one.

An equally entertaining speaker was the special guest at two eastern alumni branch meetings later that month. The Honourable **Alex Macdonald**, Attorney-General of British Columbia, spoke to a good crowd of alumni in Ottawa on November 16 and to a equally fine gathering of alumni in Montreal on November 17. The title of his talk was "Lotus Land is Waking Up." UBC Alumni Association President **George Morfitt**, gave a short report on developments at UBC, notably the work of the UBC Presidential Search Committee (of which he is a member), which is seeking to find a replacement for President **Walter Gage** who retires in 1975. Watch for fuller report later on these eastern branch functions.

Ian McNairn Memorial Fund

A fund has been established in memory of Ian McNairn, of the department of fine arts at the University of B.C., who died in

a boating accident on 20th August, 1973.

In view of his interest in the university library, the fund will be used to buy specialized books in the areas of medieval art history with which he was particularly concerned.

Anyone who would like to contribute to this fund is asked to send a donation, endorsed "Ian McNairn Memorial Fund", either to the department of fine arts or to the university librarian, or directly to the department of finance, University of B.C., Vancouver 8, B.C. Official receipts will be mailed by the department of finance.

Xmas Comes Early To Young Alumni Club

The ever-popular Young Alumni Club will hold its Christmas party on Friday, December 14 from 4 p.m. to 1 p.m. in Cecil Green Park. There will be live music, plenty of Yuletide cheer and a special guest: Mr. S. Claus. Mr. Claus, a well-known eccentric, will make his appearance via the chimney about 9 p.m.

Otherwise, the YAC continue their merry round of weekly events at Cecil Green Park: Thursdays from 8 p.m. - 12:30 p.m. and Fridays, 4 p.m. - 1 a.m. One of the largest clubs on campus, the Young Alumni Club is open to graduating students and graduates for a modest \$4 fee. For information call: 228-3313. □

Branches Anyone?

Interested in becoming involved in alumni branch activities in your area? Here are your local branch representatives:

BRITISH COLUMBIA

Campbell River: Jim Boulding. **Castlegar:** Bruce Fraser (365-7292). **Courtenay:** William Dale (338-5159). **Dawson Creek:** Roger Pryke (782-5407). **Duncan:** David Williams (746-7121). **Kamloops:** Bud Aubrey (372-8845). **Kelowna:** Larry Taylor (762-5445). **Nanaimo:** Gordon B. Squire (753-1211). **Nelson:** Judge Leo Gansner (352-3742). **Penticton:** Dick Brooke (492-6100). **Port Alberni:** George Plant (723-2161). **Prince George:** Neil McPherson (563-0161). **Quesnel:** David Woolliams (922-5814). **Victoria:** Kirk Davis (656-3719). **Williams Lake:** Anne Stevenson (392-4365).

ALBERTA

Calgary: Frank Garnett (262-7906). **Edmonton:** John Haar (425-8810), Gary Caster (465-1342).

EASTERN CANADA

Halifax: Carol MacLean (423-2444). **Montreal:** Hamlyn Hobden (866-2055). **Ottawa:** Gerald Meyerman (232-1721). **Toronto:** Jack Rode (364-7204). **Winnipeg:** Harold Wright (452-3644). **Newfoundland:** Barbara Draskoy (726-2576).

UNITED STATES

Los Angeles: Don Garner (342-2967). **New Mexico:** Martin Goodwin (763-3493). **New York:** Rosemary Brough (688-2656). **San Francisco:** Norm Gillies (474-7310). **Seattle:** Gerald Marra (641-2714).

FOREIGN

Bermuda: John Keeffe (20444). **England:** Alice Hemming (35 Elsworthy Rd., London NW3). **Scotland:** Jean Dagg (32 Bentfield Dr., Prestwick). **Singapore:** Kwong-Hiong Sim, 51 Wayang St., Kuching, Sarawak, Malaysia (East).

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SPOTLIGHT

20s

The permanent president of Arts'20, **Alfred H.J. Swenisky**, BA'20, (L.L.B. Osgoode Hall), has retired as senior county court judge in Vancouver after serving 18 years as a member of the bench. His successor as senior judge is **William Schultz**, BCom'33, BA'34, who was appointed to the bench in 1958 in Prince Rupert and moved to Vancouver in 1962...**William Blankenbach**, BA'28, BASc'29, was cited by the Sugar Industry Technologists at their annual meeting for "his outstanding professional achievements in the industry." He is presently a consulting engineer but before his retirement in 1970, was for many years general chemist of B.C. Sugar Refining...**James Beattle MacLean**, BA'28, (MA, PhD, Washington), retired this summer, ending a long association with the University of Victoria. For the past several years he served as professor and head of Germanic languages and literature and as director of the university's summer school. He was also responsible for the creation of a counselling office at UVic, a field he first became involved with during the Second World War in the RCAF...A long-time member of B.C.'s forest industry, **John M. Billings**, BA'29, retired in October. He had been president of Forest Industrial Relations since 1951 and a staff member since 1944. His successor is **Donald A. Lanskaill**, BA'50, LLB'50 president of the Pulp and Paper Industrial Relations Bureau, who will direct the activities of both agencies.

30s

The general meeting of the Commonwealth Forestry Association in England elected **Charles D. Schultz**, BASc'31, as a member of its governing council. The association, which has members from all over the Commonwealth, is concerned with all aspects of forest use and ecology...Next year **Jack M. Streight**, BA'31, (L.L.B. Osgoode Hall), takes over as North America's Number One Shriner — the Imperial Potentate. He will be the third Canadian named to the post ... Public service has been a major part of **Cecilia Long's**, BA'32, life. She's been on all kinds of committees, served as chairman and board member of Women's College Hospital and chairman of the Toronto Zoological Society in its busiest years — planning the soon-to-open zoo. For these efforts and many more, the Canadian Public Relations Society awarded her its shield of public service for distinguished and dedicated service to the public welfare. Miss Long is public relations director for the Canadian Arthritis and Rheumatism Society ... **David H. (Pi) Campbell**, BA'33,



V.L.A.D.

Ray Bey

Vancouver's Skid Road is the end of the road in the lives of many people, but for some it is their whole life. There is a group of kids, in their early teens, who find life "on the street" highly stimulating. At any moment someone could get busted, or stabbed or robbed. Many of the street kids come from within a mile of the waterfront, born into those cheap, debilitating hotels. Add to these the growing number of runaways and drifters attracted by the easily available drugs and an accepting atmosphere and you have a group numbering in the hundreds.

These kids needed help — the traditional agencies were not heavily involved — and Outreach was formed and eventually found funding, first from the city and later from an LIP grant. Ray Bey, MSW'73, a social worker with the Catholic Family and Children's Service was seconded to work with the new group along with workers from other agencies. "We tried to provide a real relationship for the kids. Their relationships tend to be very unstable and temporary. Their only commitment is to their own survival."

Ray, as a detached worker, spent a lot of time just talking. "You learn of the experiences that make these kids sometimes destructive, sometimes skilful at hustling and panhandling, sometimes unable to relate positively to others, sometimes suspicious and mistrusting, generally angry but always unique and interesting."

Outreach organized drop-in programs and impromptu activities for the kids. "We tried to give them some horizon-expanding experiences. Sometimes we'd go fishing. We had \$25 a month for expenses so we were able to buy some bait and rent a boat. Oddly enough, living so close to the water some of the kids had never been in boats." They took trips to the North Shore mountains and the country. The kids liked it, "but soon became uncomfortable because it was foreign soil. They wanted to go back to the comforts of the streets." Gradually this feeling of insecurity in new places began to

recede. Ray's first contact with social work came as a result of an undergraduate social work club and a paper on juvenile delinquency he did for a third-year sociology course at the University of Calgary. Calgary Children's Aid offered him a job with time off to go to university and he took it. As a result, his final undergraduate year took five years to complete. He worked as a probation officer for two years before moving to Vancouver and the CFCS.

He came to UBC in 1971. "I didn't relish the idea of going back (to university) but it was a necessity if I was to remain a social worker. I felt locked in with a BA. Positions would come up I felt qualified for but I wasn't considered because I didn't have an MSW." He feels there's a lot of good workers who don't have BAs or MSWs who would really benefit from a part-time study degree program.

The first year at UBC was a hard adjustment after eight years away from university. "I tried to learn everything, memorizing just like high school. I didn't do that well. The second year I learned to recognize that each prof had his own areas of interest — and that's where the marks were. I played the role of interested student and did better as a consequence." He would like to see a pass/fail system of marking in social work. "There's been enough research to indicate that good marks are not particularly indicative of success in the field."

Changes in the whole system of social welfare in B.C. are being made by the provincial government. Bey welcomes the integration of agencies and resources as essential to being effective in the community. "Now you have three or four or five agencies dealing with one family. Workers in some homes are meeting each other at the door, the families stay the same and the problems remain much the same." But he also sees a place for the alternative, volunteer agency — so people still have a choice.

Does Ray Bey like being a social worker? "I could never have designed a better job for myself. I love it."

BE'd 58, retired in August from a long career in B.C. education — ranging from the classic one-room schoolhouse to district superintendent. He was a member of the 1931 Canadian champion Thunderbirds basketball team.

John E. Armstrong, BAsc'34, MAsc'35, (PhD. Toronto), of the Geological Survey of Canada, received a special merit award from the Public Service of Canada for his work as secretary — general of the 24th International Geological Congress held in August 1972 in Montreal. The congress was attended by 4,000 delegates from 110 nations ... UBC's chancellor, **Nathan Nemetz**, BA'34, is now chief justice of the supreme court of British Columbia, replacing the retired chief justice J.O. Wilson. Mr. Nemetz, was previously a justice of the appeal court of B.C. ... **Paul B. Paine**, BA'38, is president and chief executive officer of Montreal Trust. He was a lawyer in Vancouver until 1967 when he joined the Power Corp. of Canada as vice-president.



James MacLean

Railways vice-president of cybernetics — which means data processing and related systems and communications planning.



William Davis

and **Dennis McIntosh**, BA'67) that is the visible side of CTV's Canada A.M. Her typical day starts at 5:30 am — but she says that it's a slower pace than the time she was "holding down five freelancing jobs at once."

Lots of beautiful music comes from Vancouver Island during the summer months. Its source is the Courtenay Youth Music Camp, now in its seventh successful year. For the past four years its director has been **Robert Creech**, BA'56, who has played with the Toronto and CBS Symphonies and is currently teaching at UBC. The camp has grown from a two week session with 51 students to a five week camp with 500 students and 52 faculty. It offers an intensive program of music classes spiced with an assortment of summer activities and class performances ... Alumni association third vice-president **James L. Denholme**, BAsc'56, has been elected a fellow of the General Accountants Association of Canada ... **Douglas J. Henderson**, BA'56, (PhD. Utah), has been honored for his outstanding research at the IBM research laboratory in San Jose where he is a staff member. Recently he's been appointed associate editor of the *Journal of Chemical Physics*.

D. Lorne Ball, BSc'59, (PhD. Alberta), is dean of studies at Selkirk College ... Whole communities operating on hydrogen energy — sound impossible? A group of U.S. scientists working with NASA don't think so. One of the group was **Kenneth Cox**, MAsc'59, (PhD. Montana State), professor of chemical and nuclear engineering at the University of New Mexico. The team concluded that by the year 2000, 25 to 30 percent of U.S. energy needs could be supplied by hydrogen. Hydrogen is already being transported by pipeline, it is storeable, compressible and when burned its main product is water — "an ecological plus." ... A request for information — from **David Higgs**, BA'59, (PhD. London). He is working on a history of the Portuguese community in Canada and would be delighted to receive any information or correspondence on the subject. He can be reached at the University of Toronto where he is assistant professor of history. ... Two appointments at the University of Saskatchewan/Regina. **Wilbert Toombs**, (BED. BA. Sask.), MED'59, (PhD. Alberta), is now dean of education and **Donald Stewart**, BAsc'59, (PhD. Purdue) associate professor of civil engineering heads the university's new Canadian Plains Area Centre ... **David Vickers**, LLB'59, a former president of the Vancouver Bar Association

40s

As Boeing goes, so goes Seattle — and between 1969 and '71 things were bad for both. Boeing started to look for new customers and products and one of the people doing the looking was **Richard A. Montgomery**, BA'40, division manager of the army systems division. Dr. Montgomery and his engineers are looking for ways to modernize the army in transportation, weapons and equipment ... **Ormond W. Dier**, BA'41, who has been our man in Columbia, Ecuador and Vietnam, is the new Canadian High Commissioner to Guyana. He has also served in Mexico, Finland, Denmark and Venezuela. ... A note to all those who might be wondering who was Cyril J. White, BA'45, BCom'45 — you're quite right there isn't anyone of that description. But there is **Cyril J. Bennett**, BA'45, BCom'45, an instructor in pulp and paper making at the New Zealand Technical Correspondence Institute, which is part of the New Zealand education system.

Another presidential move on the university scene — this time at Calgary where **Alfred W.R. Carrothers**, BA'47, LLB'48, (LLM, Harvard), will leave in June '74 to be president of the Institute for Research in Public Policy in Montreal. Before moving to Calgary in 1969 he was dean of law at Western Ontario ... **James A. Muford**, BA'47, has a brand new masters degree from the University of Northern Colorado ... **Jack B. Brown**, BCom'48, is executive vice-president of health care operations for the Sisters of Providence on the west coast ... **Alistair Crerar**, BA'48, MA'51, is director of B.C.'s new Secretariat for Environment and Land Use. The new group will be focussing on broad areas of resource management and land use allocations. For the past ten years, Crerar has been in eastern Canada as director of long-range planning for Toronto and the Atlantic Development Board and its DREF counterpart, Atlantic Regional Planning ... **Terence O'Grady**, LLB'49, solicitor and counsel for Victoria for the past 17 years has joined the Insurance Corp. of B.C. as secretary and general counsel ... **Charles F. Armstrong**, BCom'49, is now Canadian National

50s

William E.P. Davis, BSA'50, MSA'53, has retired after 23 years on the staff of the Agriculture Canada research station at Agassiz. He doesn't seem to be taking retirement too seriously though as he's back in Tanzania — where he previously spent two years with CIDA — for another year in charge of a wheat breeding program ... Watch for the mid-December opening of the General Electric Theatre on television. The scheduled feature is "I Thought I Heard The Owl Call My Name" — a play with lots of B.C. connections. The Christmas eve sequence was filmed in Christ Church Cathedral (recently saved from the wreckers' hammer) and is produced by **Daryl Duke**, BA'50 with a story based on events in the life of **Eric Powell**, BA'56, MSW'71. As a young Anglican priest, Powell was sent to work with the Nootka Indians at Kingcome Inlet 250 miles up the coast from Vancouver, where he finds he has as much to learn from the Indians as he has to teach them. A note of pathos — in the film Powell has an incurable disease. The real Eric Powell is very much alive and appears as part of the church choir, singing along with Tom Courtney as the film's, Eric and Dean Jagger as the Bishop.

Donald E. Waldern, BSA'51, MSA'54, (PhD. Wash. State), is the new director of the agriculture research station at Kamloops. Previously he was at the Agassiz station in charge of cattle nutrition research ... **John Braithwaite**, BA'53, BSW'55, MSW'56, is president-elect of the American Correctional Association. He is deputy commissioner of the federal penitentiary service and is believed to be the first Canadian to head the association ... There really is a Macdonald's farm — but actually it is a college and part of McGill University. **Sherman P. Touchburn**, BSA'54, MSA'56, (PhD. Ohio State), has been appointed professor and chairman of the department of animal science at Macdonald College ... She really likes her new job, says **Helen Hutchinson**, (Mrs. David Harrison), BA'60 (Class of '55), because she has the opportunity "to pick the brains of interesting people." She's joined the UBC group (by that we mean **Percy Saltzman**, BA'34

The Travelers Appointment



Gordon W. Coghlin

The appointment of Gordon W. Coghlin as Director of International Operations in the life, health and financial services department at The Travelers Insurance Companies in Hartford, Conn., U.S.A. has been announced by Morrison H. Beach, president.

Coghlin joined the companies in 1953 at Vancouver, B.C. and two years later was named assistant manager. He served two years at San Francisco, Calif. returning to Vancouver in 1960 as manager. In 1961 he was named manager at Toronto, and since 1968 he has served as president, managing director and a member of the board of directors of Caribbean Atlantic Life Insurance Co., Ltd. a subsidiary of The Travelers Corporation.

A native of Trail, B.C., he is a holder of a combined arts and law degree from the University of British Columbia. Coghlin was admitted as a barrister and solicitor to the Supreme Court of British Columbia in 1952. He is a graduate of the LIAMA School of Agency Management, and during World War II served in the Royal Canadian Air Force.



Elaine McAndrew

will be in Victoria for the next two years as deputy minister in the attorney-general's department.

60s

Sun dogs, halos and green flashes are just part of the things to see in the collection of Alistair Fraser's, BSc'62 (PhD, London) photographs of meteorological phenomena. The exhibit, sponsored by the Smithsonian Institute is touring museums and planetariums in Canada and the U.S. — including the Royal Ontario and the Calgary Centennial Museums. Dr. Fraser is associate professor of meteorology at the University of Pennsylvania. ... Elaine McAndrew, BHE'62, MBA'73, is one of a growing number of women who are coming to university — some for the first time, some to finish degrees interrupted by children and other circumstances and others for graduate work like Elaine. She's just undertaken the job of helping to raise a million dollars for the commerce and engineering building project.

Rod Logan, BA'65, MA'67, (PhD, McMaster), is now associate professor of geography at the State University of New York, Plattsburg — except that for the coming year he is visiting professor at McGill — which sounds confusing but isn't ... a China-Canada cultural exchange is sending at least three UBC grads to China. Patricia Horrobin, BA'70, Jane Nishi, BA'65 and Neil G. Burton, BA'67 are part of a group of 300 foreign students. Both Pat and Neil have visited China previously but all three will be spending a year in intensive language training before moving to study at other institutions. Henry Suderman, BAsc'65, MA Sc'69 has joined the staff of the Canadian Imperial Bank of Commerce in Dallas, Tex., as a special representative.

Peter Farr, MAsc'66, was a visitor to the alumni office in Cecil Green Park this fall on a visit to Vancouver from his home at Wembley Downs, West Australia.

Allen R. Andrews, BA'63, MA'68, is no longer teaching at St. Francis Xavier University but is studying law at York University's Osgoode Hall ... William J. Dube, MD'63, assistant professor of medicine of the University of Manitoba was recently elected to the executive of the alumni association of the Lahey Clinic Foundation in Boston.

Doreen Braverman, BEd'64, new president of the B.C. Liberals is keen on chang-



James Kerr

ing the party's image — "We talk to ourselves too much," she says. She plans to set up a 100 member council representing the whole province — so the party can get a first-hand understanding of local issues ... Hamilton C. Hudson, BA'64, (MSW,PhD, Minnesota-Twin Cities) is associate professor of social work at the University of Minnesota-Duluth...It's getting to be something of a family tradition — George and Elizabeth Jakeway, BSc'64, MD'70, (Scholefield, BSR'67), are in Bolivia for a two-year posting as medical missionaries with the Canadian Baptist Mission. They will be working with the Quechua Indians in the Chapare River Valley. Elizabeth's aunt Sheila Buchanan, BA'37, BSA'46, for many years clerk to the UBC senate and board of governors, has been serving with the Baptist Mission in Bolivia for almost ten years ... Robert B. Mackay, BCom'64, has left Scott Paper where he was manager of consumer services and gone back to school. He and his wife, Gail (Carlson, BA'63) are in Edmonton where he is taking law at the University of Alberta.

The Factory Theater Lab of Toronto opened a new season in a Shepherd's Bush pub — in west London — sponsored by External Affairs. The company headed by Kenneth Gass, BA'67, won a favorable reception with its first production of "Esker Mike and His Wife Agiluk" by Vancouver playwright, Herschel Hardin. The Eskimo wife, Agiluk, was played by Joy Coghlin, BA'47 (Mrs. John Thorne) ... William M. Ross, BEd'67, who was assistant professor at Kent State University is now on the faculty of Cook College, Rutgers University ... Brenda Joyce Sneed, BMus'67, has finished her course at the Julliard School of Music and returned to Vancouver this fall to do some CBC broadcasts and to give a concert at the Vancouver Playhouse. Her future plans include some concert work in the States. ... Every year the UBC commerce & business administration faculty puts on a multitude of continuing education programs aimed at the business executive. This year the whole series became the responsibility of Peter Watts, BCom'67, LLB'68, MBA'71.

Eric Green, BA'68, wrote a play while in England on a doctoral fellowship and this winter it comes to life as "The Assassination of Christopher Marlowe" in Toronto. A former journalist and contributor to the *Chronicle*, Eric is currently executive assistant to the B.C. minister of industrial development.

trade & commerce ... The Anglo-French Concorde — is making itself useful to the scientific world by running research flights and a Canadian experiment was included on the early fall flights. A team of University of Toronto physicists including **James Kerr**, BSc'68, (MSc, PhD, Toronto), took turns flying with an instrument to measure the nitrogen oxide in the upper atmosphere. There has been concern that the nitrogen oxide produced by the SST's would damage the ozone layer which protects the world from excessive ultraviolet radiation. The head of the group was asked why men have to fly with the measuring devices — "it has to point at the sun for part of the measurements — and the cheapest and most reliable instrument for pointing at the sun is man." Dr. Kerr is a research scientist with the Atmospheric Environment Service in Toronto.

The do-it-yourself lawyering kit — a perhaps unorthodox but very successful project that grew out of a UBC idea to provide inexpensive texts for law students. The series, which began with the B.C. Divorce Guide (now in its third printing) is known as the Case Law Studies Series — and its widely used across Canada. The publisher of the books is International Self Counsel Press, president **John D. James**, LLB'70 — who is quick to point out that there are still many

times when a real live lawyer is what you need. They have published other provincial editions of the divorce law, and books on labour law and civil rights among others — all written by experienced lawyers who unjumble the legalese English.

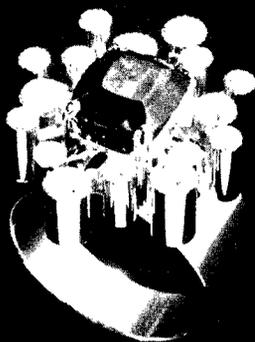
70s

Nader's Raiders with an English accent? **Robert S. Spence**, BA'71, is organizing a team of investigators for the British Consumers' Association and they'll be looking into all aspects of the "European travel biz" — including the ins and outs of air charters." He has been living in England for two years — completing a doctorate on industrial violence in Britain and working as a freelance journalist...The lure of faraway places being too much, **Alex Volkoff**, BA'71 has left Ottawa for newspaper work in Tehran, Iran. Her sister, **Olga** (Mrs. Peter Richardson), BSc'71, (MBA, West. Ontario) is teaching at Western Ontario...After she graduated from UBC **Leueen Willoughby**, BA'71, started auditioning for theatre schools — and she was one of the handful of students selected by the Bristol Old Vic. After she appeared as

Rosilind in "As You Like It" — one of the school's graduation productions, she was offered a season contract with the Bristol Old Vic — which naturally she accepted. Her first role of the new season was in "Canterbury Tales".

BIRTHS

Mr. and Mrs. David Baker, BAsc'69, a daughter, Cynthia Joan, May 23, 1973 in Port Alberni...**Mr. and Mrs. Martin P. Dournovo**, 3Sc'69, (Virginia Maddock, BHE'69) a daughter, Lisa Anne, July 13, 1973 in Kelowna...**Dr. and Mrs. L. Frank Harris**, BA'66, MA'69, (Marianna Christenson, BA'68), a daughter, Katrin Francine, April 1973 in Australia...**Mr. and Mrs. Kenneth J. Lott**, BSc'69, a daughter, Amber Diane, Sept. 17, 1973 in Vancouver...**Dr. and Mrs. Ed McBean**, BAsc'69, a son in Ithaca, N.Y.**Mr. and Mrs. R. Dean McLean**, BA'64, (Wendy Baker, BA'66), a daughter, Heather Elizabeth, May 17, 1973 in Kamloops...**Mr. and Mrs. Christopher Mitchell**, BSc'62, MSc'65, MBA'70, (Pat Chataway, BA'64), a daughter, Zara Elizabeth, July 27, 1973 in Vancouver...**Mr. and Mrs. Charles H.**



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Nelson, BSF'66, (Louise Tarlton, BSc'66), a son, Mark Charles, June 25, 1973 in Cranbrook....**Mr. and Mrs. Wayne Nelson**, BSc'67, (Alora White, BSR'67), a daughter, Jennifer Alora, July 3, 1973 in Calgary....**Mr. and Mrs. Brian Reid**, (Marilyn Thomas, BA'59), a son, Erik Graeme, June 12, 1973 in Delta....**Mr. and Mrs. Ronald Sowerby**, BCom'69, (Lynne Bergman, BEd'67), a son, Scott Andrew, Aug. 20, 1973 in New Westminster....**Capt. and Mrs. Gerald Spiess**, BA'68, a son, Michael Warren, Aug. 22, 1973 in Montreal....**Mr. and Mrs. Douglas Walkley**, BCom'73, a daughter, Angela Shannon, July 9, 1973 in Vancouver....**Mr. and Mrs. Ron Woodward**, (Meredith Bain, BA'65), a daughter, Amber Emily, April 7, 1973 in New Denver.

WEDDINGS

Mikulec-Landels, Markus John Mikulec, BEd'67 to Barbara Louise Landels, BEd'69, Aug. 21, 1973 in Vancouver....**Mitchell-Wallace**, Brent F. Mitchell, BSc'69 to Barbara L. Wallace, BEd'70, July 14, 1973 in West Vancouver.

DEATHS

Gerald David Allan, BSc'64, MSc'71, Aug. 1973 in Calgary. A teacher at Fernie Secondary School, he was a former member of the Thunderbird basketball and rugby teams. Survived by his wife, two children and

father, John, BA'48, BEd'58 and sister. **George Ashwell Allen**, BA'25, MA'27, Sept. 1973 in Chula Vista, Calif. He was an accountant in San Diego and is survived by his wife, sister and two brothers. **Walter Bapty**, (MD, West. Ont.), Convocation Founder, July 1973 in Victoria. A physician in Victoria since 1906, he was a veteran of the Boer War and the First and Second World Wars. Survived by two sons, (Harry, BASc'47) and two daughters. **Oliver J. Hayles**, BASc'43, May 1973 in Buffalo, N.Y. Survived by his wife, (Mary Eddie, BSN'42) and four sons, (John, MAsc'73). **Norman Harry Ingledeew**, BSA'31, MSA'34, Sept. 1973 in Victoria. At the time of his death he was dairy commissioner of B.C. Survived by his wife, two daughters, son Michael, BSc'65, PhD'69, three stepchildren, a sister and four brothers (Garfield, BA'21 and William, BA'27). **Dorothy Margaret Laundry** (Holmes), BA'24, Aug. 1973 in Victoria. A student at Victoria College before moving to UBC, she was a Great Trekker and an active member of the Players Club. Survived by her husband, Cecil, and son, Patrick, BA'49, a daughter and brother. **John Maxwell**, BSA'42, Oct. 1973 in Lebanon. He was killed after being held hostage by terrorist gunmen in a Beirut bank. He had arrived in Beirut less than a month previously to begin a new job with Douglas Aircraft. Survived by his wife and three children. **John William Thompson**, BA'50, BSW'51, MSW'71, May 1972 in Victoria. Survived by his wife. □

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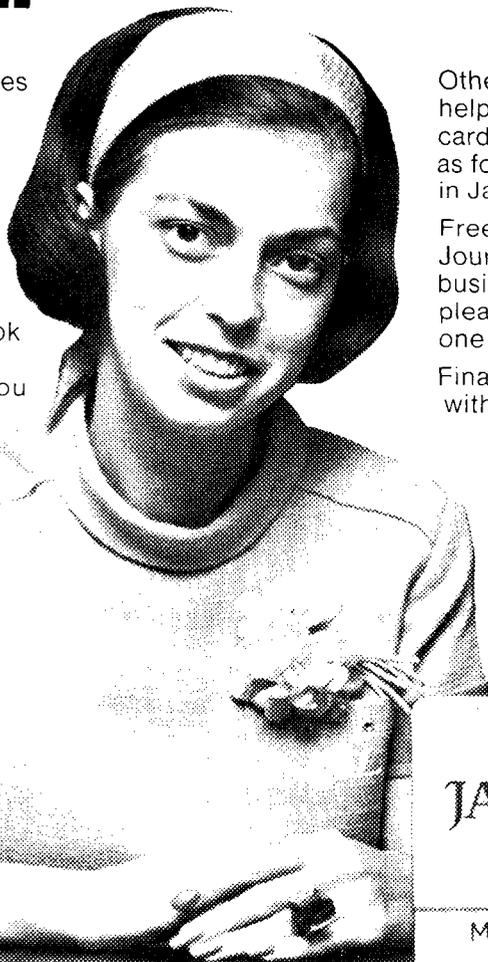
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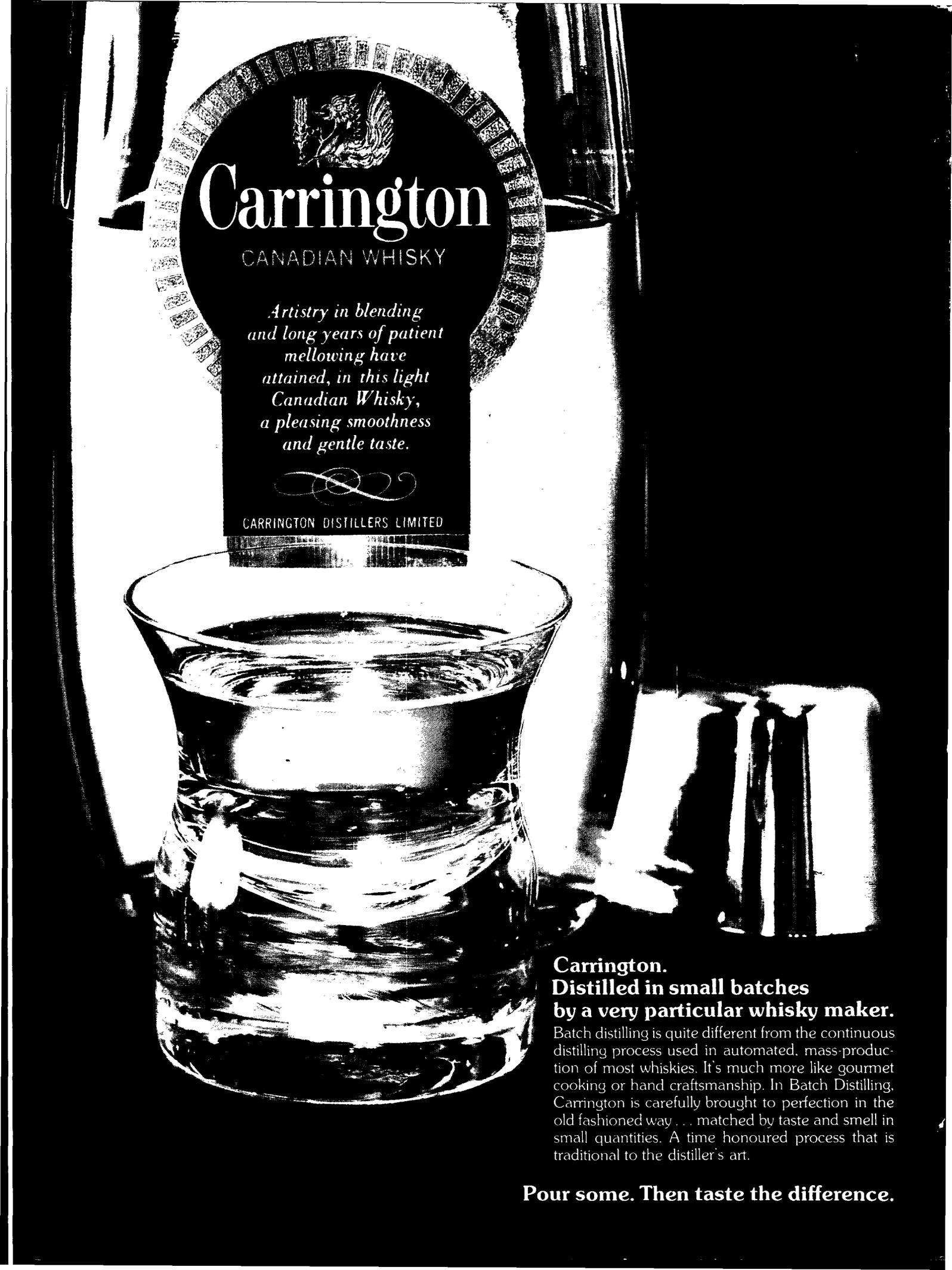
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