Dup-

The 432

UBC Archives Serial

SCIENCE UBC

The Newspaper of the Science Undergraduate Society

Volume 3, Number 7 THE NEWSPAPER FOR SCIENCE STUDENTS November 29,1989

The Science Behind Santa Claus

by David New and Aaron Drake

Most readers will be familiar with the reported evidence on the Santa Claus phenomenon: A pudgy gentleman dressed in red and bearing a sack travels by animal-driven sleigh around the world each December 24th, delivering presents to each of the billion-odd children currently in existence. He subsists on an inordinate amount of Oreos and milk, and returns to far above the Arctic Circle to manufacture another year's worth of supplies.

How can this be accomplished? The details seem completely incompatible with observed scientific reality. But The 432's intrepid team of staff reporters has compiled this intensive report, showing that far from being a scientific impossibility, Santa Claus in fact operates exclusively within known theoretical principles, although at a much higher technological level.

At press time, our letters to Claus and his wife Eleanor (North Pole, District of Franklin, Northwest Territories, H0H 0H0; the street address for personal correspondence is harder to come by) had not yet resulted in a telephone interview, but hopes are high.

The night of December 24th is some fifteen hours long, being just three days after the winter solstice. But after time zones are considered, the total time during which Claus journeys annually is found to be thirty-eight hours — from 4:30 pm in Fiji to 7:30 am in Hawaii. This eases matters significantly.

One still might think it difficult to travel around the world, stopping every few houses, in a mere thirty-eight hours, and one would be correct. Claus exploits special relativity: next to no time is spent in transit.

What propulsion system does Claus use to achieve such acceleration? Surely the accounts of ruminant towing are spurious. Eight arctic mammals could certainly not account for relativistic velocities.

Additionally, one would ask exactly how eight reindeer towing a large fat man, his sleigh, and enough toys for every single child (excepting the bad ones) in the world, or at least in modern western countries, might be able to fly through the air. Numerous studies have shown that reindeer do not have wings, Even if they did, they would need a collective wing area of twelve acres. How do reindeer fly?

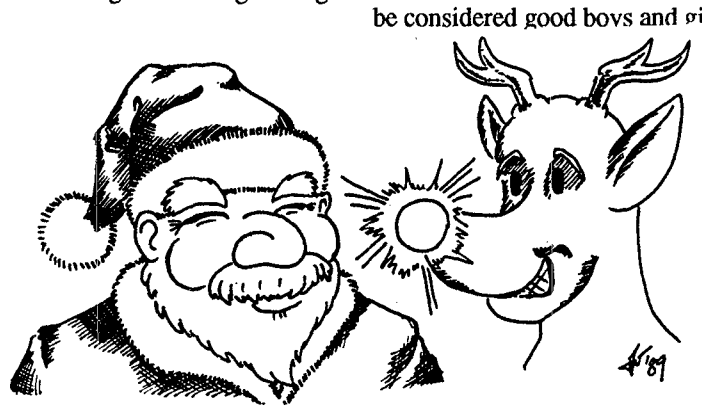
The truth is, reindeer, don't fly. They float. Their bones are hollow and filled with hydrogen, giving them a natural buoyancy. Only the ingestion of large quantities of water or snow (hence their north pole location) can the reindeers be heavy enough to stay on the ground. Thus, on the twelve days before Christmas, Santa dehydrates the reindeer until they can float.

Actually, of course, the number of reindeer is nine. Rudolph's position at the front of the team, unpaired, serves a greater function than merely a night-light. His nose acts as the heat dissipation system for the circuit, broadcasting in all wavelengths but most noticeably in the energetic infrared. This emission of intense radiation from the nose is termed nasal bioluminescence.

The intense heat produced is a result of the fusion processes inside the reindeer bodies. The hydrogen in the bones seep into the stomach where they fuse together to form helium. The intensely energetic helium particles are ejected from the body (the scientific term is nuclear flatulence) and this gives the reindeer their propulsion, accelerating the sled to relativistic speeds.

Of course, the reindeer are fluffing out helium nuclei at high rates. Helium nuclei is alpha radiation. Santa is situated right behind the reindeer, and so he must protect himself against the high dosages bling a waveguide (ie a chimney) wherein the de Broglie wave representing Santa is guided up the chimney to the top.

The enigma of Santa is not in his distribution and delivery system, though. The enigma of Santa is in his information retrieval system. Not only must Santa receive and sort through millions of letters each year, he must assign specific toys unique to each child. On top of that, Santa must keep a continuous 24 hour observation of each child to determine who is being good and who is being bad. His methods, sadly, are a trade secret, but some routines have been discovered. For families with multiple children, a parent is monitored instead of the child, and is observed for undue stress, irritation, or verbal slips wherein the parent reveals that their little angel is really a brat. The monitoring seems to be done by the many elves of Santa, in the ten months before Christmas. It seems, therefore, that at the time that Santa's elves are busy building toys in the short time before Christmas, children are free to wreak havoc, and still be considered good boys and girls.



of radiation. This is why he wears his suit. It is more functional than aesthetic. Santa is not fat; his great swarthyness is due to lead shielding surrounding his body.

A theorem, proved in 1987, states that any two topologically identical items can be sliced into a finite number of pieces, and reassembled into each other — a cube into a sphere of equal volume, an icosahedron into either, even a cube into a double-cube, of double the original volume! This counterintuitive result is the basis for Claus' sack, wherein, the topology of the inside of the sack is similar to that of a Mikkorski bottle, which allows for topological violations. Hence, due to the extreme curvature of the space-time inside the sack, the volume is much greater than the surface area. Therefore, Santa can fit enormous amounts of toys in his sack.

Let us now turn to the phenomena of chimney travel:

The soot molecule was recently isolated from a SUB cafeteria donut. It was only then that the process of "a wink and a nod and up the chimney he goes" was understood. When Santa lays a finger aside his nose, he is, in fact, snorting soot. This gives him the quality to quantum tunnel in various situations, most predominantly in a manifold space resem-

North Pole Dispute Spells Trouble For Santa

by Aaron Drake

The Hague - A sovereignty dispute threatens the serenity of Claus Enterprises, better known as Santa Claus at the North Pole. Both Denmark and Canada claim that the North Pole is part of their territories. If the case, which is currently before International Court, is resolved, it could cause the opening of a legal can of worms.

For decades, Claus Enterprises has produced copies of patented toys, with complete disregard for the companies. Toys like Cabbage Patch dolls are produced en masse and delivered free of charge to good little boys and girls all across the world. The real toy companies have protested for years that they are losing substantive profits due to this practise, yet Claus Enterprises has been untouchable. It has, to date, been considered in no country in which they could be sued.

If Canada or Denmark wins control of the north pole, it would mean hundreds of millions of dollars in taxes on elve's wages. As it is, there is no figures on the wages paid, but it must be substantive.

Labour groups, however, do not believe any wage guidelines are being followed. It is suspected that the elves are receiving much less than minimum wage, in what has been termed "Christmas Sweat Shops."

Labour trouble is not the only problem facing Claus Enterprises if they enter into a confederation. According to the laws of either land, they would be breaking the law by monitoring children across the world. This invasion of privacy is considered criminal trespass, and in violation of the basic human right to be free from spying. If that wasn't enough, Santa could be charged with approximately two hundred million separate break and enters in homes across the world on Christmas eve.

Yet all these potential problems fade in the face of a massive tax audit and police investigation into Claus's income. As it stands, Claus Enterprises gives away over seven billion dollars of goods every Christmas. Where the capital comes from is not known, and legal eagles are circling, waiting to move in for the kill. In the halls of justice there is but one thing whispered about Santa: *Drug Kingpin*.

Highlights

More Questions For Dan Quayle Page 5

Do you know how to spot keeners? Wild Campus Page 7

THE ALIENS ARE COMING! THE ALIENS ARE COMING! PAGE 6

Happy New Year

Editor's Comment

Some of the fondest memories of my maladjusted childhood are of Saturday mornings in front of the TV set. The only cartoon back then, and today, for that matter, worth a fat rat's haunch, was Bugs Bunny. God, nowadays, we've got My Little Pony, and She-Ra and all that commercialized Madison Avenue effluent. The stories mean nothing. It's the commercials that count now. But I'm off on an arm-waving tangent. I want to get back to *my fondest memories.*

I'd be out of bed, wide-awake, at six in the morning, come bounding down the stairs like it's the running of the bulls and sit myself in front of the set for the next six hours. I'd start with the Scooby Doo, and end at 12:30 with Fat Albert. In that time, I'd go through a box of Alpha Bits, half of it winding up on the rug in a neat little circle around my bowl.

But I'm STILL digressing. The best part was at 9:30 when the Bugs Bunny Road Runner Hour came on. Sometimes, dad would get up about then and come out and watch some of it with us, but he'd only watch the Coyote chase the Road Runner. There I'd be, sprawled on the shag carpet, coming down off of a sugar high, and my dad would be in jeans with no shirt, standing, laughing like the Coyote was the funniest thing on earth.

But I hated the Coyote. It was the only thing on The BBRRH that I disliked. I couldn't figure out why *he* thought it was funny but *I* didn't. So I'd pretend to like it, even when he wasn't around.

I'm older now, and I'm wiser and bigger, and I don't spill half as much Alpha Bits as I did. And I still don't like the Coyote.

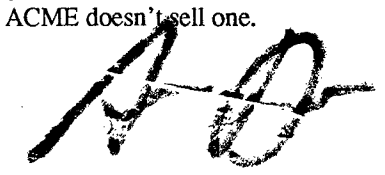
Really. The Coyote is deranged. Any number of shrinks would have committed him by now. The guy's an obsessive compulsive. Why else does he risk life and limb to catch the road runner? Listen, Wile E: *order a pizza.* There's no meat on that bird, anyway.

That road runner isn't exactly playing with a full deck, either. He should be locked up too. He won't give the coyote any peace. How many times have you seen the coyote, stressed out, by the side of the cliff, waiting with a rocket sled or something for the road runner to run by on the road below (usually about six thousand feet below - what desert are they in, anyway?), and the road runner sneaks up behind the poor coyote, goes "BEEP BEEP!" and the coyote jumps in total shock over the side of the cliff? That's sadistic. the bird loves all the attention. He revels in the poor coyote's plight.

I hated that bird. I used to fantasize at night about helping the coyote catch that crazy road runner. And there was no fooling around on my part either. I mean, how can Wile E. Coyote call himself a super-genius when he doesn't even comprehend the fact that if you jump up and down on the top of a large safe to try and make it fall, you're going to fall with it? So, in my fantasies, I'd set him straight, mainly by drawing up sophisticated airstrike plans wherein the Road Runner is napalmed by an F-16. My mistake, of course. Being a child, I didn't know that Road Runner have only three natural enemies: falling grand pianos, giant Road Runner Killing Robots, and the standby generic cartoon device, TNT.

What kind of job does the coyote have anyway? It's obviously not in the service industry, because this takes place in a desert where the only inhabitants are the coyote and the road runner, save for the occassional truck or traind that runs over the coyote. I aks this because I've always wondered exactly where he gets the money to pay for all the stuff he buys from ACME. A friend suggested that he intercepts retired pensioners deriving through the desert on their way to Florida. In the back of Wile E's cave is about six dozen RV's. Someone else suggested that he's a sales rep for ACME, and they keep sending him demo material, but that makes no sense. Who does he sell to? The road runner. Someone else thinks he's livng off an inheritance, but how did his father get all that money? I personally think that Wile E. Coyote is the owner and president of ACME. That's right, he's an eccentric tycoon, not unlike Howard Hughes.

Why doesn't Wile E. buy a good 12-gauge shotgun? Probably because ACME doesn't sell one.



That's it. From me and all the gang at SUS. Th-th-th-that's all folks. Christmas is here, exams are here, and this is the last issure of the year. Wait a sec. This is the last issue of the decade. Is that significant or what? I'm getting all choked up. Good on ya to all that helped out. Sooner or later I'm gonna bait the people out there that I've been trying to bait. Oops, gave myself away. Merry Christmas.

This was originally submitted for Questions For Dan Quayle. It isn't exactly in the spirit of that piece, but it was too good to leave out.

What's this "imaginary number" business? Most of us have enough trouble with real numbers. Now you tell me that nothing times nothing equals something. Isn't this the same as saying nothing plus another number of nothings equals something? This can be refined further to: you can get something from nothing! Huh!

Is calculus a form of birth control? Since Isaac Newton invented calculus and all sorts of wonderful ideas, people have been trying to emulate him. Many people thing that Newton was the greatest thinker of all times and wish that they could be more like him. One catch, guys, Newton died a virgin! How can you believe a man who tells you how the universe works, but doesn't know how his own body works?

Brian Erb
Science 1

Newton was a mathematician. No wonder he died a virgin.

Law of Hydrodynamics: When the body is immersed in water, the telephone will ring.

This, along with two other I. N.Steins in this paper are reprints. Please let us explain why I.N. Stein is not on the front page. It really isn't our fault. Ken Otter was hit by a meteor while jogging naked with Immelda Marcos on the Bay Bridge. We think. Okay, we're making it up. Ken didn't submit anything this week, and we're all very worried. We've notified the local authorities. Ken? If you're reading this, then please keep hope. We all want you to come home. Scott thinks you're just in some drug indiced haze right now, but we know better. It's probably alcohol. Come home, Ken. We miss you. Supper's getting cold. You owe me money.

Okay. Okay. Um, um, um....Okay. This is a, um, a....what?what?- a Macintosh SE called,uh, **Lucifer**! Right. Okay, uh...I think we have a...oooh! oooh! I know this one! Wait...don't tell me! It's a..a...It's a Beast? I mean, it's a **Beast**! Yeah! A 60MB hard drive. I got it. Yes! This is the 432. That's the way it was - huh? Not yet. Oh. Okay.

SUS
c/o Dean of Science
Room 1507, BioSciences Bldg.
University of British Columbia
Vancouver B.C.
V6T 1W5

That's the way it was, Volume 3, Issue 6, Wednesday, November 29

Editor: Aaron C. Drake

Writers (and contributors): David "Guts" New, Tanya "Guts" Rose, Devan "Guts" Fauste, Aaron "Guts" Drake, Ari "Guts" Giligson, Orvin "Guts"Lau, Elizabeth-"Guts"-Anne "Guts" Brown, Derek "Guts" Miller, David "Guts" Falk, Morgan "Guts" Burke, Patrick "Guts" Redding, Tim "Guts" Lam, Kurt "Guts" Preinsberg, Brian "Guts" Erb, Scott "guts" Davidson

Artists: Ken "Fingers" Otter, Aaron "Fingers" Drake, Clement "Fingers" Fung, C. "Fingers" Quan

Layout/Pasteup/Proofreeding: Elizabeth-Anne "Crazy Horse" Brown, Aaron "Quiet Waters" Drake, Derek "Coyote In Heat" Miller

Printed by College Printers

That's it for this year kids. Thanks and all that melancholy stuff. Everybody get out of my house and go sing christmas carols. Because it's the season to be jolly after you finish your exams. Oops, did I say something wrong? How 'bout this: The 432 recognizes no sovereign king, but instead quietly jams about campus, sponsored by the wonnnnderfull SUS and all that. You've heard it before. All material is copyrighted in the name of the author, or else in the name of Aaron Drake. Rock and roll. Next year we'l need you all to come in and say something funny or controversial. Otherwise, God is gonna call me home. Does anyone read this stuff? If you read this far, come in and tell me, and I'll buy you a beer. There's over four grand of you out there. Doesn't anyone realize the clout you have, as one unified voice. Boy, if everyone ordered pizza all at once...

c 1989, The 432

Ho Ho Ho. Merry Christmas. Good Luck to you all on your exams. Thanks to Don for his enthusiastic input for Dan Quayle. Dono, the Quayle would be proud of you. Thanks to everyone for reading this year's 432. hopefully, next year will be better. But that's up to you little people out there. Thanks to all the nymphos of the world. I think. Where are you all hiding. Thank you George Harrison, there's something in the way you moved me. Thank you Paul McCArtney, next time buy your pot when your IN Japan, okay? Thank you Ringo Starr for not coming over to my place and singing, because GOD do you have a voice that's worse than a fat pig farting. Thank you John Lennon for marrying Yoko Ono and saving someone else from the fate.

MERRY CHRISTMAS

Dik Miller, Campus Cowboy

(Continued from November 15)

Let me get one thing perfectly straight: jail sucks. Especially when you haven't been tried yet, you were framed, and really have very little idea as to what's going on. I was sitting, quite disconsolately, on a bare metal bench, staring listlessly through the iron bars at the guards beyond.

"What are you in for?" I asked one of the men interned with me.

"Smuggling," he replied snappily.

"Oh? Smuggling what?"

"Jumbo jets."

"Hmm. Er, how do you smuggle a jumbo jet?" I feared the reply.

"Very carefully."

My worst fears were confirmed: this man was not only a smuggler, but an amateur comedian. I turned my attention to another cell mate.

"How about you?" I inquired.

"Drugs."

"Oh." I didn't want him to get into grisly details.

"I was a pharmacist at Save On Foods and Drugs, and someone discovered that I never got a degree in Pharmacy. I'm so ashamed."

And so you should be, I thought. *Of all the things to pretend to be, who would be dull enough to impersonate a pharmacist?* "That's too bad," I said, not very convincingly.

Somone else piped up. (Hey, there were a lot of people in this jail cell, okay?) "You keep asking all of these questions. What are *you* in for?

"Seshwl rismnt," I coughed into my hand.

"What was that? Szechuan raisins?"

"Seshwl rismnt," I mumbled.

"Seashell-rinsed mints?"

"Sexual harrassment," I said quietly.

There was a loud rumbling and scuffling of feet as everyone immediately shifted over to the far side of the room. "Hey, man," said one. "I'm not sitting next to a perv."

Great, I thought. *Just great. I go into the Pit to buy a burger, some woman accosts me and then accuses me of sexual harrassment, and now I've just alienated the residents of psycho central. What a pain.*

"Miller," announced a guard with a clipboard as he came striding up to the gate in the cocky way that only people who are separated from you by impenetrable iron bars can do.

"That's him," said one of the internees. "He's the sicko pervert slimebag who pawed that innocent young thing."

"You don't even know anything about it!" I protested.

"I'd rather not," he barked. "I know what kind of things you creeps are into and, frankly, the whole thought of it makes me want to vomit."

"How nice for you," I sneered.

"Pipe down!" shouted the guard. "It says here, Miller, that the woman who had you arrested has dropped all charges. You are, as they say, free to go."

"No! No! He's guilty, I tell you!" cried the ersatz pharmacist.

"Fry him! Give him the chair!" railed the jet smuggler.

The guard ignored them and opened the gate. "Your personal belongings are at the front desk. Consider yourself lucky, Mr. Miller."

"I hope you get hit by a street sweeper!" yelled one of the jail occupants. Then they all began chanting "Die! Die! Die! Die!" as I left the room.

I was in a bit of a tizzy and the chant was still echoing in my head hours later when I drove up to the Traffic and Security HQ on Wesbrook Mall. As I drove, "Die! Die! Die!" had been warped by my mind into various odd combinations, but it wouldn't go away. Now I was hearing "Rye! Rye! Rye!" as I parked the souped-up, stripped-down, lean-mean-no-I'm-not-a-criminal-machine royal blue Chevy Bel Air.

I stumbled in the front door and nearly fell over my supervisor, who was bent down, squinting at the floor.

"Hello, sir," I said. "What are you doing?"

"Looking for my contact lens."

"Oh, I'll help." I began walking about the room, and within seconds there was a loud pop beneath one of my feet.

"Nicely done, Miller. By the way, you're fired."

"What?! For breaking your contact lens?" I was aghast.

"No." He shook his head. "In the past month you have incited an environmentalist riot on campus, gotten yourself in hospital, caused a police investigation of ozone depletion in the Chemistry building, and had yourself tossed in jail on sexual harrassment charges. You're too much trouble. Leave me your keys and uniform and get out. And scrape that contact off your shoe. I need it to get my insurance for a new one."

I looked at him blankly.

Let me get one thing perfectly straight: life sucks too.

A very happy season's greeting to the big Dik. Hey bud, I hope Santa leaves you some donuts. Maybe a walkie-talkie or two. Dik Miller is written by Derek Miller. Dik Miller...Derek Miller. DIK Miller...DEREK Miller. Hmmmm. Lemme try this again, only slower: DIK...DEREK. Ahah! There's a link here. I swear.

"If you're not confused, your not paying attention."
Wall Street Week

Year Rep Positon Available.

The SUS is looking for 2 fourth year reps and 1 third year rep. The positions will be by appointment (you don't have to campaign-you get in automatically) by the SUS council

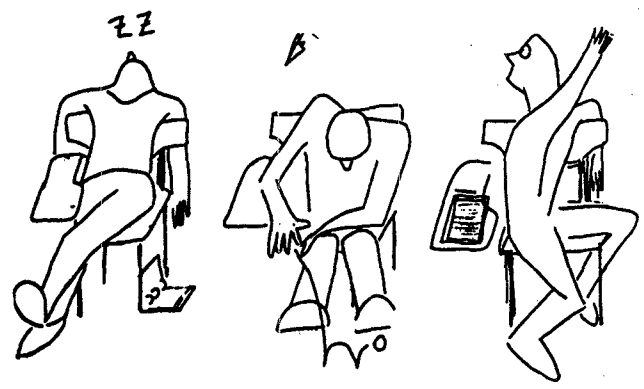
For Details, call SUS (Chem 160) 228 -4235.

Yawn

The SUS is revising its constitution

Anyone interested can see the revisions in the SUS office.
Contact Ari if you have any constitutional suggestions or if you just feel like dressing up in black underwear and discussing Chaucer.

The Back Row



by Elizabeth-Anne Brown

The process of marking. It seems to be a highly random process requiring creativity and ingenuity. This fact reared its ugly head most recently when my English proffessor explained his highly developed scoring system to the class a little over two weeks ago. I'm still trying to figure it out.

It seems that there is an alphabetical basis to his method of evaluating student's work. This system appears to be very simple on the surface but it does have some very complicated twists. Everything seemed just wonderful when he stood up and proclaimed that the letter grade letter grade "A" on a student's essay implied that the student had done a "slightly better than satisfactory" job on the essay. He then proceeded to assign a numerical value of 120/150 to this letter grade. This is in fact reasonable I suppose; however, it confirmed my suspicion that it was not possible to obtain a score higher than 120/150.

Next, a category of rather vague "B's" was introduced. This category appeared to have onbly three sub-categories: B+, B, B- (corresponding to 115, 110, and 98 out of a possible 150 points). The other categories, utilizing the letters C, D, and F were presented in a similar matter. No real surprise here.

It wasn't until the introduction of the famous "subjective trio": +, -, and /, that I decided that this was getting silly. In this course it is entirely possible to earn a score of B—(+). Now what does that mean? How does the number 101.5/150 sound? Well actually this number has to be divided by 2 because this is a 1.5 uni English course. I laughed when I was told. I couldn't help myself.

What is wrong with using numbers? Mos of the university community has beer using them with some success for quite some time now. At the risk of becoming the class scapegoat for the rest of the term, I suggested a numerical approach to this marking system, and have now foolishly singled myself out as the only Science student in the entire class. This could have devastating ramifications.

Seriously though, wouldn't it be easier to toss all of the essays onto a busy highway and grade the papers according to the brand of tire print? An "A" would mean that the student's essay was run over by a new set of Pirelli's and a bald print would indicate an "F". Oh and in case you were wondering, a grade of 50.75/75 would be a 50% worn Michelin print with a dead Maple leaf stuck to the paper. (The paper has to be ripped in half of course, it's a 1.5 unit course). This system would be a lot easier to interpret. Give me a break.

Elizabeth-Anne is sore ate her profs. Merry Christmas, E-A. I'm going to buy you a lump of coal for christmas. What's that? You already expect that from Santa. Oh fudge. I'll just get you a fried lizard sundae, then. Ho Ho Ho. Seriously, thanks for helping paste up the last 432's of this decade.

Happy New Year

That's Trivial

by **Tanya Rose**

Hello again! Last issue, we had something on BC, so let's try and bring this one a little closer to home. Good Luck!

Theme: Vancouver/Lower Mainland

1-10:Easy
1. What is the island under Richmond?
2. What's the longest street in Vancouver?
3. What Vancouver beach was listed by Lifestyles of the Rich and Famous as being in the world's top ten?
4. Where is the provincial park nearest to Vancouver?
5. What is the current vacancy rate in Vancouver?
6. What is the tallest building in Vancouver?
7. Where is the mermaid statue in Vancouver?
8. Which city has the highest millionaire density in Canada?
9. What were the original colours of the Vancouver Canucks?
10. How many white pages are there in the Vancouver Phone book?

11-15: Medium
11. Who bought Vancouver's fireboat?
12. What was the first town in B.C.?
13. What famous ship sunk where the Lion's Gate Bridge is now?
14. What was the first capital of B.C.?
15. What famous captain was Captain Vancouver a midshipman for?

16-20: Hard
16. What was Point Grey originally called?
17. What were Sheba's Pups?
18. Who was the first European to set foot in the lower mainland?
19. What was the first industry in what is now Vancouver?
20. Who was Tillicum?

Bonus Question:
This infamous indian lived near Siwash Rock, in the late 1800's. He was rumoured to have killed over a dozen prospectors. What was his name?

Answers on page 8

CommentAri

by Ari Giligson, SUS President

Friday Night November 16th, about 200 of us got together in SUB Ballroom, did some dancing, did some drinking and mostly had a good time. By all reports, the band (**XYZ**) was good and most people enjoyed themselves (Except perhaps Yen - Next time get there earlier than 11:48pm, Yen.)

Yet, I was not totally satisfied.

It was not for the lack of 70 people required to break even that made me unhappy. After all, the crowd still managed to reach critical mass. But, when I considered that only 5% of our entire undergrad society thought it worth a paltry $5 to show up, I was dissatisfied. To those of you who were there I thank you for realizing the value of social events in the students life and also for keeping the party going even with a modest crowd of 200 people (Special thanks to Sheryl from Biochem who got people out on the dancefloor).

Did the rest of you feel that your fellow Science students were not worth socializing with? Did you feel that you couldn't spare four hours from your valuable schedule to loosen up and relax? My strong opinion is that every one of you should come out to at **least** one SUS social event this year (This *Bachelor's* degree!). For those of you who had 30-page papers due on Monday, I sympathize - but only so long as you spent Friday night working on them.

And now that you feel deeply guilty and ashamed, here is your chance to redeem yourselves: **The SUS has been challenged by the other Undergrad Societies on campus to raise food and donations for the Vancouver Food Bank.** Bring non-perishable food to either: The SUS Office (Chem 160) or to your local Science Club office or look for drop boxes in SCIENCE Buildings. Any cash donations go straight to SUS Execs only. Hurry! The challenge ends on Dec. 1 - and the final count will be in SUB concourse. *So bring your food tomorrow* - it won't go on your resumes but you will help some people in Vancouver who are less fortunate than us.

So once again, Thanks:
To all of those who made the dance possible;
All who came Friday noon to help lug the band's stuff upstairs;
To those who stayed till 2am. to help lug the band's stuff downstairs;
To the Microbi Club for doing security and to the members of Physsoc who worked the bar;
And a special thanks to Antonia Rozario who had a term paper due the day before the dance, yet managed to co-ordinate the entire function.

Good Luck on Exams (I know I could use some) - See you next year.

Merry Christmas, Ari, ya big Lug, you. If you don't make it into Med School, I hope you realize your other life's vision: a guard for Boston Celtics. Otherwise, you'll probably end up as one of thosepeople who wear two different sneakers, and hold tin cups out for spare change. Just kidding. Sort of.

A Scientist's Responsibility Part II

by Kurt Preinsperg

Principle of Scientific Responsibility: "If, in your role as a scientist you function as a link in the casual chain leading to harm, then you are morally responsible to the extent that you have the capacity for refusing cooperation."

Could and should scientists accept such a principle?

A scientist may respond: "But surely, there's no special duty for scientists to be better than the law requires us to be."

It is, unfortunately, a myth that the net of the law covers all cases of serious irresponsibility. In a corrupt society the state of the law reflects this corruption, and moral obligations may exist where there are no corresponding legal obligations. Accepted social roles - that is, completely legal and well-paying jobs - may be utterly indefensible from a moral viewpoint. A large proportion of jobs in our society today arguably involve immoral aspects, and jobs in science are no exception.

The best way to tell if something is morally irresponsible is not to rely on lawyers and lawbooks, but rather to ask oneself some searching questions: Would I want to see others, in similar circumstances, act in this way? Would I want other people to treat me as I'm treating them? Can I foresee human unhappiness as a result of my actions? Honest answers to such questions are the stuff moral responsibility is made of.

And because of the terrifying power of science and technology to shape everyone's life, scientists do have a special duty to prevent potential harm arising from their work. The world would be a considerably better habitat for human beings if, for example, scientists refused to develop projects which incorporate planned obsolescence, if engineers would rather quit their jobs than omit important safety features in cars or airplanes, or if both scientists and engineers refused to cooperate in the development of diabolical weapons systems.

"But," scientists will continue, "as a rule we can't predict the ways in which scientific findings may later be used for good or evil, or what long-term impact they may have on society at large."

It seems to me that many, or even most, disastrous consequences and evil applications of scientific findings can be foreseen at some stage, possibly at a very late stage when part of the harm has already occurred. It is never too late for a responsible scientist to refuse cooperation, and blatantly immoral to argue, as military scientists sometimes do, that because the arms race is already out of control, refusing to cooperate would be pointless.

But adopting the Principle of Scientific Responsibility would clearly not be a panacea. The large-scale, long-term impact of scientific research on the world as a whole is largely beyond the intellectual grasp of the individual scientist and requires discussion in the political forums as well as radical measures - such as, for example, a general redirecting and possibly slowing down of scientific research.

The scientist may continue his or her defense: "If there's a misallocation of resources in our society - institutionalized evils like excessive military spending - it's up to voters and politicians to correct the situation. Of course, I'd much rather live in a world without nuclear weapons, planned obsolescence or environmental destruction, but all these things can be justified in terms of national self-defense, the profit needs of business or the need for economic growth."

In general, allocation of resources is a political matter, but in many cases - military spending is a perfect case in point - the power of vested interests has grown so immense that most political leaders succumb to them. It is the height of hypocrisy when the same scientists who, via their entrenched interest group, pressure the government into funding military projects, reproach the government for misallocation of resources.

Even in many other cases a scientist is often in a position to call misallocations to the attention of voters and politicians. It is a pernicious thesis that responsibility for bad decisions rests entirely with the people at the top of a hierarchy, such as the board of management or governments. The alternative thesis I would defend is that responsibility is always distributed along a chain of command in such a way that everyone shares in it to the extent that that person is conscious of the potential harm and capable of refusing cooperation.

Although I do not believe in a moral reality analogous to the physical reality scientists study, harmonious social cooperation for mutual advantage requires agreement on principles of cooperative behaviour - in other words, a morality. The course of historical events often creates the need to reform or refine old-fashioned moral principles. We have reached a point in history, I believe, when the old principles governing scientific practice are clearly inadequate.

The Principle of the Division of Moral Labour - that the business of scientists is simply to create knowledge and not to worry about the harmful applications of this knowledge - has made scientists into servants of commercialism and militarism and brought humanity to the brink of self-annihilation. I have offered, as an undogmatic alternative and impetus for discussion, the Principle of Scientific Responsibility.

We must reject the excuse of may scientists that they are too busy with purely technical problems to concern themselves with complex moral questions about the harmful social consequences of their work. What is necessary - and woefully neglected right now - is to train morally sensitive and enlightened scientists who refuse to knowingly function as links in causal chains leading to harm. The goal must be to convince scientists that technical success purchased at the price of moral myopia is really bad science.

To conclude with a somewhat personal statement: I love science, but science, as practised today, is largely commercialized and militaristic. It is devoted to spurring on senseless overconsumption with ever new titillations and devoted to setting the global stage for a universal conflagration. The neglect of ethics in science education is a terrible social misfortune. Instead of instilling respect for humanistic values in young scientists, the current study of science instils in them a contempt for "fuzzyheaded" ideas which cannot be observed or quantified.

When the vice-president of one of Canada's largest mining companies gave a talk to geology graduate students, he was asked what hopes there were for getting the mining industry out of its slump. He said, very seriously:"Well, another war. We need a war. We loved the Falklands war, because there were sinking ships. A lot of metal gets used up that way."

It is appalling how today's scientists and engineers, enamoured of their powerful machines and techniques, have almost completely lost sight of human ends and human problems which bigger machines and fancier computers cannot solve. Given that science and its cancerous technological offshoots determine more and more the shape of our daily lives, the conclusion is frightening: we have delivered ourselves into the hands of technical experts, most of whom are moral cretins.

MERRY CHRISTMAS

More Questions For Dan Quayle

by Aaron Drake, et al

What would happen if Pinochio said, "My nose will grow longer?" Would he explode?

Is the road runner a boy or a girl?

Why doesn't the Tasmanina Devil get dizzy?

And Yosemite Sam. There's a guy who gets around. Cowboy, pirate, confederate soldier, miner, poacher. Wow.

Where is Effigy and why are people always being burnt there?

If houses were triangular, what could you put in the corners?

Why is *abbreviated* such a long word?

If Casper is the Friendly Ghost, where is Casper the Friendly Kid buried?

Oriental Flavor Noodles. That's discriminatory, Why isn't there Negro Flavor Noddles? Or Native Indian Flavor Noodles.

Oooh, I'm gonna catch hell for that one.

What about Torontonian Flavor Noodles? Would it taste like pork?

Are mermaids mammals? If so, the bottom half must be like a dolphin's, yet they have scales. God? Hello? Are they all Pisces? Aquarius?

Why do they call them typewriters? They don't write. They print. I mean, come on...

Why do sneakers squeak? It defeats the purpose.

Here's a real contradiction of terms: *professional engineer*.

And fluid statics...

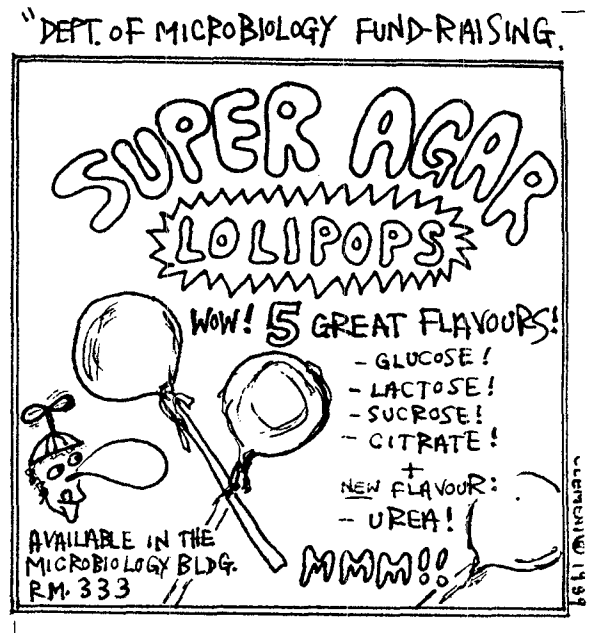
Does anybody buy a tabloid for any other reason than to laugh at the morons who buy these tabloids? It's a scam, I tell you.

Why do they always say that you have caught a cold? Who actively goes out and hunts colds? No one! We don't catch them, they catch us! If we caught the cold, then why are we in such a hurry to lose it again?

They want to change postman to postperson. Isn't that the silliest thing you've heard of. What's next? I guess we'll have to change manslaughter to personslaughter, mankind to personkind, manipulate to personipulate, manage to personage, demand to depersond...

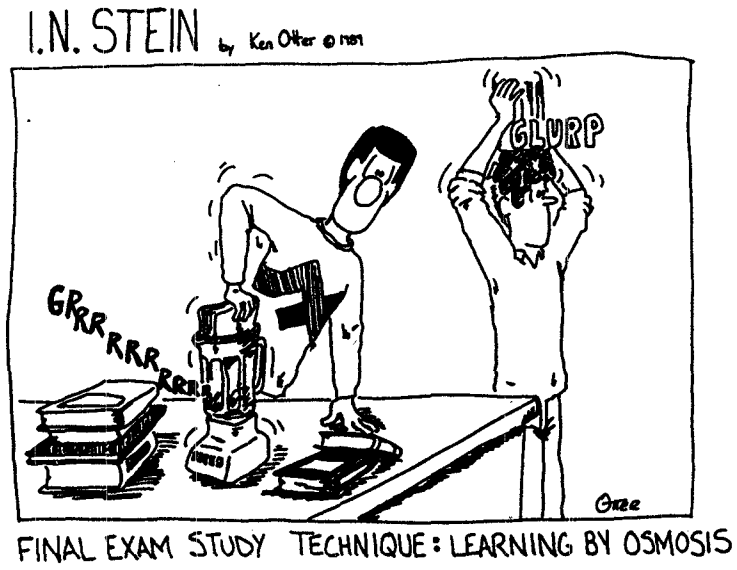
Why can't Siskel and Ebert agree on anything? They give me a royal pain in the wazoo.

Why do the meek get to inherit the earth? They don't deserve it. Who gets to will it to them. Hold on a second...the meek *will* inherit the earth, but only after the bold are through with it.



Due to gross oversight caused by mid-terms, nobody mentioned the
results of the rep elections. Here are the reps, both the ones elected and ones in by acclamation:

Biology/Aquaculture	Lloyd Jeffs
Biochemistry	Loveleen Lohia
Chemistry	Sylvia Cho
Computer Science	Yvonne Lee
General Science	[vacant]
Geography/Atmospheric Science	[vacant]
Geophysics/Astronomy	[vacant]
Mathematics	Mira Bajic
Microbiology	Adrian Abdool
Oceanography	[vacant]
Pharmacology	Phil Edora
Physics	Caireen Hanert
Physiology	Pam Sproule
Psychology	Joe Wu
4th Year	Trent Hammer
	[2 positions vacant]
3rd Year	Louisa Dickinson
	Todd Donnelly
	Tim Lo
2nd Year	Kelly Guggisberg
	Hugh Leung
	Kande Williston
1st Year	Barry Johnston
	Orvin Lau



UBC SCIENCE TEACHING EVALUATION QUESTIONNAIRE

Improved teaching and learning comes from finding out how you feel about the course and its presentation. Your instructor will appreciate sincere answers to the following questions. Use the back of this sheet to continue your comments where necessaary. You may wish to print you comments in order to avoid recogniotion of your handwriting.

COURSE: **INSTRUCTOR**

IMPORTANT
Please rate from 1 to 5 according to how much you agree with each statemen 1 meanst that you completely disagree, while 5 means that you completely agree.

PLEASE ANSWER ALL QUESTIONS

THE INSTRUCTOR
1. The instructor speaks clearly and audibly....
2. The instructor dresses shabbily...
3. The instructor has dandruff...
4. The instructor habitually scratches his privates...
5. The instructor bores the hell out of me...
6. The instructor must be on drugs...

THE COURSE
1. The course bores the bejesus out of me...
2. The text is about as useful as tits on a bull...
3. The text was written by the instructor solely to cash in on royalties...
4. The only reason I'm taking this silly course is that it's a prerequisite...
5. The Labs are scheduled by people on drugs...
6. The T.A. hates undergrads...

The First Law Of Homework

For every right answer obtained, someone will obtain a wrong answer

The Second Law Of Homework

The amount of homework in the universe can only increase

The Third Law of Homework

The amount of homework expands to fill all available time

The Fourth Law Of Homework

Homework is carcinogenic

Happy New Year

Science Week is showing Bladerunner and The Abyss. Science students can get in for $2. Come to SUS for more details

Mars, Martians, and all that

by Morgan Burke

Extraterrestrial intelligence is always a fascinating subject for speculation, but is particularly prone to distortion and outright fabrication by a shoot-from-the-hip, self-proclaimed UFO experts. This thankfully small group always seems to get far more exposure than they warrant, largely due to their extremely sensational claims and speculations, which are presented as fact to an unsuspecting public. Their ideas are often made to seem more credible when they refer to themselves as 'scientists'. This title is becoming disturbingly synonymous with 'sorcerer' in this age of complex ideas. As a rule of thumb, self-proclaimed 'scientists' are anything but: witness Political Scientists and Creation Scientists (not to suggest in any way that Political Science is as bogus as Creation Science; it's just not science...). Real scientists are nearly always known by their field (eg. Astronomer, Biologist, Physicist), as well as by their credentials (for example, Carl Sagan, Astronomer, Cornell University). But I digress. The reason for this tirade, is that a 'scientist' of no claimed field or credentials recently got onto that bastion of unbiased and rational comment, CBC's The Journal, and proceeded to describe how a certain land formation on the surface of Mars was, in fact, a message to us Earthlings from an alien race.

According to this gentleman, not only does this feature bear an uncanny resemblance to the human face, but numerous 'five-sided hills' and features in the surrounding landscape form a geometric pattern which actually points to the face! Unfortunately, trying to decipher the lines which are drawn across photos of the region to illustrate this amazing face is analogous to solving one of those "How many triangles can you find in this picture" puzzles you get on the children's placemats in Big Scoop restaurants. It's not obvious.

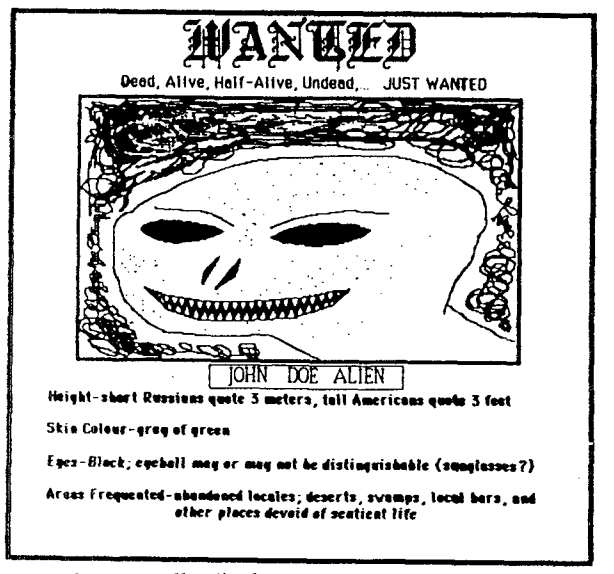
When first spotted in photographs by the Viking orbiters, planetary scientists at NASA innocently gave the 'Face of Mars' its suggestive name with no intention of implying the existence of intelligent extra-terrestrial sculptors. Predictably, however, there were those in the burgeoning pseudo-scientific and space-alien fringes who seized on the misshapen lump of rock and its gee-whiz name as an interplanetary beacon.

The evidence for this bold claim is as outlandish as it is weak. The notion that the face was constructed by intelligent creatures is just as erroneous as suggesting that the 'pictures' formed by the constellations were made by the gods to commemorate valiant heroes, or that the perfect circularity of moon craters suggests the action of titanic geometry students, or that nickel-iron meteorites are extra-terrestrial spaceships that melted during re-entry. Geographic features are so infinitely varied, it is not only possible but very probable that occasional anthropomorphic formations will be observed in any landscape. Human faces and heads abound in nature both on and off Earth, but for some reason these sensationalists don't trumpet the cosmic ramifications of the man-in-the-moon. Why should Mars be any different than Earth or any other planetary body in this respect?

There's actually an answer to that question. Mars has been a symbol of extraterrestrial life for centuries. The belief in the existence of an advanced civilization on Mars perhaps peaked during the time of the astronomer Percival Lowell, who lovingly detailed the canals and cities of the ancient and dying race of Martians. He performed his observations with a telescope, reading features into the Martian landscape which his contemporaries were strangely at a loss to find. We now know that Lowell's scientific ability became hindered by his almost religious belief in the existence of Martians, but it seems that some still have to learn his lesson.

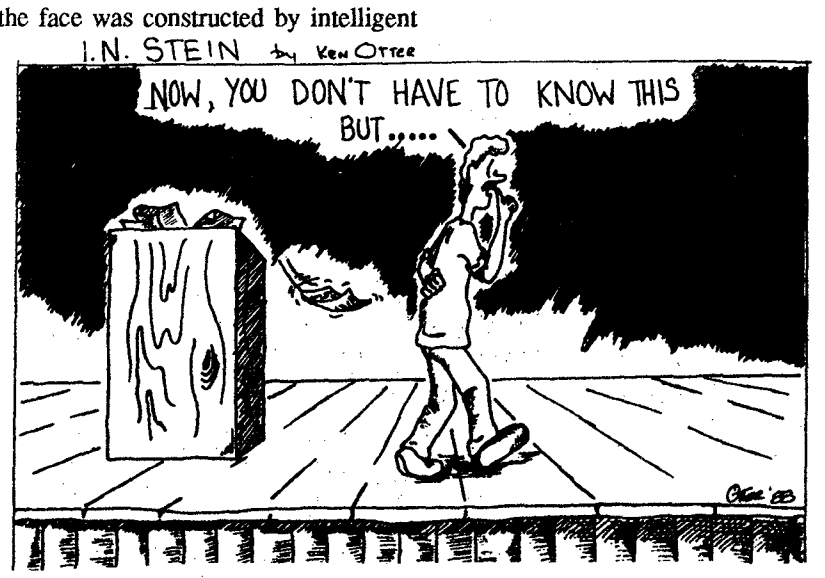
The mystique of Mars caused many (except the planetary scientists) to be disappointed when the data from Viking showed Mars to be dead. Unfortunately, over a decade after that spectacular mission, people are still resurrecting the Martian myth, certain that secret messages are hidden in the scientific data.

Besides, surely any extra-terrestrials worth their salt could build a better face than that! I've seen better faces on the butt-ends of coconuts, but I'm not going to call Carl Sagan over it. Any face with only one 'eye-socket' which shows up only under very oblique lighting, and a chin higher than either the nose or brow is certainly not the face of anything this side of Cubism. Those five-sided hills must possess a very subtle layout to display the two-fold symmetry and 'pointer' claimed by these charlatans. I fear these silly people are suffering from a Lowellian complex in their imaginative mental landscaping of Mars. And somehow they always neglect to mention that the photos of the face that they proudly display are enhanced considerably to bring out the human features: Mount Rushmore this thing is not.



SETI, the (real) Search for Extra-Terrestrial Intelligence, is struggling for funding but is starting to achieve the broad scientific recognition it deserves. Borderline UFO cults like these do it no service, and set back the cause of astronomers fighting the supermarket tabloid and pulp fiction perceptions of alien civilizations.

It's always nice to see science stories on shows like The Journal, but an effort really must be made in a public forum to distinguish between science fact and science fantasy. Even those who strive to stay within the boundaries of pure science can get swept up in controversy and debate which rivals that of any political forum. Contrary to popular belief, little in science, and especially the space sciences, is known absolutely; scientists are trained to always consider, present, and argue other opinions as a result. Journalists should know that balanced reports are necessary not only when covering social and political topics, but scientific ones as well.



The Science Food Bank Challenge

An inter-faculty challenge has been issued by the other undergrad societies to see who can raaise the most food and donation by Dec 1.

Bring Non-Perishable Food Items to The SUS Office (Chem 160) or Science Club Offices or Look for Drop Boxes in SCIENCE Buildings

Monetary Donations are appreciated, and can be given to any SUS Exec.

Hurry! - The Challenge ends Dec 1 Final Count at SUB Concourse, 12 noon.

UFO Psychology

by David Falk

The military (Canadian, American, Russian, so on) has been pursuing UFOs for years. In all, over three thousand UFO chases have been reported. Many of these chases were by the fastest planes - F-16's, MiGs, Blackbirds. Still, the UFOs have outrun their pursuers. Why are they running from us? Have aliines travelled billions of kilometers just to play hide and seek? If alines came a long way to visit, then why do they balk at contact?

Maybe the aliens aren;t particularly nice. Some poeple have claimed to be beateb, dissectd and reassembled without anasthetic, subjected to energy weapons, raped, or a combination of these, after being taken abouard an alien space ship. This isn't exactly the mark of a gentle race.

Suppose we asume that aliens exist and they think like humans. Then we've got to conclude that they have a sick sense of humor. Just imagine an alien cruising over the Nevada Desert at half the speed of light when it sees a telephone repairman in a pickup truck (it's funny - aliens like to target pickup trucks). The alien hovers over the pickup and decides to make a close encounter of the second kind. The hard way. It gives the truck as good shake with some advanced tractor beam mechanism - you saw it in Star Wars. The alien gets a few cheap laughs, then leaaves. Ir probably knows that the lower life form it's tormented will be psychology scarred, maybe batters. No one will believe him when he says that an alien shook his truck.

These aliens have been sighted numerous times outside of their vessels. If they are from another planet, then they might have more than a little problem adjusting to earth's conditions. The aliens sighted outside of their ships never had any special breathing apparatus or environmental clothing (for that matter, they usually have NO clothing). Unles their natural atmosphere is almost exactly like ours they are going to face some problems.

F.Y.I.
David Flak and Morgan Burke were kidnapped together and disected by Martians. Morgan liked it, but Daavid didn't. Nanoo-nanoo.

MERRY CHRISTMAS

Deep Thoughts

by Derek Miller

Have you ever written a really good paper, handed it in, got it back with a really good mark, and wished that somone besides you and your professor could read it? With 34,000 day students of various capacities at UBC, the number of assignments done each year is truly monstrous, and even if only a very small proportion of them are any good, and an even smaller proportion truly excellent, there must be several dozen, or maybe several hundred, absolutely wonderful papers produced. What happens to them? Doubtless many of them lie mouldering in notebooks (or in notebooks which are in landfills). A few may be submitted to some sort of publication such as *Arc* undergrad literary magazine, produced here at UBC. But how many people read that? Not many.

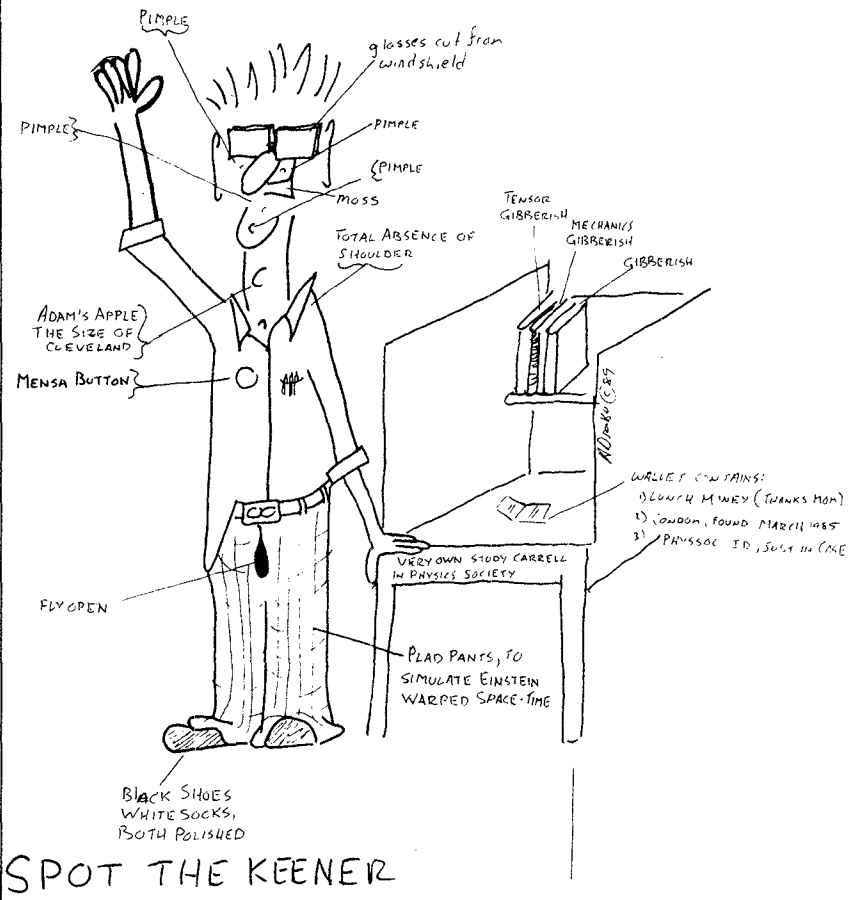
Even if the paper presents radically new ideas in an interesting way, it is likely never to be seen by a very large number of people? Yes, Science students, Engineers, many Artsies (particularly in fields like Anthropology), and others have journals that take submissions, but the chances of getting anything published are slim. Why? Because journals publish material almost exclusively from people who already have PhD's in their field. *Nature*, *Science*, or even *The Journal of Slavonic Studies*, if they received a submission from a lowly undergraduate student, would likely not even look at it. Even if they did, chances are that the ideas presented therein would not be in exactly the form they would like, and would be unprofessionally written. Rejection would probably be almost instantaneous. And what about people who write good papers in courses which are not in their major (ie. where their knowledge is limited), or in fields where journals or magazine are scarce or nonexistent?

My roommate suggested to me the idea of a national undergraduate journal. His opinion was that there should be some sort of forum for excellent undergraduate work in any field, which would take submissions from people who do not have a degree in the field of their submission - whether he or she is a professor of Microbiology writing on Greek thought, an Archaeology major turning in her or his term paper, or an elderly retiree synthesizing a life's hobby work translating Vietnamese historical texts. The journal could be structured as are most other journals, with a professional panel of reviewers for each subject which could either accept a submission, accept it conditionally pending some changes, send it back for more work, or reject it. Advertising for submissions could go to colleges and universities across the country, and work could be sent by mail to a central office.

The difficulty of this proposition lies not with the concept, but with funding, organization and personnel. Would money come from government, advertising, private donations, or some other source? Who would coordinate? How many people would be needed to organize, type, lay out, and print the thing? Where would the reviewers come from?

If anyone is interested in trying to figure out what can be done to see that truly fine undergraduate work can be recognized and read, please contact me in the Science office (Chem 160, phone 228-4235) or at home at 433-5214. Who knows? We might be able to start something.

Merry Christmas Derek. It's three in the morning ans I can't think of anyting thing witty or bitingly sarcastic to write down, so I'll just curse your ancestors.



Be a UBC Brewmaster

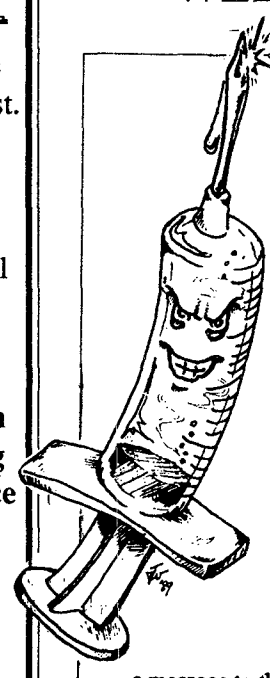
MicorBi is sponsoring the UBC Beer Brewing COntest. This contest is open to all students.

Each brew will be taste tested by an impartial panel of judges at the MicroBi Beer Garden on January

This is in conjunction with the MicroBi Beer Brewing Contest held during Science Week.

Prizes:
1st: $50
2nd: $30
3rd: $20

IT'S SUS DRUG AWARENESS WEEK!.



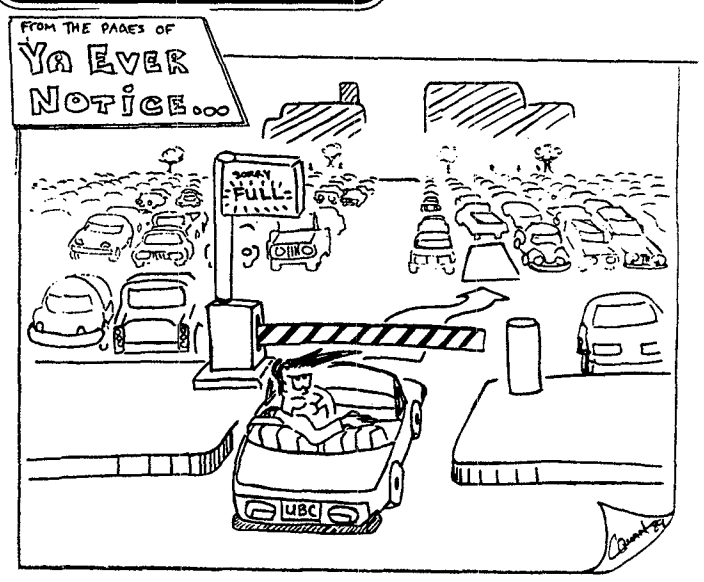
Say No Thank You to chemical drugs or the ones that are too expensive

a message to the staff of the 432

New Shoots

Epsiode Something: Big Laughs

Ork Ork Ork Ork Ork



Happy New Year

Yuppie Excuses For Not Doing Homework

by Tim Lam, Pat Redding, Aaron Drake

1. My CD Player broke down last night.
2. I pulled a muscle at aerobics.
3. I had to pick up my BMW from the shop.
4. My Lhasa Apso ate it.
5. My investment counselor died.
6. There was a Miata for sale.
7. Oh, didn't you get it? I faxed it to you last night.

New Age Excuses For Not Doing Homework

1. The textbook is hostile.
2. I was having an out of body experience.
3. Shirley Maclaine came over.
4. My crystal broke.
5. Jupiter and Venus were aligned - bad vibes.
6. I did it in my past life.
7. Mike ate my homework.

East Van Excuses For Not Doing Homework

1. What homework?
2. There was homework?
3. I didn't do it.
4. I didn't do it. You got a problem with that?
5. I haven't copied it off of someone yet.
6. Huh?
7. What?
8. Huh?

Answers to **That's Trivial,** from page 4

1. Lulu Island.
2. Marine Drive.
3. Wreck Beach.
4. Pacific Spirit Park (Endowment Lands).
5. 0.5%
6. Harbour Center.
7. There isn't one.
8. West Vancouver.
9. Breen, blue, white.
10. 1514.

11. San Francisco.
12. New Westminister.
13. The SS Beaver.
14. New Westminister.
15. Captain Cook.

16 Isla de Langara.
17. The Lion's Peaks.
18. Don Jose Maria Narvaez, 1971.
19. Brickmaking.
20. Vancouver's Centennial Sea Otter.

SCORING
1-10: 1 point.
11-15: 2 points.
16-20: 3 points.

>32 points - Expert
24-31 points - Know-it-all
14-23 points - Joe Average

The Text-Book Writer's Song (with apologies to Gilbert + Sullivan)

by Allan Sharp

When I was young I set my mind,
to get out of a financial bind.
I promptly wrote a text with care,
that improvements could be made in it here and there.

Chorus: Oh improvements could be made in it here and there.

I wrote the text so carefully
That it's always ben required at the 'varsity.

Chorus: He wrote the text so carefully
That it's always been required at the 'varsity.

A few years later when the sales went flat,
A revised edition soon came to bat.
I made a few improvements and I raised the price
And my pecuniary problems were defeated in a trice.
The second edition did so well for me
That I've always kept my foothold at the varsity.

Chorus: Repeat last two lines

A third edition soon came along,
With twelve new chapters to make it so long.
Very few students ever read that trash,
But they came in very handy when I needed cash.
That third edition was the cross on the 't',
When it came to making m oney at the 'varsity.

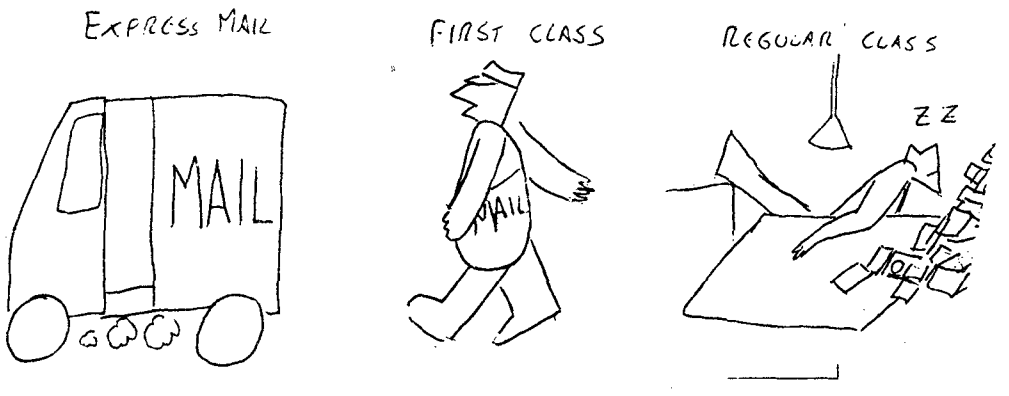
Chorus: repeat last two lines

The fourth edition was a tour de force;
I expanded it as a matter of course.
The illustrations rivaled Van Gough
And the text said all I'll ever know.
Editions five to nine came so naturally
That I'll always be required at the 'varsity.

Chorus: repeat last two lines

Professors all, whoever you may be,
If you want to stay at the top of the tree,
If you want to sell your book at every school,
Be sure to be guided by this golden rule.
Revise your edition, and don't cut your fee,
And you'll always be required at the 'varsity.

Chorus, fleurish, fade to black



CONGRATULATIONS

to the Science women's field hockey team, the Blue Jays, for winning the women's division.

and to the mens' Science Ball Hockey team, Physsoc, for winning their pool. Good luck in the playoffs. The Physsoc ball hockey squad went undefeated.

Sign up for Term II sports
TODAY!

Classifieds

Messages

Ari Giligson Lookalike Contest.\ Dec 7, SUB Auditorium.

Anthony C. It isn't over. Not by a long shot. Colonialism is a noble pursuit. Remember your place in the SUS Kingdom. Or you'll be shot at dawn. Have a nice day.

Physsoc is back. Yes, back. Exams are here. Betcha need a place to study real late, right? Like maybe a study carrell in a rockin' society that has a microwave in it's lounge and pop cheaper than anyone on Hastings? Yup exams are here. You probably could use free tutoring in math, chem and physics, couldn't you? Bet you could use a membership in Physsoc. Forget it. Shoulda thought of that at the beginning of the year, you goof. Good luck on your supplementals.

For Sale Misc

Stuffed and Mounted: Various Roadkill. Reply Box 201, this paper.

Mom. Body shot, but still a lot of years left in her. Box 214, this paper.

My virginity. Oh Heck, I'll give it away. Reply Box 204, this paper.

Patent for combo automatic enema/food processor. Real opportunity here. Box 202, this paper.

Integrity for sale. Real cheap. I gotta join SUS council. Pre Med student. Box 203 this paper.

Companions

Looking for the guy? Looking for a tall, handsome, interesting male (20-25) into sports, long walks in the moonlight? Want someone sensitive, understanding, caring? So do I. Write to Bob, box 102 this paper.

SWM, Rich old bastard about to kick the bucket, but wants a lecherous fling with some bubbleheaded coed nympho who doesn't mine putting her body ahead of her principles. Box 209, this paper.

Are you a daring female looking for the fun side of life? Do you live for thrills, excitement, action? Do you take chances, dare the reaper, dance carefree on the razor blade? Do you taunt the precipice, demanding that life give you its all? Do you risk it all when it's right? Are you the kind of person into this? So am I. I get out in six months. Maybe we can get together. Box 210 this paper.

Many SWM looking for many SWF, attractive interesting, for witty conversation, bible study, whips and chains. Box 213 this paper.

Lost

Paradise. Call 664-6969. Ask for Milton.

Jimmy Hoffa. The sucker owes me five bucks. Box 221 this paper.

Books in the UBC bookstore for a reasonable price.

MERRY CHRISTMAS