

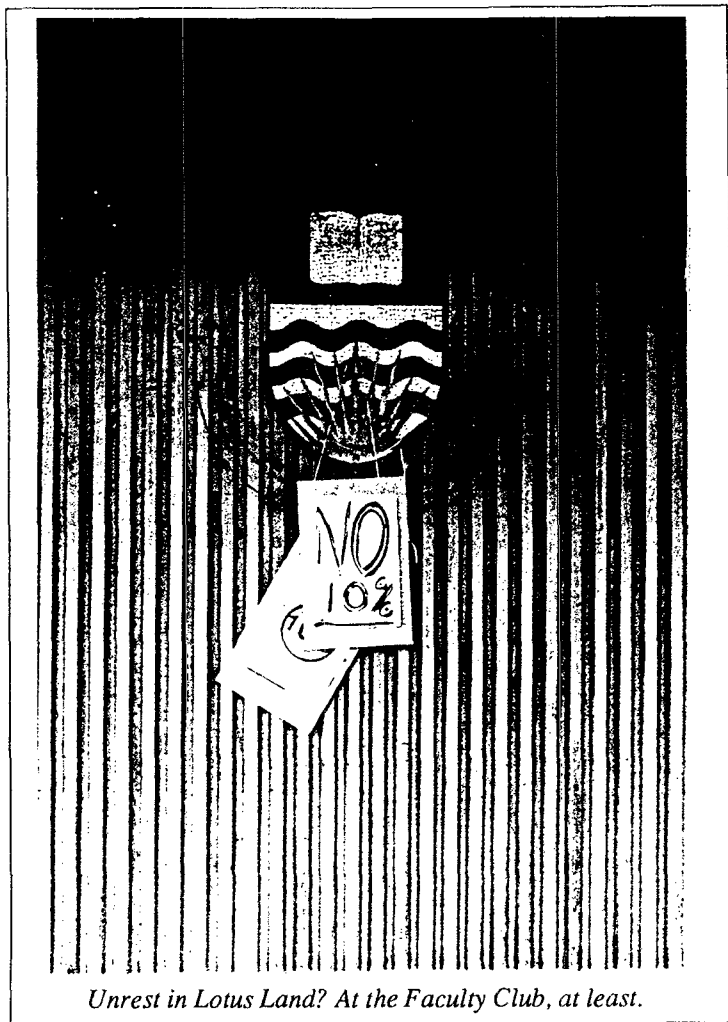
# THE 432

SCIENCE U.B.C.  
NEWSPAPER

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THE NEWSPAPER FOR SCIENCE STUDENTS

February 8, 1989



Unrest in Lotus Land? At the Faculty Club, at least.

## BoG Ignores Student Protests

by Derek K. Miller

On Thursday, January 26th, over 700 UBC students protested outside the Faculty Club while the Boards of Governors sat inside deliberating over President Strangway's proposed 10% tuition increase for 1989-90. Marching, holding placards, and chanting "No way, we can't pay!" as they circled the building, the students were rallied by such speakers as now-elected AMS President Mike Lee and Students Against Tuition Fee Hikes (SOTFH) organizer (and elected AMS Coordinator of External Affairs) Vanessa Geary. Despite over three hours of continuous protest, spurred on by visiting bands such as the Free Radicals and No Fun, the Board decided later that afternoon to allow the 10% increase to go ahead.

A visiting speaker from Simon Fraser University related that university's student struggle to stop a proposed 6%

tuition fee hike, which was also quashed. It marks the first time in the 22 year coexistence of the universities that their tuitions have differed. For some, such as "senior" graduate students (those who take longer than average to complete a Master's or PhD degree), fee increases are even more dramatic: as high as 50%.

This protest, in conjunction with the rally at SUB the previous week, marked the largest student protests at UBC since the Solidarity movement of 1983. The general reaction to the BoG's decision was disappointment, from the AMS administration, SOTFH, the Ubysey, and constituencies and clubs. It is hoped that, although the protests failed to stop the current 10% proposal, they will dissuade the board from rubber-stamping further increases planned for following years. Further action is planned in order to express the general displeasure of students with the BoG's action.

## SUS Council Nominations Open

Nominations are now open for executive positions on the Science Undergraduate Society Council. Positions are open to any Science undergraduate student attending UBC. Nomination forms are available in the SUS office in Scarfe 9. Eight positions are open for elections taking place March 8-10, 1989:

**President**  
**Internal Vice President**  
**External Vice President**  
**Executive Secretary**  
**Director of Publications**  
**Sports Director**  
**AMS Representative**

**Director of Finance**

Nomination forms must be returned to the Elections Commissioner by 6:00pm on Wednesday, February 22, 1989. For further information contact Irene Dorocicz, Elections Commissioner, in Scarfe 9.

(see Executive page 2)

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BONE STRENGTH EXPERIMENTS

As I.N. STEIN is a copywritten cartoon, if you wish to reproduce it you must have written permission from the artist, Ken Otter. Contact through the 432.

# How to be an SUS Exec

## Executive Positions in the SUS

### A Brief Description of the Duties of the Executive

by Irene Dorocicz, Elections Commissioner

In the following, "SUS" and "Society" both refer to the Science Undergraduate Society of the University of British Columbia. "AMS" refers to the Alma Mater Society of the University of British Columbia. "Council" refers to the SUS Council unless otherwise stated.

#### Duties of All Executives:

- o The Executive must consist of Science undergraduate students who intend to remain Science undergraduate students during their term of office (April 1st, 1989 - March 31st, 1990).
- o All officers of the Science Undergraduate Society shall be responsible for personally promoting Science events through words of mouth, class announcements, posters, etc. as requested by the SUS Council.
- o All officers of the Science Undergraduate Society shall post and maintain regular office hours during their entire term of office.
- o All officers of the Science Undergraduate Society shall regularly attend all Council meetings and be a member of at least one standing committee.
- o All Executive Council members shall, during their term of office, keep accurate written records of their activities and submit these along with any recommendations as an annual report which must be submitted to the Honourarium Committee by the April 1st following their term of office. If this report is not submitted then any honourarium or refunds to the executive in question shall be withheld until the report is submitted and accepted.
- o All newly-elected Executive Council members must submit a proposed budget to the Budget Committee for their term of office by the date requested.

#### Individual Duties as Defined by the SUS Constitution:

##### President:

- o To be the main spokesperson for the Science Undergraduate Society and the students it represents.
- o To know and uphold the SUS Constitution.
- o To chair meetings of the Society, Executive, and Council.
- o To vote only in the case of a tie (except in the case of secret ballot, in which case the President votes as do other members).
- o To supervise and direct the duties of the Council.
- o To act as a liaison with all Science clubs.
- o To be a member of the Budget Committee, Public Relations Committee, and the Science Week

##### Committee.

- o To act as an ex-officio member of all other SUS committees.

##### Internal Vice President:

- o To know and uphold the SUS Constitution.
- o To have a current version of said Constitution at all meetings of the Society.
- o To coordinate the academic affairs of the Society.
- o To coordinate any elections or referenda.
- o To be a member of the Academic Sub-Council, Science Week Committee, and the Alumni Committee.
- o To recommend people to Council for academic and election positions and to work with the officers appointed to their respective projects.

##### External Vice President:

- o To know and uphold the SUS Constitution.
- o To represent the Society to the AMS Student Council.
- o To have booking privileges with the AMS.
- o To be responsible for organizing, coordinating, and promoting all social functions of the Society.
- o To be a member of the Science Week Committee.
- o To recommend people to Council for the positions of Science Week Coordinator and Blood Drive Coordinator and to work with these officers appointed on their respective projects.

##### Executive Secretary:

- o To know and uphold the SUS Constitution.
- o To carry out all normal correspondence of the Society.
- o To send notice for forthcoming events to the Faculty.
- o To record the minutes of the meetings of the Society.
- o To keep the minutes on file in the SUS office and with the AMS archivist.
- o To represent the Society to the AMS Council.
- o To make copies of any proposed amendments and distribute them to all Council members within one week of receiving the proposed amendments.
- o To inform the External Vice President, Internal Vice President, and the Director of Publications of the proposed amendments so that they can ensure that proper notification of the proposed amendments are carried out.
- o To receive and distribute all of the Society's mail.
- o To collect annual reports from Council members, year representatives, and ex-officio officers for the SUS and AMS archivist's files.
- o To be responsible for the purchase, maintenance, and use of office supplies and equipment and have Book-store signing authority.
- o To be a member of the Budget Committee.

##### Director of Finance:

- o To be responsible for the finances of the Society and to be the primary signing officer of the funds used directly by

##### the SUS.

- o To submit all budgets as required by the Director of Finance of the AMS.
- o To obtain estimates of all proposed expenditures.
- o To sign all requisitions of approved expenditures.
- o To work in conjunction with the incoming Director of Finance in preparing the next year's budget.
- o To submit to Council every two weeks a report of all of the accounts of the Society.
- o To coordinate and help the Sports, Publications, and Sales treasurers.
- o To chair the Budget Committee.

##### Director of Publications:

- o To publish the summer Student Guide/maillout and The 432 Science UBC Newspaper.
- o To coordinate the production of all posters and banners for the SUS.
- o To ensure publication of items requested by the Executives and/or Council.
- o To be a member of the Budget Committee and Science Week Committee.
- o To be head editor of the Science Newspaper Council.

##### Sports Director:

- o To be the liaison between the Science Athletics Council and the SUS Council.
- o To head the Athletic Council.
- o To chair the Athletic Awards Committee.
- o To be a member of the Budget Committee.
- o To keep the Science Newspaper Council informed of the activities of the Science Athletics Council.
- o To promote the attendance of all Science clubs at the Athletics Council meetings.

##### AMS Representative:

- o To know and uphold the SUS constitution.
- o To know the AMS Constitution, Codes, and Bylaws and have current copies of these on file in the SUS Office.
- o To keep Council informed of the activities of the AMS Council.
- o To keep Council informed of the activities of other AMS constituencies and clubs.
- o To attend AMS Council meetings.
- o To keep Council informed of any AMS rights or privileges to which the SUS is entitled.
- o To keep Council informed of any AMS procedures of which it should be aware.
- o To be liaison between the Council and the AMS.
- o To act as Council's agent to the AMS if directed to do so by Council.
- o To keep the Science Newspaper Council informed of the activities of the AMS Council.
- o To attempt to sit on at least three AMS standing committees.

The numbers for accessing the UBC Library Catalogue remotely are 228-5011 (300 bps) and 228-2222 (1200 bps). Type "ubclib" to enter.

## Biosoc Bits

by Johan Stroman and Yolanda Leung

Again we have reached that time of year when the approaching tidal wave (or is it Blizzard?) of homework, lab write-ups, midterms, term-papers, and missed notes gets uncomfortably close. Biologists, like all others, begin wading through their paper filled domiciles and are apt to let all those New Year's resolutions sink to the bathyal depths. If those resolutions mentioned getting more involved in student affairs, helping organize and taking part in events, here is your chance. Yes, you guessed it! BIOSOC elections for next year's executive are approaching. And on that note you may well ask what we have been up to (besides homework) and hence if you should get involved.

BIOSOC has been brimming with activity in the past few months with a half dozen talks by Biology faculty (and more to come), a video-lunch, 2 Bzzr Gardens, a recent fieldtrip to the Zoology department at the University of Washington, and the highly successful Gyotaku (fish painting) during Science Week. Proceeds totalled \$200 and will be forwarded to the Tofino Oil Crisis Centre to help in their efforts in cleaning up the beaches on the West Coast. The second and last day of the Academic Forum is on Thursday, February 9th with faculty speaking about the Animal, Marine and Cell/Developmental Biology options. Two fieldtrips to the North Vancouver Fisheries Lab are slated for consecutive Tuesday and Thursday afternoons in late February. Also another Bzzr Garden is set for the first Friday in March. For all those who want a last ski-bash on the slopes we have an awesome package at Whistler on the Easter weekend. And for all the fourth year Biology, Botany and Zoology students, a Graduation Dinner and Dance at the Vancouver Aquarium on March 17th.

So as you can see lots is happening. But to keep all these activities going for next year's Biology students we need NEW people to replace those executives who are graduating. So get involved, help keep some traditions alive and have some fun doing it. All Executive positions are available and can be contested, including:- President, Vice-President, Secretary, Treasurer, Public Relations, Academic Committee, Graduation Committee, Graphics Co-ordinator, Seminar Co-ordinator, Social Co-ordinator(s), and of course Sports Co-ordinator. Remember that no particular experience is required — only some interest, a few hours a week and good spirits (We don't mean alcohol). So drop us a note with your Name, Major, Year and Position sought. Nominations can be left with Peggy in the Biology Office (room 2521) or at the BIOSOC Hut. NOMINATION DEADLINE: February 24th, 4 p.m. Fill in those nomination forms!

The elections will be held on Tuesday, February 28th at 12:30 p.m. in Biology room 2449. And hey, good luck on your midterms.

Calling all old exams - midterms and finals. BIOSOC is building a collection of exams especially biology, botany, and zoology from previous years for use by members. We especially need the more

(continued on page 3)

*(Biosoc continued from page 2)*

obscure courses as well as a better selection of first and second year exams. Stop by the BIOSOC office Hut M32 room 6 or leave copies at the biology office.

Yes, BIOSOC held the first bake sale on Wednesday January 25. We raised some money for the graduation fund as well as provided some tasty treats to students and professors alike. Thanks to all who contributed. Next time we'll advertise better.

## Dik Miller, Campus Cowboy

Tick tack tick tack tick tack tick tack tick tack...  
Ring.  
“Dik Miller, campus cowboy.”  
“Mr. Miller, what are you doing right now?”  
“Talking on the phone to...”  
“No, no. What were you doing?”  
“I was typing.”  
“Well, stop typing.”  
“I have. I had to answer the phone.”

There was a distinct growl from the party on the other end of the phone line. “I mean don’t *start* typing again.”  
“Okay. By the way, who is this?”  
“I am a representative of Students Who Eat And Try Bargaining Against New Dining.”  
“That would be...er...” I thought for a moment. “SWEATBAND?”  
“Well, yes, but we don’t like using that. It’s rather an unfortunate coincidence that it should end up that way. We didn’t intend it to.”  
*Like hell you didn’t*, I thought. “What exactly is it that you do?”  
“We oppose the replacement of the old tables in the Subway cafeteria with new ones. We like the old ones just fine.”  
“I didn’t know that they were planning on replacing the old ones.”  
“They aren’t.”  
I was getting confused. “Then why,” I asked, “are you opposing something that isn’t happening?”  
“Just in case they decide to replace the tables.”  
“Well,” I ventured, “what if - and this is purely hypothetical, of course - what if one of the tables was broken and they *had* to replace it?”  
“Er...” came the reply. Obviously this organization hadn’t come up with such contingency plans. “Um, I guess we’d try to get it replaced by a table that’s just like the old one.”  
“What is it that’s so special about the old tables that you don’t want them replaced?” I was getting quite curious.  
“It would be an act of autocratic, pig-headed ignorance to replace the tables without consulting students first.” She said it with conviction - so much that I was almost convinced that Subway tables are actually important to the state of the world today. Almost.  
“But what’s so great about the ones they have now?”  
She toned down a bit. “Nothing really. We just like them. It’s more the principle.”  
“You mean you have set up an entire student organization just to oppose the replacement of tables that you don’t feel especially attached to?”  
“But we *are* attached to them!” she squeaked.  
“Sorry. Tables that aren’t all that special.” I rolled my eyes heavenward.

"Well, yes."

I left a distinct pause in the air that verged on geologic in length. "Why did you call to tell me this?"

"Ah." She remembered her train of thought. "We're planning a rally..."

"A rally?!" I couldn't believe it.

"Yes, a rally. In the SUB plaza. At lunchtime."

"You won't be sitting at your precious tables?"

"Not today. We're willing to sacrifice that for our cause."

"I see. What if someone changes them when you aren't looking?"

She gasped quietly. Obviously she hadn't thought of that either. "We...we'll make arrangements to have them monitored."

"So what do you want me to do?"

"We wanted to inform you in case you wanted to come by to make sure there's no violence."

"No violence. I see. Well, sure." It should at least be an interesting spectacle. "Lunchtime, you say?"

"Yes."

"Well, I'll be there. So keep your people in line, okay?"

"We're a well behaved bunch, Mr. Miller."

"I'm sure. How many of you are there, anyway?"

"Six."

"Right. I'll be sure to bring reinforcements." I hung up before she could respond.

A few hours later I hopped into my royal blue, souped-up, stripped-down, lean-mean-enforcement-machine Chevy Bel Air and cruised down East Mall towards SUB. As I approached, I looked across the plaza to see a crowd of people gathered around what looked to be some sort of disturbance. My eyebrows darted up. There must have been two or three hundred of them. I got out of the car and walked slowly across the plaza until I could see what the big deal was about.

In the centre of the group were two people, one of whom was obviously being severely beaten up. I pushed through and yelled at them to stop.

"Stop!" I yelled.

There was no response. I waded into the conflagration and pulled the two apart.

"Alright! What's going on here?" I queried.

"I...I don't know," said the one who was obviously losing. He coughed. "I just said 'Who cares about the Subway tables anyway?' and then she hit me."

"Ignorant, redneck pig!" cried the woman whom I held by the next with my other hand, spitting at him. She was the one who had been on the phone.

"Shut up. Did you say anything else?"

The man shook his head.

"No chance. She just attacked me."

The crowd was dispersing. I looked around and turned to the woman. "Where are the rest of your members?"

She looked down. "They're all test tasting cookies inside."

At that moment, someone came running out of SUB and shouted. "Margaret! They're changing one of the Subway

*Science*

Margaret's eyes relit and she bit my arm. It hurt, and I let go, allowing her to run away towards Subway.

Somehow, I managed to stop Margaret from scratching out the eyeballs of the Subway staff who were moving tables. By vote of the rest of the members of SWEATBAND, she was impeached



## What Happened

by David New, Byelection Commissioner

Well folks, the SUS by-election went ahead, and Council has been expanded by Tobin Tanaka as 4th-year rep, Margot Purdon as 3rd-year rep, Caireen Hanert as Physics rep, Mira Bajic as Math rep, and Rhiannon Johnson as Oceanography rep. Mike Everson, the SUS Academics Co-ordinator, has also been installed as a 4th-year rep.

That's what happened.

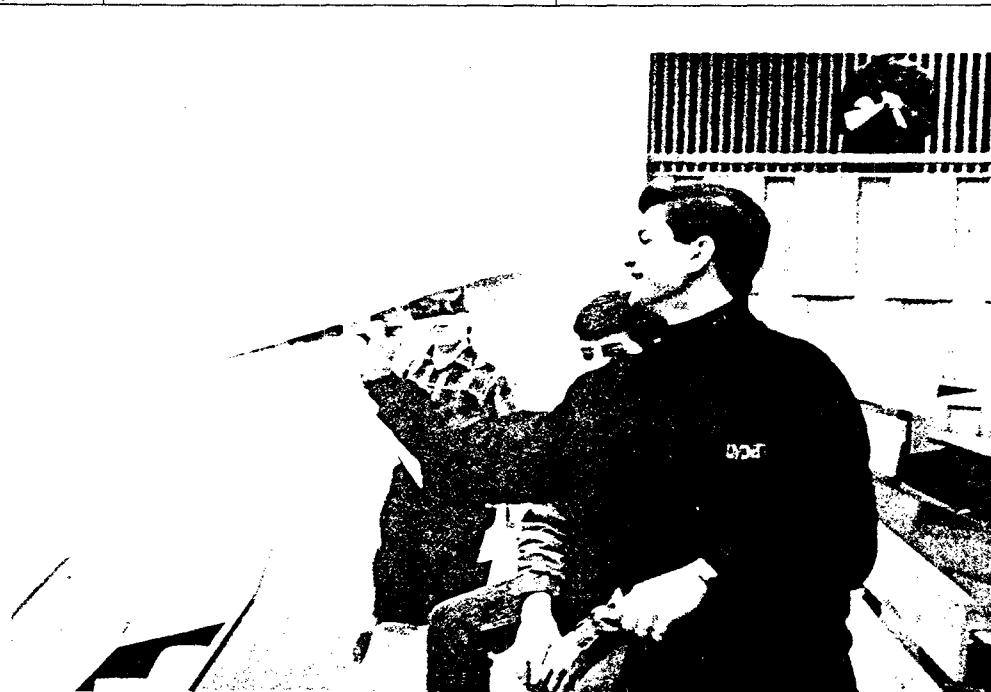
Have a nice day.

# Languages of the World

The top 11 languages in the world, calculated by people who speak them fluently:

Mandarin Chinese.....	806 million
English.....	426 million
Hindi.....	313 million
Spanish.....	308 million
Russian.....	287 million
Arabic.....	182 million
Bengali.....	175 million
Malay-Indonesian.....	132 million
Japanese.....	123 million
German.....	118 million
French.....	115 million

(Source: Dr. S.S. Culbert, U. of W.)



*Science Second Vice President Claudio de los Rios at the Physsoc Paper Airplane Contest.*

# Gravity: What's the Attraction?

by James Olson

Most people are familiar with the concept of gravity as the force which holds or pulls things to the surface of the Earth, but gravity is also responsible for many other things such as tides, flowing rivers, and the orbits of the planets.

There have been a number of people who have provided definitions of gravity in the past, but as our understanding of nature has improved we have had to update and change these definitions. One of the earliest definitions is the force which lifts fire and air while gravity is the force which pulls on the Earth and the sea. A later definition was given by Sir Isaac Newton as the attractive force which exists between all bodies in the universe. In this century, Albert Einstein described gravity as the warping or curving of space and time by any mass. This definition is confusing and misleading in almost all practical instances and therefore should only be considered in the same light as Aristotle's definition.

In the sixteenth century gravity was discovered to be an attraction which existed between all bodies that have mass. (the mass of an object is what most people refer to as the weight and is hence measured in kilograms). The heavier a body is, the less it can attract other objects. For example, people weigh less on the surface of the Moon because the Moon is lighter than Earth and does not pull down as hard.

The attraction is also affected by the distance which separates two objects. This is evident when we see astronauts floating weightless in space. Here, the Earth still has the same attractive pull but the astronaut is too far away to feel it. Similarly, the attractive pull on a mountain climber on the summit of Mount Everest would be slightly less than if the same person was jogging on the beach at sea level because he/she is farther away from the centre of the Earth.

One characteristic of gravity is that it

attracts all objects with the same acceleration. This is not as obvious as it sounds. One consequence of this is that when two rocks of different mass are dropped at the same time they will hit the ground at the same time. In other words the two rocks will travel the same distance in the same time. This may appear obvious but similarly a rock and a feather would also hit the ground at the same time if it weren't for the interference of air. This was best illustrated, when, during the Moon landings an astronaut held an eagle feather and a Moon rock at equal heights and let them drop, and they both hit the ground at the same time.

In order to see how all objects can fall at the same rate it is useful to use a notion put forth by Einstein. Conventionally, everything accelerates toward the surface of the Earth, but it can also be thought of as the surface of the Earth accelerating towards everything else. Under this premise, if you were standing in an elevator with the doors closed it would be impossible to tell if you were standing still on the surface of the Earth or if the elevator was being accelerated upward far out in space. It now becomes easy to see how a rock and a feather would hit the floor at the same time. If a person is standing in an accelerating elevator and lets go of the feather and the rock, the elevator and the man will accelerate up, but the feather and the rock will float in space. (fig 1 and 2). Eventually the elevator floor will move up and hit the rock and feather at the same time. (fig 3). If we now picture the same series of events but imagine the elevator being stationary and the rock and feather being accelerated, the rock and the feather will still hit the floor at the same time. (fig 4). This is true because the person inside the elevator can't tell if he is being pulled by gravity or the elevator is accelerating away. All he sees is the feather and the rock falling and hitting the floor at the same time.

The idea of an accelerating elevator and gravity being equivalent allows us to see some of the more subtle effects of gravity such as the way even light can be attracted by a body such as the Earth. If a beam of light is shone across an elevator that is accelerating, the beam will travel in a straight line. (fig 5 and 6). As the beam of light travels across the elevator, the elevator moves up and by the time the beam reaches the opposite side of the elevator it hits the wall lower than where it started. (fig 6). Now, if we think of the elevator standing still and a person observes the path of light it appears to have bent down or pulled down by the attraction of gravity. (fig 7). However, the bending of light would be greatly exaggerated if the elevator in fig 7 was sitting on Earth.

Further proof that light is bent by gravity was provided during the eclipse of the sun in 1958, when the image of a star was seen, although the star was actually hidden behind the sun. (fig. 9). The light from the star which would have normally missed the Earth is bent by the Sun and hits the Earth and allows us to see an image of the star.

Gravity not only attracts light but changes the rate at which time passes. This is to say that if one twin lived on a high gravity planet, (a planet that has a larger mass), and the other twin lived for twenty years on Earth, when the twins got back together, one would only have lived for fifteen years (Earth time) while the one on Earth would have lived for twenty. It is in this context that Einstein said that gravity warps space and time.

The bending of light and the altering of time are effects that exist but gravity can be practically defined as the simple attraction that all bodies have on each other, where the attraction depends on the mass of the bodies and the distance between them.

## On This Date...

by Russ Monger

February 12 is Robinson Crusoe Day. This day commemorates the rescue, in 1709, of Alexander Selkirk, a Scottish sailor who was the model for Daniel DeFoe's book. Selkirk requested to be put ashore on the uninhabited island of Juan Fernandez after an argument with his captain. Before the ship left, however, he begged to be readmitted but was refused. He was left with a few simple necessities and remained there alone for five years. This is a day to be adventurous and self reliant.

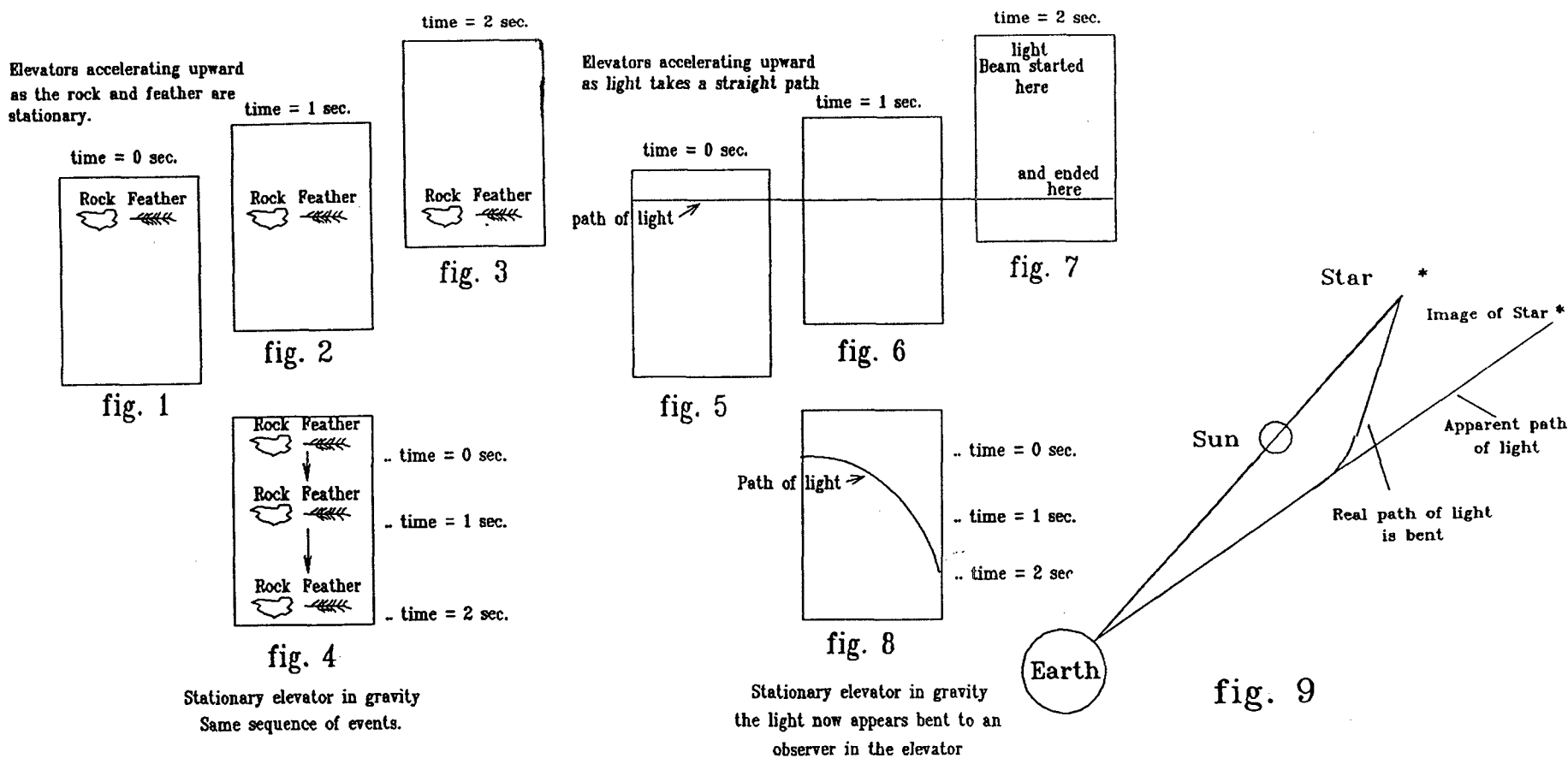
February 14 is the birthday of George Washington Gale Ferris. Ferris, born in St. Louis in 1859, invented the Ferris wheel which he developed for the World's Fair in 1893. He died in Pittsburgh on Nov. 22, 1896. Born in St. Louis; died in Pittsburgh. This guy got around.

### Pharmacy Valentine's Day Carnation Delivery

Send a carnation.  
To whom?

1. The person(s) that takes notes for you when you are at the Pit.
2. The person(s) who buys you a drink at the Pit.
3. The person(s) who drives you after the Pit.
4. Your romantic interest(s).
5. Your non-romantic interest(s).
6. Your data fudging lab partner.
7. Your favourite prof.
8. 1, 2 and 3
9. all of the above except 8.
10. all of the above.

ON SALE: Feb. 6, 7, 8 at lunchtime in Woodward IRC Lounge. Delivered in IRC and Cunningham on Feb. 13 or 14th. \$1.50 each or 5 for \$5.00.





# How Smart Are You? Or Can You Tell?

by Russ Monger

Intelligence testing began in Paris, France in 1905 when psychologist Alfred Binet was commissioned by the Department of Education to devise a method of testing that could be used to separate 'normal' children from 'dull' children. It was believed that these dull children would not benefit from a regular education and should go to special schools for slow learners. Binet's tests would be used to determine how well, or how poorly, a student would do in the Paris school system at the turn of the century and this in turn would determine which type of school he should attend.

Binet began by studying normal children in a public school as well as a group of retarded children at a nearby hospital. He set out different types of tasks that could easily be performed by normal children of a certain age but not by retarded children of the same age. The aim here was to find out what was "normal". From this, through trial and error, he constructed a graduated series of tasks, starting with those that could be performed by a very young normal child, and then increasing in difficulty. The highest group of these tests a child could pass would be used to determine his mental age. An attempt could then be made to use this mental age to indicate the child's rate of learning compared to others his own age.

Just before the outset of World War I, German psychologist Wilhelm Stern introduced a new way of expressing the results of the Binet tests. Stern suggested calculating the ratio between a subject's chronological age and his mental age as determined by the Binet test. His argument was that ratios would be more revealing. He reasoned that if a ten year old tested one year ahead of his chronological age it may not indicate a big difference, but if a five year old tested a year ahead this would be far more significant. The formula for calculating this ratio is simple: the mental age is divided by the chronological age and then multiplied by one hundred to get rid of the decimal point. This method of scoring gives a ten year old with the mental age of 11 a score of 110, but a 5 year old with a mental age of 6 would receive a higher score of 120. This ratio score of a Binet test came to be known as an Intelligence Quotient. By this formula, an average IQ is 100. Anyone with an IQ less than 100 is considered below average; anyone with an IQ above 100 is considered above average. (An IQ over 140 is considered genius level). These standards are still in use today.

Intelligence testing was more readily accepted in North America than it was in Europe and the greatest spurt of interest came in pre-WWI United States. At this time the army was faced with a large problem. Huge numbers of men from all parts of the country and from all walks of life were being drafted into the service. From this large number of inductees, the army needed to determine quickly which men would be sent to officers' training school, which men would be put into labour battalions, which men would be given special training or which men would be mustered out as unfit for duty. The army didn't have the time or the personnel to administer individual tests

to each draftee. What was needed was a test that could be given to a large number of men by officers who had no special training in psychological testing. Tests similar to Binet's tests were quickly prepared and employed. By the beginning of 1919, nearly two million men had written these army intelligence tests. The public became convinced that the army tests were scientific and foolproof and after the war, private companies began testing programs to determine who would be hired, promoted and transferred. The greatest market for intelligence tests was the schools. By 1920, nearly every school system in North America employed some kind of intelligence testing. A huge industry grew to meet the demand. Tests were constantly being checked, refined, and revised, yet the basic assumption - that IQ tests measured a discreet mental quality - was never really doubted.

It wasn't until the 1960's that IQ testing began to be questioned. In 1964 the New York City Board of Education decided to do away with IQ testing completely and other boards of education soon followed suit. In 1971 the United States Supreme Court ruled against a company that used IQ tests as a basis for promotion. Today, IQ testing is no longer considered sacred in education or business, but it has by no means been abandoned. Millions of people are still tested every year in business, in the military and in schools. IQ scores continue to exert a powerful influence on how we perceive ourselves and others.

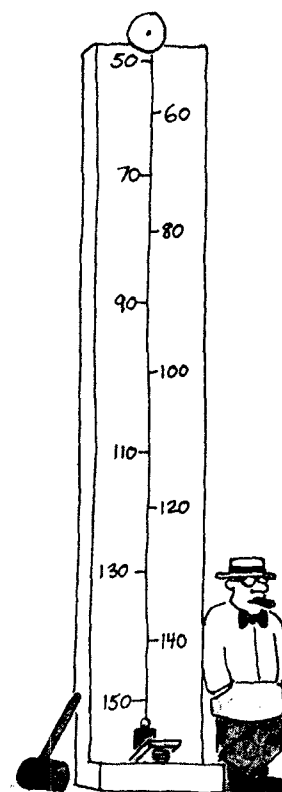
Over the years, intelligence tests have aroused great controversy. One of the more important questions that begs to be answered is "What is being measured?". Psychologists insist that IQ tests measure intelligence and yet they cannot define exactly what intelligence is. How can something be measured if it is not known exactly what it is that is being measured? IQ tests appear to measure only a rather limited type of intelligence - the kind that schools and psychologists value. Many critics claim that intelligence tests do not measure what many experts believe to be an essential aspect of intelligence - creative, or original thinking. Most intelligence tests emphasize convergent thinking; they present problems that have well-defined, correct answers. As a result, intelligence tests often fail to acknowledge properly individuals who excel in divergent thinking - those with the ability to produce new and original ideas. Other critics maintain that many tests are culturally biased. Many questions on these tests are drawn from what a student has previously learned in school, which does not reflect basic mental ability. Environment differences, as encountered in different schools, may explain much of the variation in test scores. For example, test results show higher scores for average income whites than for poor urban blacks who may not have had the same schooling opportunities. Another criticism is that an individual's IQ score often fluctuates, depending on emotional state, age, and the desire of the person to succeed. There is also evidence that indicates familiarity with taking tests will improve a score. A young Mississippi black raised his IQ score dramatically in a 6 week period

simply by being taught how to take tests.

College entrance examinations have been found to correlate closely with success in college, however, the obvious argument here is that the methods of measuring achievement in college (i.e. written exams) are themselves no more reliable than those of the entrance examinations. High test scores may indicate nothing more than a worthy ability to write tests and may not indicate mastery of a subject at all. A second criticism is that these strong correlations reflect policies of denying admission to students with low test scores. Since people with low IQ are not admitted into colleges, this reinforces in college, since low IQ people are not usually given the opportunity to succeed. It may also be worth regarding that intellectual factors alone do not determine academic success. Many students are not successful due to lack of motivation or good teaching and not because of a lack of intelligence. Despite their limitations, ability tests are still the most objective method available for assessing individual capabilities, but tests scores must always be considered in conjunction with other information.

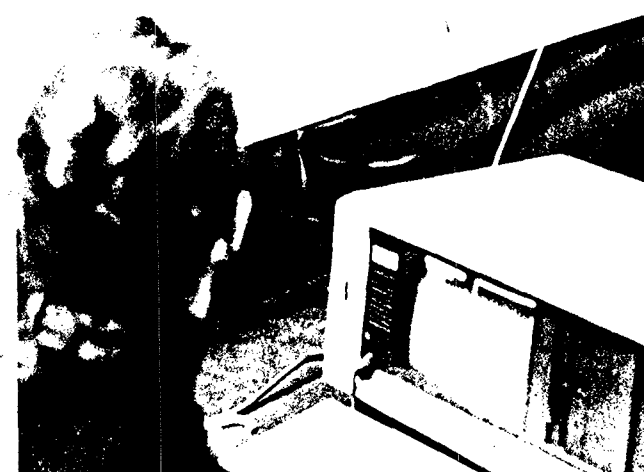
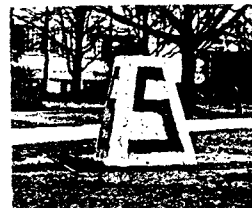
Perhaps the only thing you can be certain your IQ will tell you is whether or not you are able to join the Mensa Society - a society consisting solely of people who score in the top 3 percent on intelligence tests. For further information about this organization write to: Mensa, Dept GG, 1701 West 3rd Street, Brooklyn, New York 11223

Students interested in IQ testing may wish to contact the Psychology department here at UBC. For a sample of the army IQ test, see page 7.



TEST  
YOUR  
I.Q.

L.TREPEL



Practicing oil spill cleaning techniques at departmental displays.

## Uncle Rusty

Well, we did have an Uncle Rusty for this issue, but somehow it got squeezed out by all the other stuff. Look for it next issue. Sorry, Unk.

## Arr, Billy! Ever been to a Physsoc pirate party?

Well, there's one in Hebb 12 on February 10th. Tix at Physsoc or call 228-3116.

## Teaching Excellence Award Nomination Form

*Please print.*

Nominee:

Course(s) Taught:

Nominator:

Student Number:

Supporting Signatures:  
(at least 10 required)

Signature

Student Number

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

No person may nominate more than one professor or instructor, and each student is limited in signing only one nomination per term. An Academics Sub-Council member may not nominate a professor or instructor or sign a nomination form.

Please return completed forms to the Academics Coordinator's box in the Science Office (Scarfe 9) by Wednesday, February 22, 1989. Also remember to include a short outline on why you think the nominee should receive the award. Although this is not mandatory, it will greatly aid in the selection process.

## AMS Report

by Ari Giligson, AMS Rep

If you're looking for a tough job that pays only a nominal fee, nominations for both Assistant Director of Finance of the AMS and Ombudsperson are open until Feb 15. Applications available in SUB room 238.

In other news, the meeting of the AMS of Feb 1 lasted 3.5 hours. The most important issue raised was that of Duke's Cookies. This discussion lasted about an hour and all guests were asked to leave. It was finally resolved that the AMS reaffirm our intent of honouring the agreement signed by Duke's (i.e. Duke's will move out by April - as per the contract).

The Engineers related to us an interesting anecdote about the night that AMS executive election ballots were counted. It seems that Mike Lee, AMS president elect, in the course of celebrating his victory downed a rather large portion of alcohol (this being amplified by the fact that Mike doesn't usually drink much). The Engineers took it upon themselves to give the, soon to be, president a tour of the building, albeit strapped to a swivel chair with duct tape. Mike enjoyed the tour so much, at least in the Engineers' opinion, that they decided that a repeat performance was in order. Monday they tied Mike in a chair

covered him with whipped cream and affixed "Alf cards" to his person - they call this "Alf carding". Did I neglect to mention that this occurred in SUB course and that people mistook Mike for some sort of Asian-week display?

Ken Armstrong, of Arts, put forward a motion that we send a letter to Mel Couvelier and Bill Vander Zalm asking them to overturn the 10% fee increase. This struck me as a rather useless waste of time. Do we really think a letter from the AMS will scare the BC government into overturning a decision of their own appointees?

What really annoyed me was that Armstrong had the audacity to question my responsibility to the SUS members. He challenged any of the constituency reps. who voted against his motion to go back and tell their people that they did so. Well Ken, I keep no secrets from the people I represent. I felt that the action proposed by you is to be an utter waste of time. Now stop trying to be some high power politician. That gets none of us anywhere.

I apologize to any of you who love the usual dry and simple AMS report. I decided to go into some gossip and internal silliness to show you that the AMS is composed of real people. Besides, we didn't have anything really exciting happen at that meeting. Well, not that I can talk about anyway.

## BIOLOGY BOTANY ZOOLOGY

by Doug Sheppard, Biology Grad Chairman

With only two more months before our final Finals, some graduating students may have their eyes set on Grad School, some on travel, or potential job opportunities, and others still on their applications for unemployment insurance. Myself, I've been busy setting up the final plans for our Grad Dinner-dance, and photos. Tickets for the dinner-dance are on sale for \$30.00. The grad will be at the Vancouver Aquarium on Friday, March 17. Doors and bar open at 6:30 and the dinner will be served at 7:30. Dress is semiformal, or formal - take your choice - and drinks will cost \$2. Tickets can be purchased directly from myself, Sarah Bagshaw, Jennifer Hoar, Gareth Williams, Johan Stroman, Coral DeShield, or Yolanda Leung, or sign up on the list in the Biology Office.

As for Grad composite photographs, please call Evangellos Studio (731-8314 or 732-3023) as soon as possible to set up an appointment if you have yet to do so. The sitting is free, but packages may be ordered.

To those of you who do not know, YOU MUST APPLY TO GRADUATE. If you did not receive two graduation cards from the registrars office, you have until February 15 to get them from the registrar and submit them if you want to graduate in the spring ceremonies.

Good luck with midterms and pick up your grad tickets as soon as possible.

## Phobomania

by Russ Monger

Can you match each of the phobias on the right with their name on the left? Don't fear, the answers are listed to the right.

- 1) Claustrophobia
- 2) Thanatophobia
- 3) Hydrophobia
- 4) Xenophobia
- 5) Zoophobia
- 6) Toxophobia
- 7) Acrophobia
- 8) Agoraphobia
- 9) Homophobia
- 10) Cardiophobia
- 11) Astraphobia
- 12) Lalaphobia
- 13) Nyctophobia

- a) fear of being poisoned
- b) fear of strangers
- c) fear of homosexuals
- d) fear of thunder and lightning
- e) fear of closed spaces
- f) fear of open places
- g) fear of darkness
- h) fear of water
- i) fear of heart attack
- j) fear of public speaking
- k) fear of animals
- l) fear of death
- m) fear of high places

The Deadlines for The 432 are:  
February 15; March 1, 15

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Only three more issues left, people. Don't forget that submissions are always welcome. Just stuff them in the 432 pocket in the Science office (Scarfe 9). We also need photos, art, etc. Meetings are Thursdays at 12:30. Check Scarfe 9 for location.

The 432 is produced on Lucifer the Apple Macintosh SE and "The Beast" the 60 MB hard drive with Microsoft Word and Aldus Pagemaker desktop publishing software. It is printed in Canada on some mashed-up, flattened ex-trees. Now that UBC has a recycling program taking effect, maybe the paper will get re-used and it won't be so environmentally detrimental.

## SCIENCE VARSITY JACKETS

Order before Feb. 11  
for delivery before  
Grad '89.

Blue melton body with white  
leather sleeves.

Answers to Phobomania

- |      |       |
|------|-------|
| 1) e | 7) m  |
| 2) l | 8) f  |
| 3) h | 9) c  |
| 4) b | 10) i |
| 5) k | 11) d |
| 6) a | 12) j |
|      | 13) g |

# LIBC · PRE-MED SOCIETY

February Line Up!

FEB 7: "Obstetrics"  
with Dr. Thomas Martin

FEB 14: "Paediatric  
Endocrinology"  
with Dr. Ralph Rothstein

FEB 21: "Family Practice"  
with Dr. Fraser Norrie

12:30 IRC#1

## Test Yourself

(A sample army test from the March, 1919 issue of *The American Magazine*)

With your pencil make a dot over any one of these letters F G H I J, and a comma after the longest of these three words: boy, mother, girl. Then, if Christmas comes in March, make a cross right here \_ but if not pass along to the next question, and tell where the sun rises \_\_\_\_\_. If you believe that Edison discovered America, cross out what you just wrote, but if it was someone else, put in a number to complete this sentence: "A horse has \_ feet." Write yes, no matter whether China is in Africa or not \_; and then give a wrong answer to this question: "How many days are there in the week?" \_ Write any letter except g after this comma, and then write no if 2 times 5 is 10 \_\_. Now, if Tuesday comes after Monday, make two crosses here \_\_; but if not, make a circle here \_ or else a square here \_\_. Be sure to make three crosses between these two names of boys: George \_ Henry. Notice these two numbers: 3,5. If iron is heavier than water, write the larger number here \_\_, but if iron is lighter than water then write the smaller number here \_\_. Show by a cross when the nights are longer; in summer? \_ in winter? \_\_. Give the correct answer to this question: "Does water run uphill?" \_ and repeat your answer here \_\_. Do nothing here (5+7=\_) unless you skipped the preceding question; but write the first letter of your first name and the last letter of your last name at the end of this line \_\_\_\_.

This test takes the average adult 125 seconds. If people were divided into Excellent, Good, Fair, and Poor, Excellent is 100 seconds or less, 100 to 125 seconds is Good, 125 to 150 is Fair, and anything over 150 seconds is Poor.

## Git Along Little Proteins

(or The Song of The Transition Vesicle)

by Allan Sharp

The following occurred to me during a lecture on the subject in a Bio 200 tutorial. I will not attempt to describe my mental state at the time but let it suffice to say that cowboy songs are not generally found running through my head at 8.30 on Thursday (or any other time).

Non-biologists may not understand, but that's tough.

(Sung to the tune of "Git along Little Dogies")  
(twangy guitar music)  
(voice with a silly sounding American accent)

As I was alookin' one morning with pleasure  
At an endomembrane studded ribosomes  
I spied a vesicle a leaven' the E R  
And it went a singing to the dictysome.

(chorus, sung by several voices similar to the original)

Singin'; To the Golgi you go, git along little proteins,  
It's my work that moves you and none of your own  
To the Golgi you go git along little proteins  
You're bound for the Golgi and then your new homes.

(back to the single voice)

Its on the E R they make you proteins,  
When ribophorins bind a polysome  
You're trapped in the membrane, translations completed  
Then you're shipped out on the way to your homes.

(Chorus again, as if you wanted to hear it)

It's us transition vesicles that get the hard work  
Of hauling your proteins off to your new homes  
Translation may be done on the sides of the E R  
But you're to be sorted in the dictysome.

(Chorus, followed by twangy guitar solo)

While glycosolation begins in the E R,  
The saccherides joined to you before you can roam  
It'll be in the cisternae that they'll do the nice work  
Differentiation occurs in the ol' dictysome.

(Chorus, followed by squeaky violin solo)

When you get there you'll be sorted and processed  
You and those like you will be set all alone  
You'll be sorted with those of the same destination  
And then you'll be blebbed of to your new homes

(Chorus, with really fake sounding whip and cattle driving sounds)

The ribosome that made you was on the E R  
Not in the cytoplasm by itself alone  
So you'll be secreted, or put in a membrane  
Or if you're real nasty, in a thick lysosome.

(Chorus, with yodel)

If you're lysosomal, you get special treatment  
You get mannose PO4 attached to you alone  
A receptor will grab you, its made to do that  
And you'll get shipped off in a new

lysosome.

(Chorus and more twangy guitar music before they finally quit)

## Letters

Dear 432 Editor,

Here is a list of my favourite things:

- 1) kicking piles of fallen leaves in the fall
- 2) the smell of strawberries in spring
- 3) the sound of church bells on a Sunday afternoon
- 4) eggs that have red embryos in them
- 5) when the cops don't have anything to prove you did it
- 6) giving street winos turpentine in a bottle
- 7) the urge you get to push someone off a high balcony
- 8) the quiet that comes after someone in pain passes out
- 9) the kind of skin that turns bright pink after the first slap
- 10) people who are quick to trust you

Jeff Shantz  
Section 8

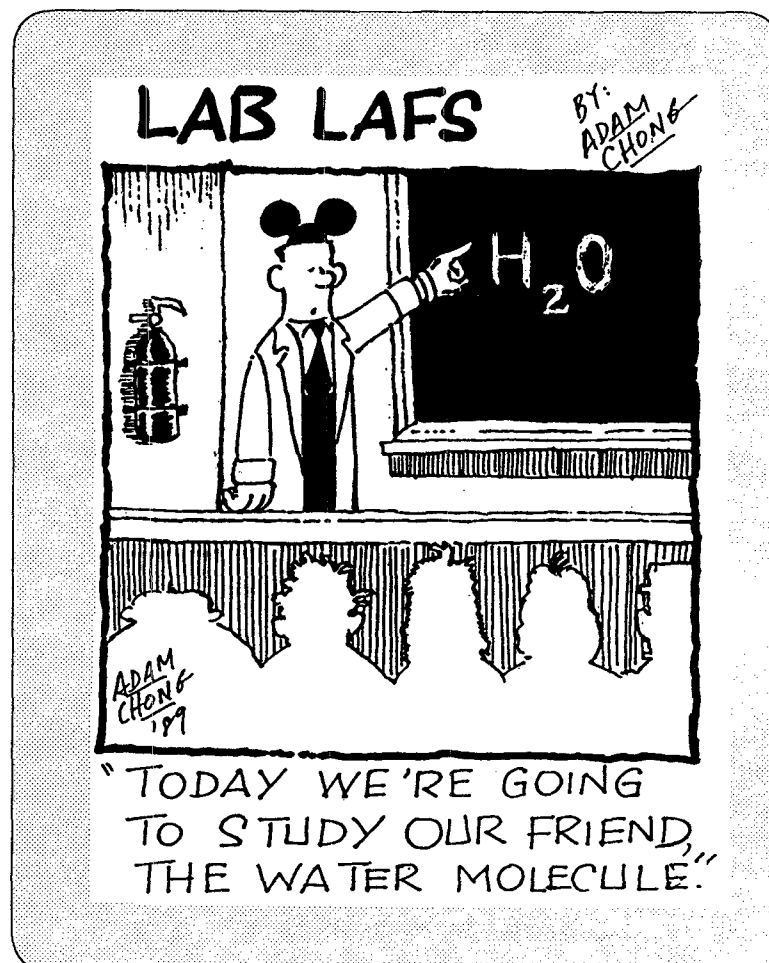
What a pleasant person you are - Ed.

Dear 432,

I was just wondering if any of you could explain why I only get good reception on my tv when I stand 0.432 meters away diagonally from the right hand corner of the screen, on one foot, holding a blue plastic toy sword high in my left hand at 12°23' from the zenith and touching the left rabbit ear of my TV with my right ring finger. This is the only position that works, but it gets very uncomfortable after awhile. I phoned a TV service man but he just laughed.

Milton Bearer  
Snorkling 3

I guess somebody up there just happens to like making you look ridiculous.  
- Ed.



Sports Report

by Gautam Lohia, Sports Coordinator

The second annual Science Tricycle Race was a tremendous success. There were many thrills and spills, dashes to the finish, joys of victory and agonies of defeat, as there are in all major sporting events. Many people will remember this race for the excitement it generated in their lives on that chilly Friday in January.

Some highlights included:

- 1. The strength of Dr. Tripp overcoming the structural design of the tricycles.
- 2. The relentless breaking of trikes in two (the handlebars came off).
- 3. Computer Science's 7 teams.
- 4. Pharmacology's 5 teams (half the department).
- 5. Reg Peters' "tumble" to the finish line.
- 6. The well-dressed crew of the "Day Trippers" from Biochem.

The race was covered by CBC television and shown as a feature story on the 6:00 news. The winning team was Flagellar Propulsion from Biology, with an incredible time of 1 minute 19.36 seconds. (These guys must practice.) Runners up were the Oingo Boingos from Chemistry, the Dæmon Peddlars from Comp Sci, and Physsoc I. If you haven't picked up your T-shirts yet, you can do so at Scarfe 9.

We donated \$840.00, 6 rather used tricycles, and 6 stuffed animals to Children's Hospital. Thanks to everyone for participating. I would like to thank all the people who helped: Alison Gilbert, Todd Ablett, Stella Wong, Matt Parker, Donaree Nygard, Scott Davidson, Lov-eleen Lohia, Sonia Chhabbra, Alan Douglas, Annette Rohr, Julie Memory, and Russ Monger - and all the judges and anyone else I missed.

In other news, Computer Science Men shared first place in the Division 2 category of the sub 6 basketball tournament in Intramural Sports. Women won the sub 5'8" basketball tournament.



Scott Davidson, Master Mechanic.

TRIKE RACE RESULTS

HEAT I		
Team Name	Time	
1) Mad Mustachioed Purple Hued Malt Worms	2:01:17	
2) Cycloclones	1:39:08	
3) C Speedsters	2:37:71	
4) Pedantic Peddle Pushers	2:09:48	
5) Physsoc I	1:27:41	
HEAT II		
Team Name	Time	
1) The Oingo-Boingo's	1:30:23	
2) The TriklOBikes	1:45:66	
3) Biocyclists	2:05:48	
4) Spratley & the Generic 5	1:52:74	
5) Phroggers (3rd Years)	2:41:00	
HEAT III		
Team Name	Time	
1) Turing Trikers	2:41:23	
2) Zot's Alien Task Force	2:11:76	
3) Pascal Pedallers	2:05:20	
4) Chemistry Chemistrikes	1:59:07	
5) Physiology Trikers	1:39:99	
HEAT IV		
Team Name	Time	
1) Daemon Peddlers	1:45:79	
2) Flagellar Propulsion	1:36:00	
3) The Krayon Factory	2:16:29	
4) Binary Bikers	1:52:25	
5) Day Trippers	1:43:31	
HEAT V		
Team Name	Time	
1) Lethal Dose	2:07:99	
2) Dynamics	1:55:47	
3) Overdose	2:27:29	
4) Drugs To Go	2:01:70	
5) The Tricycle Antidepressants	2:37:49	
HEAT VI		
Team Name	Time	
1) The Biffo Videoids		
2) Math Marauders		
3) A. I. Aces		
SEMI-FINALS		
HEAT I		
1) Physsoc I	1:21.03	
2) Flagellar Propulsion	1:24.01	
3) Oingo-Boingo's	1:21.09	
4) Physiology Trikers	1:40.14	
5) Day Trippers	2:45.00	
HEAT II		
1) Biology Cycloclones	1:37.98	
2) A.I. Aces	1:37.91	
3) Daemon Peddlers	1:24.05	
4) TriklOBikes	1:41.45	
5) Binary Bikers	1:37.49	
FINALS		
1) Flagellar Propulsion	1:19.39	
2) Physsoc I	DNF	
3) Oingo-Boingo's	1:24.10	
4) Daemon Peddlars	1:36.12	

UBC Intramural  
UNIT POINT  
STANDINGS

Faculty Women

Conference A	
Arts	1821
Commerce	954
Law	451
Nursing	851
Science	2685

Faculty Men

Conference A	
Arts	2744
Commerce	1684
Engineers	6184
Science	4547

Science Dominates  
Ski Events

by David Way

Yes, yet another ski season is upon us and, as usual, Science has dominated in participation in both the Grouse Mountain Ski Challenge and the new Cypress Bowl Ski Blitz. Both events were dual slalom races, run twice for each participant, and included racing, leisure skiing, meals, and a party afterwards.

Claudio de los Rios, Science 2nd Vice Pres, clocked times of approximately 2 minutes 10 seconds on the Grouse course pn January 19th, designed to be run in 25 seconds. Of course, it was his second time on skis (the first was least year's Ski Challenge) and he did better than many who fell during their runs. Kande Williston, Science 1st Year Rep, took 3rd place in the women's novice category for her sheer enthusiasm (read "hysterical screaming."). Science put in 42 of the 150 competitors. Conditions were great and most put in a full day of on the slopes. A fine buffet dinner was destroyed very rapidly (once you got a plate) and Tim Brecht, a one man band and all-round entertainer, kicked the crowd into high gear with his mix of good dance tunes and hilarious songs if lost love and farm animals. ("I've got a cattle prod" is a personal favourite.)

About 65 hardy ski addicts (or party animals) - of whom some 50% were Science students - turned out two weeks later on February 2nd at Cypress Bowl. A more exclusive group than that at Grouse braved temperatures below minus 15 degrees and frozen water pipes which closed the indoor washrooms, forcing the use of outhouses on the slopes. Conditions were a bit on the icy side but some fresh powder made some slopes quite nice. The races were followed by a treasure hunt (for 40 oz. bottles of tequila) and a mogul competition in the afternoon.

Later in the day it warmed up a couple of degrees and two lunatics were seen sunning themselves under one of the chairlifts. (Donations to the Canadian Hypothermia Research Foundation in lieu of flowers, please.) All survi - er, skiers - retired to the Sandy Cove Pub in West Van for a Mexican theme fiesta. A great buffet of nachos, burritos, do-it-yourself tacos, and salads was consumed and certain participants were verbally abused for hogging all the burritos. Nearly everyone present got a door prize. Kathleen Stormont won the women's advanced category after being accidentally moved up from the intermediate category. Other Science students took other categories, but their names and placements have temporarily escaped my mind.

Pt. Grey By-Election

In order to vote in the April 26, 1989 Pt. Grey provincial byelection, you must register to vote before polling day.

A registration centre will be set up in SUB and at other locations. Contact the local Elections Office for more info. Pt. Grey area residents only.