

Editorial

I should warn you that this is the first editorial of my burgeoning career, so be patient with me. I understand that it takes some time to master the biased, libelous tone of writing required. I should really check with Larry on that, though.

The topic of this week's diatribe is the Federation of Students' almighty Fee Hike Strike. In case you've been hibernating for the past year, the Fee Hike Strike is a stringent measure, conceived by some of the stupider trained chimps on Fed Council, for combatting this fall's 7.5% tuition fee increase. It's supposed to work something like this. This fall, every student on campus pays only last year's fees. The University, realizing that the students seriously oppose the fee increase, knuckles under and rolls back the 7.5% fee increase. An amusing fairy tale, but here's what would really happen. This fall, you pay only last year's fees. Financial Services, noting that you have underpaid your fees, sends you a bill for the balance plus late penalties (\$10 plus \$3 per day (no limit)). If you don't pay this bill, the late penalties will continue to accumulate until you do pay up. So, two years later, having completed your programme, you inform the University of your intent to graduate. The University in turn informs you that unless you pay them the \$2275 arrears (plus late fees) that you owe them, you will not be permitted to graduate. You have just spent \$2275 to save about \$75. Aren't you clever?

You will notice that the preceding argument against the Fee Hike Strike remains valid whether or not it is even advisable to oppose the fee increase at all. If the fee increase should indeed be opposed, then the Fee Hike Strike is probably the worst possible way to go about it. So even if their motives are noble, the Feds' methods are simpleminded in the extreme.

But should the fee hike be opposed? Consider that inflation is currently running at 9%. Consider further that the University of Waterloo is in no way immune to inflation. It becomes evident that a 7.5% increase in tuition fees is exceptionally reasonable. To oppose the fee increase is to promote cutbacks in the quality of your education. The price of everything is increasing these days, and education is no different. If you don't want to pay more, you're going to get less. If you really want to stop tuition increases, you'll have to stop inflation first. The Feds are deluding themselves if they think that opposing the fee hike will do anyone any good. And they're deluding you if you stand by and let them pour thousands of your dollars into their preposterous Fee Hike Strike. It's about time someone woke them up to reality and stopped them from wasting our money on pointless melodrama.



WINE & CHEESE?

The Math Society now has a social committee. The point of this is, of course, to instill some interest in an otherwise boring school term. With this in mind, we've planned a punk wine and cheese (*what a CLASH!*) for Wednesday June 11 at 8 p.m. CKMS is supplying a Deejay playing exclusively new wave and punk. Admittance is \$1.50 for Mathies and \$2.50 for others and there is a \$1 deposit for the wine glass. Come out and have a good time.

Future events are being planned so keep an eye out for posters. Anyone with ideas or who just wants to help out call Bradd Hart at 885-3577 or Diana Cadorn at 886-9038.



Campus Health Promotion Fitness Evaluation Centre

Health Services once again offers you (students, staff, and faculty) the opportunity to have a thorough fitness evaluation. The series of tests determines your blood cholesterol/triglyceride levels, body fat composition, flexibility, muscular strength, lung capacity and efficiency and cardiovascular fitness. Then a computer assesses your present lifestyle habits (*all those naughty things you do alone at home*), that is if you want it to. After the evaluation, you get personal consultation to discuss the results and set up a special exercise program just for you.

VITAL INFO:

Place: Health Services
Cost: \$10.00 Students
\$20.00 Staff/Faculty
Contact: Bruce Moran
ext 3541
Appointments: 884-9620

Get yourself in shape this summer!
Take the **CAMPUS HEALTH
PROMOTION FITNESS
EVALUATION.**



...the sensible alternative

math NEWS

Do you suffer from occasional irregularity? Relax, there's always

◆ Friday, June 6, 1980 ◆

◆ Volume 23, Number 1 ◆

Pseudo Prezz Sezz

Confusion reigns supreme, and I, for one, am not amused. It goes something like this.

Mid February and the Mathsoc elections are about to commence, with yours truly about to heave a huge (as Danny Gullivan would say) sigh of relief. I mean, 12 months is a long time to be president, especially when you are incapable of doing anything right. (That this applies to me is self evident, due to the number of people who believe it.) But n-o-o-o. Council decides that the elections were about to be improperly conducted, so, after an en masse resignation of the Election Committee, we start all over again with a projected election date of March 24th. Surprisingly enough, these elections come off without a hitch with Mark (MAB) Garstin acclaimed as president, myself elected as vice-president, and Bradd Hart elected to the treasurer's Post. At this point I take off for the scenic solitude of Muskoka with assurances from MAB that he will have everything in order for the start of the summer term, and further assurances that he will present often enough to fulfill the president's duties this summer.

<1 month passes>

I return, on April 28th, to discover utter chaos and MAB nowhere in sight. It seems that he was called away to the U.S. on urgent family business. This gives me less than a week to take care of the lockers, intramurals, office organization, and all the other fun start-of-term hassles. To complicate matters, Walter, the reliable Athletics Director, flies away to B.C. for 3 weeks, causing the intramural situation to degenerate even further. And then, I discover that I had been named Interim **mathNEWS** Editor in my absence. So now you know why this rag hasn't appeared until now.

And the tale continues. As of this writing (typing?), I have yet to hear from MAB. That makes it over 2 months since Council has last heard from our president. Worse still, he has most of the office keys, so we can't even keep decent office hours. Anyway, the heart of the matter is that now, after the term is a third over, I finally realize that I'll have to assume the president's post for the duration of this term. Hence, my somewhat negative frame of mind.

One thing puzzles me, though. It seems to me, that with me and my bungling ways out of the way for a month, things should have been well organized and running smoothly upon my return. Alas, things were worse by far than when I left. I suppose it must have been due to some residual incompetence that lingered on after my departure.

But enough of the recriminations and complaints. On to some hopefully constructive action. We need help!!! The executive is currently understaffed and I urge, nay I **command** anyone who even thinks that they might be able to help us to come unto me (MC3038) and offer up their services. Especially if you'd like to be Orientation Director, **mathNEWS** Editor, Administrator, Education Director, or Internal Affairs Director. Remember, with your help, we can make it work, but it won't if we don't.

Excelsior!
Greg Bezoff
(Vice) President

Are You An Inventor?

*Cheating on assignments
doesn't count.*

If you have a new idea, a business proposal, or an improvement which you want to develop, the Waterloo Enterprise Program (WEP) can help you.

The WEP was initiated to assist student inventors and entrepreneurs. A major benefit to the student is the assistance in accessing physical resources and expert advice, whether technical, commercial or other, provided by the University and the Ontario Industrial Innovation Centre, and bringing this help to bear on the student's own idea.

Financial assistance may be awarded to good ideas either to cover out of pocket expenses or outstanding ideas may receive sufficient support to enable the student to devote a work term or summer to the project.

The WEP is made possible by the University of Waterloo through the Ontario Industrial Innovation Centre and the Waterloo Enterprise Fund.

Students may obtain further information and application forms from the Ontario Industrial Innovation Centre, NH 358, extension 3003.

Watsfic Presents

apparently not a hell of a lot this term. With a phenomenal membership of 26 people, organizing events is going to prove difficult. At this writing it appears that a planned bus trip to Toronto to see *The Empire Strikes Back* will have to be cancelled due to a lack of interest (30 people would have been necessary to run it). There are no plans for a movie night this term (but the Feds are showing *Wizards* and *Dark Star* and I've heard mumblings from the direction of 3036 about something called *2001*). Sometime in the term we'll probably try to hold a Diplomacy tournament (or some other game) but given past experiences with 80 or more members such efforts are probably doomed to failure.

I realize that this has been rather pessimistic so far, rather out of character with other articles in this series which usually point to a glowing and exciting term, filled with meetings, tourneys, movies, etc. but of late the club has been having problems. The membership seems to rely on the executive totally and even when something is organized, support is half-hearted at best. This term we couldn't even get volunteers to take care of what is arguably the most popular feature of our meetings, coffee(tea) and doughnuts.

For the record then, meetings are weekly, alternating Wednesdays and Thursdays (next meeting [as of press time] is Wednesday June 11) at 7:30 p.m. in MC5158. The executive for this term is:

President	Michael Albert
Secretary	Lynn Marshall
Treasurer	Dean Edmonds
Secretary of War	Lance Corey

The Watsfic office, MC3036, is sporadically open. I (i.e. the president) can be reached in MCC5046 during "business" hours. And that's all folks!!!!

Mike



The Ramones, alright a new wave band. The May 26 concert at the University of Guelph's Athletic Centre drew on all the hip and pseudo-hip of South Central Ontario. But what was this, what did this sound have to do with Gary Numan and the B-52's, you know real new wave bands. All those raised on Blondie and the Cars were definitely alienated. If you expected trendy, new wave, musical sounds you were out of luck. This show had nothing to do with music, it was strictly rock and roll. The most avant-garde moment of the evening was the 30 second drum roll introduction. From then on the most recognizable utterances for those of us up front was Dee Dee shouting 1-2-3-4 into his mike between chord after chord and beat after beat of rock and roll power. So what if you couldn't hear more than 5 words Joey sang all night, so what if you were deaf in ear, you could feel the beat and hear the chords and that was enough to keep you hopping for about an hour and a half.

The first band, Steve Blimkie and the Reason, were a bit more recognizable to the "new wavers". Blimkie, looking sort of like a new wave John Travolta, led his band through an amiable 40 minute set. The Reason, a respectably tight band, handled different tempos and volume changes that made even the trendiest feel comfortable. Between Blimkie's wild vocalizations and the Reason's strong and versatile back-up, this act has come a long way and will probably go much further. But they could only give you a hint of what was to come. It was like a stretch of the muscles before the game, because the main event was the Ramone's rock and roll in "smash your hand against the wall" style.

The Ramone's logo, plagiarized from the U.S. presidential seal, unravelled behind behind the stage, displaying the bald eagle holding 2 missiles rather than arrows and lightning bolts and read "Hey Ho, Let's Go"; you knew you were going to be blown away. Then the Ramone brothers (not really), took the stage after the intro, all in leather jackets, T-shirts, jeans and running shoes, not neat "punk" ties, leather pants or new wave hair. They look like any set of "Dum Dum Boys" from any high school who jam in the basement and know three chords and one beat. If that wasn't enough to put off the trendy, the music did it for sure. *continued on page 8*

Notepad

(When last we left our hero he'd made the fatal decision to leave the safety and comfort of software for the strange and exciting world of hardware. Yes he was about to build..... ta-dahhh! An exclusive-or gate! So you're not impressed? Tough shit!)

It seemed to me that the first step in building something out of little bits of electronic hardware would be something to put all the little bits together on. With this in mind I pulled out my handy-dandy Radio Shack catalogue and had a look at all the latest hardware fashions. The thing that most caught my eye was a neat little chunk of plastic called a proto-board. This thing had more holes in it than the Roman Catholic doctrine, and allowed you plug all your components together and test the circuit out before committing yourself.

So I strolled down to RS and paid the usual outrageous price for one. I already had all the necessary chips having found them buried deep within a box mysteriously labelled 'surprise pack'. This was the second such pack I'd purchased with the first containing half a dozen little bent metal stickers proclaiming such sage words as: 'Realistic', '4-Channel', and of course the ever-popular 'afc on'. Indeed it was a surprise.... I'd expected something useful.

At any rate I hit the jackpot with the second surprise package so I guess that evened the score out a bit. It contained a bunch of and, or, and inverter gates. No exclusive-or. This meant I'd have to build the sucker out of whatever I had available. After carefully working out the alternate logic I slapped the circuit together and plugged it in.

It took my father five minutes to calm my mother down. After all a little polyfilla and my room would look like new again! After the firemen had left, I salvaged what I could and reviewed my thinking. Hmmm, I seemed to have inverted a few bits.

My next try was a vast improvement and the kitchen fire extinguisher coped easily with the minor blaze. I must be getting closer. *(I'm not sure I believe this... -ass ed)*

Third try was the winner; nothing blew up. Now to find out if it actually worked or not. I cautiously hooked it up to my video and voila! the screen was reversed. Instead of

grey-white characters on a white-grey background, I had white-grey characters on a grey-white background. This was what I'd been trying to achieve all along, with one minor problem.

You see, in the world of electronic hardware there are always n ways to build something, where n is greater than you care to imagine. Specifically there are two types of hardware known as TTL (Transistor-Transistor Logic) and CMOS (Complementary Metal Oxide Semiconductor). TTL is fast but expensive while CMOS is slow but cheap. Now, keeping in mind that all my chips came from a 'surprise package' guess what kind I had. Right, good old CMOS. Slow CMOS.

Imagine now that you are a video signal eagerly waiting to leap onto the screen. You want to be the first bit to get out onto the third line say. The clock tells you your time has come and you take the plunge... only to find Mr. CMOS standing there asking for your passport.

The end result is that by the time you finally get out onto the screen, you are a millisecond or so too late and so, instead of appearing in position x you end up in position $x+1$, shifting the whole screen image right a bit. This also had the annoying side effect of having part of the last character on a line wrap around to the beginning of the next. ****SIGH****

In any event, even with its little bugs, my circuit worked just fine and I felt reasonably proud of it. I'd proven that I had what it took to take a disjoint, motley collection of odd IC's and join them together into a highly technical and complex digital network.

All right, so what if it was only a stupid exclusive-or gate, give me my moment of glory, huh? Besides, I was ready to move onto bigger stuff. Having conquered hardware I felt that much of the challenge was gone out of Fred, and I began casting around for something else... perhaps some exciting new peripheral. I still wasn't sure just what I was after. Little did I know that our sweet little family of two would soon be brightened by the grind and clatter of little disk drives.

(NEXT WEEK: Fred meets Martha: a Love Story)

Somewhere in a galaxy far far away, near the outer reaches of one of its thinning spiral arms, lies the yellow dwarf C-2 star, around which circles a delicate blue-green globe. Over the millenia civilizations rose and fell beneath the fleeting cloud shapes of the unattainable skies. Unattainable, that is, until the coming of

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for those who care.

Prologue

This is the world of UNIWAT 2050, a sometimes strange, sometimes exciting place... usually just strange. The world of UNIWAT 2050 is so large that you must read about it to fully comprehend it. No prologue could possibly be capable of even scraping the hidden depths of conspiracy and intrigue which you'll find, but hell, I'll give it a try anyway.

As with all human and subhuman societies, UNIWAT 2050 has its hierarchy of life, at the top of which are the Masters, often called the Masties by their loving subjugates. Mastoc, the Mastie government, has just recently gained the popularity of the people by overthrowing the hundred-year-old rule of the despot Engineer Caste, whose rule of violence and mindless bloodlust has been replaced by Mastoc's benevolent government-by-wisdom.

Below the Engineer caste, cowering in the shadows, are the Artdroids, a mentally inferior race left behind by the mutant wars of 2013. These poor brainless creatures are less aggressive than are the Engineer caste, but even more useless.

Attacking every advance made by the Mastoc government is the disreputable newssheet *The Shaft-Run*, which is funded by the Federation of Unified Cosmic Students (FUCS), yet another group trying to gain control of UNIWAT 2050. However, unknown to FUCS, or anyone else for that matter, is that *The Shaft-Run* has been infiltrated by, and is being secretly controlled by, the CAIA, the Cosmic Alliance of Imperial Arachnids, a fellowship of giant spiders from the Horsehead Nebula, whose hope is to force UNIWAT 2050 to become yet another link in their vast subversive empire.

As our story opens, we find ourselves in the inner sanctum of Maximilian Morbid, the only Engman ever to pass a math course, and thus the leader of the Engmen.

UNIWAT 2050

A Quirk Martin Production

Part I

163 snapped to attention, almost poking his eye out as he tried to imitate the sharp salute he'd seen the Masties give one another. He thought to try and impress Lord Morbid with this display, but the leader of the Engmen had far greater things on his mind.

"You there!" he growled. "Whatever your number is, which came first, the chicken or the egg?"

"Uh... well, I uh... had uh... pancakes this mornin'. I dunno." 163 carefully wiped the sweat brought on by his mental exertions.

"Buffoons!" Morbid cried. "I am surrounded by fools and nincompoops. This puzzle is a coded message we intercepted from a Mastie fact sheet hidden in among what were supposedly just children's riddles, but they won't fool me; I have our top men working on them this very minute. It shouldn't be long before we break this simple-minded code." He glared back at the Engman dribbling quietly on the floor, his grey-and-white striped hat stained with grease.

"Get out, you idiot, you're getting my floors wet. Besides, I have some important business to attend to."

Carefully wiping his chin, 163 slunk out of the room.

No sooner had the lackie left than Lord Morbid whirled upon a seemingly innocent bookshelf and pulled out a red bound book. Instantly the lights flared red. Grumbling, Morbid replaced the book and tugged on another. This time a country and western song blared to life.

"Yecchh!" He hastily returned the book to its slot and went on pulling at others. Finally, on his thirteenth try, he grabbed a well-thumbed copy of September's *Pant-house*, and was rewarded by the sound of metal grinding on rock as the wall slid aside. Out from behind it appeared a long brown leg, followed by seven more and a large roundish body.

The Arachnid's dark saucer-shaped eyes regarded the magazine which Morbid still clutched. "Maybe I've arrived at a bad time," it said.

Lord Morbid glanced down at his hands and angrily tossed the magazine aside. "I've not asked you here to bandy words," he growled.

The huge spider looked terribly bored. "What else have you or any other Engman to offer me?" it asked.

"The Masties are our common enemy," the rebel leader replied. "We will offer you our help in overthrowing them, if you in turn help us."

"Hardly a fair trade in view of our obvious superiority, don't you think?"

"No, I don't think!"

"That's what I thought," the Arachnid retorted coolly.

With a scream, Morbid launched himself at the creature, but was easily held off by its three front legs.

"Calm yourself, Lord Morbid, perhaps there is something you Engmen can do to help the CAIA to achieve its goals."

"And what is that?" Morbid asked, straightening his black striped cap.

The alien smiled cruelly. "Perhaps if you and your men were to step up their anti-Mastoc activities, it would provide a proper smokescreen for our operations."

"What would be in it for us?" Lord Morbid asked doubtfully.

"As you know, Mastoc has already colonized several planets in this solar system, and is even now preparing an interstellar expedition. The CAIA would like to prevent that, if possible. We are not, however, concerned with UNIWAT 2050 itself. That you may do with as you please."

A dark smile spread across Morbid's face. "In that case," he said, "we have a deal."

End of Part I

Next week Lord Morbid and his men launch their offensive, and we meet our hero, Mike Megawatt. See you then.

Computer Science Club

Honeywell Tutorials

Early this term, the Computer Science Club gave a series of tutorials to teach some basic concepts to some of the new users of the Honeywell. What was originally planned was that we would hold one tutorial, and if we did not get enough people to enroll by putting up signs, we could ask some profs to announce it in their classes. As it turned out, the demand for this type of thing exceeded even my expectations.

After obtaining proper permissions from the powers that be, we sent some stuff off to Graphic Services, and put up announcements of the event. Within two days, we had more people than we could handle, so we decided to hold a second tutorial one week later. When the second one filled up almost as quickly, we planned a third one, for the following afternoon. All the tutorials were very successful, and the 'hun even co-operated by crashing just as we were explaining the importance of "saving often". A total of about 90 students attended the tutorials; this is impressive when you consider that there are fewer math students on campus in the summer than at any other time. Topics covered were: facilities, some useful commands, explain files, mail, EDM (a subset of QED) and running a Pascal or Fortran program. Each student in the tutorial was given a handout that he can use as a reference.

Thus ends the newsy section of this article. What follows are my own opinions about the tutorials.

First of all, I was, and am still, convinced that such a service is necessary. Unfortunately, this feeling is not shared by everyone at this institution of learning. Many people seem to feel that even though an ignorant user might take many times longer to finish an assignment, change all of their file to dots, retype it and save it as a temp file, at least they do not use very much of the CPU while they are signed on. In other words, if the Honeywell can not support 70 educated users, we should keep half of them in the dark. I find this to be ridiculous.

Another small problem, and one that we can avoid next time, is the inconvenience to some of the other users, particularly during the third

tutorial. If these tutorials (or something similar) is run in another term, we can plan on running several in the second week of classes, and save the third week for people's assignments. So, while I apologize to all the students in CS 452 who were circling like vultures to grab the Volker-Craigs when we finished, I hope they will empathize with the CS 370 students who had an assignment due in 10 hours and were only just learning that "d" stands for delete (and not "down"), and that "s" stands for substitute (and not "search"). (Ah, the pain and pleasure in learning to forget WIDJET.)

Many thanks to everyone who attended, to jllmorris and gpembro for giving us their full co-operation, to rpgurd for his cameo appearances, and (especially) to Robert Biddle, who not only aided in all phases of the planning, but came to Waterloo from Toronto to lead the instruction.

Do you have any questions, comments, suggestions??? We would like to hear from you. Just send mail to csc, or put a note to the CSC in the grey box opposite the lounges on the third floor.

Valerie Carr
Computer Science Club President



CSC FLASH

At the May 22nd meeting of the Computer Science Club, Dave Boswell of Computer Systems Group gave a presentation about WSL, the Waterloo Systems Language. WSL is an example of a Systems Implementation Language (SIL). SIL's are mid-level languages, intermediate between low-level assemblers and high-level applications languages (like Pascal and PL/I). SIL's are necessary to reduce the drudgery of writing large assembly language programs, such as the many trivial decisions (which way should this GOTO branch) needed with assembler. At the same time, SIL's must interface with the wierdies of the operating system (if any) and the machine. (For example, traditional high-level languages don't allow the programmer to access the EDIT instruction or the indirect address mechanism.) A SIL should increase programmer productivity without decreasing the machine efficiency of the generated code. Not suprisingly, most good SIL's are the proprietary software of computer manufacturers (e.g., PL/S of IBM, PLUS of Univac) and software groups (e.g., B of MFCF, C of Bell Labs).

The SIL WSL was defined to enable CSG to write Waterloo Pascal for a PET (6502-based home computing system). Some of the interesting features of WSL include a 3-level scoping rule (gives advantages of typical block-structured scope rules without some of the corresponding disadvantages) and the Guess statement (a method of error recovery including accept blocks and backtracking). While the reasons for these features may not be obvious to the average programmer, they provide certain functions and facilities wanted by the typical systems implementor. These functions are totally unavailable in conventional programming languages.

Paul Stachour

Classy Fried Ads

Anyone interested in taking STAT 464, "The History of the Theories of Probability and Statistics", in Fall '80, please contact Duncan Murdoch in MC 5046 or via userid djmurdoch on the Honeywell.

Lost: One heart-shaped gold earring. Lost in the Math building on Saturday, May 10. If found, please return to MC 3028 for reward.

JUNE

FRIDAY	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
PREREGISTER- ING OR DROPPING COURSES? <u>DEADLINE</u> TODAY! 6	7	8	9	Dead Ringers Floor Hockey 5:45 pm Co Rec Volleyball 9:15 pm Soccer 5:30 pm 10	PUNK SOIRÉE 9 pm McS136 Co Rec 510-pitch 5:20 pm v.6. 11	Dead Ringers Floor Hockey 7:45 pm 12
13	14	15	Ball Hockey 5:45 pm 16	Dead Ringers Floor Hockey 8:45 pm Co Rec Volleyball 9:15 pm Soccer 6:45 pm 17	Co Rec 510-pitch 5:20 pm v.2 18	19
20	21	22	Ball Hockey 5:45 pm 23	Co Rec Volleyball 9:15 pm 24	Co Rec 510-pitch 4 pm Cole 25	Dead Ringers Floor Hockey 6:45 pm 26
27	28	29	30			

...Matt the Mathie lives yet, but was unable to attend due to prior duck-watching commitments.

The Empire Strikes Out

You might have noticed that the latest Star Wars saga is a little slower in coming to the theatres around here than for the rest of the continent. That's because *The Empire Strikes Back* is a 70mm film and the biggest screen we've got around here only handles something like 50mm, i.e. we've only got runty little screens around here to see the movie on, and after watching Bakshi's *Lord of the Rings* in the Capitol, I felt no great desire to see any more films that were twice as tall as they were wide. (In a fit of genius the Capitol took the last remaining full-sized screen in K-W and put a wall down the centre so they could show twice as many movies on half the screen!)

It was with this in mind that I packed up my bags the other weekend, called my mother, and told her that I was dying to see her. She cleaned out my old room for me and I went back to Hamilton and saw the movie.

The movie had only been in Hamilton 3 days when I went to see it, and thus it was the first weekend of its showing. This meant that even arriving 90 minutes early we still had to stand in a line a block long, and ten minutes later the line was 3 times longer still.

Eventually we got inside and the movie started. Your first shock comes when they tell you that this is episode 5 of the adventures of Luke Skywalker and the boys, and you begin wondering if you missed a few. As it turns out, Lucas had originally planned (or so he said) a nine part series. Parts 1-3 told of the fall of the Republic and the rise of the Empire. Parts 4-6 are the tales of the rebels, while the last 3 parts tell of the restoration of the Republic. So what we've seen so far are parts 4 and 5.

The movie itself starts out in the true Star Wars tradition and continues so with one minor change: *The Empire Strikes Back* is even better than the original Star Wars!

If Lucas had any fears of spending money on the first movie he's certainly over them now. Animation has been improved tremendously to the point where Luke and Han go riding around on creatures that are half horse, half kangaroo and the creatures look real!

If you haven't heard by now, there's even a muppet in the show, run by Frank Oz (Ms. Piggy, etc). It is easily the best muppet I've ever seen and brilliantly run. It just goes to show what you can do with money.

Plot and character development actually exist in this sequel as well as the never-ending narrow escapes, hair-raising flights through asteroid belts, and slick light-sabre duels.

Luke gets to use the Force a bit more in this movie and to good effect. Lucas keeps forcing us to the edges of our seats and not letting us rest. I wonder at times if *he* has the Force.

Another change between the two movies lies in their family appeal. Star Wars II is definitely more gory than the first. Han gets beaten up and tortured, C3PO gets the shit kicked out of him, and Luke comes out of the movie wearing so many scars you wonder if George Lucas doesn't beat his employees. Hell, even Darth Vader takes a cut (*dent?* -*ass ed*) or two. In fact the only one who seems to come through without a single scratch is the Princess again.

I guess you just can't touch Royal Blood.

-dthedmonds

Mars needs



BATS

REAL WORLD 101
An Introduction to How & Why

ASSIGNMENT #1

The differential in a car is a device which allows one driven wheel to rotate at a different velocity from the wheel on the opposite side of the vehicle. This is necessary when travelling in a curve since the inside wheel traverses a shorter path than the outside. However, railroad cars use a solid axle between opposite wheels. Do they not need a differential? Why not?

CSC Report

On Thursday, May 8, 1980, the Computer Science Club had its first meeting of the term. Elections were held at the start of the meeting, and the results are as follows:

President.....	Valerie Carr (Mathematics)
Vice-President.....	Geo Swan (Integrated Studies)
Secretary.....	Kevin Martin (Science)
Treasurer.....	Peter Bain (Engineering)

As you can see, we probably have some claim to being the most diverse club on campus.

Because the elections alone were not exciting enough to compete with the deci-finals of the National Hockey League, we needed a well-known speaker to draw enough people out to justify having a meeting. So the elections were followed by a talk entitled "Making Computers Talk to Each Other", given by *Professor Eric Manning* of CCNG.

It should be stressed that all CSC meetings are open to anyone, and you do not need to be a member of the CSC to attend. Also, especially if you are now becoming a "senior" student, and you are seriously interested in Computer Science, you should see these meetings as an opportunity to learn something more about it than you will from reading the Globe and Mail. Information about the next CSC meeting can usually be found by typing **expl csc next** on the Honeywell, or asking at the CSC office, MC 3037. Last but not least, the CSC friendly consulting service is in operation again this term. If you find yourself not understanding why your COBOL program won't run, or you can't remember if Pascal likes **DO WHILE..** or **WHILE..DO**, drop into MC 3037 anytime and ask. Many reference manuals are available, and we have subscriptions to most major computer magazines. Consulting is also offered from 8:30 to 9:30 p.m. Mondays through Thursdays. Tea is usually available.

Valerie Carr

continued from page 3

After quick hacks at the guitars and greetings from Joey, they bounced into *Blitzkrieg Bop* and from then on the pace changed very little. They moved through the rockers like *Rockaway Beach*, *Rock and Roll High School*, and *Sheena Is a Punk Rocker* with flow, not necessarily melodic flow, but flow none the less. When one ended, Dee Dee shouted 1-2-3-4 and it started again. Occasionally it stopped for Joey to make some hardly recognizable comments about the girls in Guelph or a drink and a towel, but 99% of the time was spent with Joey clenching a mike in one hand and a fist in the other, Johnny pogoing around with his guitar, and Tommy pounding out the beat depending on how fast Dee Dee shouted 1-2-3-4.

It would be unfair to give the impression that these fellows were unfeeling sadists. After about half an hour of straight pogoing they slowed it down with a slower version

of *Why Is It Always This Way* which is a classic Ramones slow song, same as the rest only not quite as fast. They also supplied a visual break during *Pinhead* when the pinhead came from backstage with the Gabba Gabba Hey sign. At the end, sensing that we were all sweaty and about to collapse they did 3 encores simply to give us a quick breather between every 3 or so songs.

It would also be unfair to make these guys seem mindless as well, but art isn't the main thing on your mind at a Ramones concert. Their lyrics are some of the best sarcasm and humour to be found in the music scene today. Their style is exemplified in the titles of their songs such as *Gimme Gimme Shock Treatment*, *Teenage Lobotomy*, and *I Wanna Be Sedated*. More than anything else this was a good time to dance around and be blown away in general. It wasn't a trendy time, it was straight fun. Unfortunately

some of the people there who didn't understand the punk movement that washed up into the new wave didn't understand that, and probably expected something profound. Punk was not a new fashion trend or a new way to be hip, it was a rejuvenation of rock and roll which was on the verge of death due mostly to the establishment of rock as a respectable business with bands such as Boston and Kansas. The Ramones have been making their brand of punk rock since the mid-seventies and only now have they received any kind of widespread recognition. We have them to thank for being a large part of the resparking of teenage anarchy which is rock and roll, which is once again starting to be diluted by the "safe" wave.

But that's not what really matters, what really counts is that I got one of Dee Dee's bass picks!

Gabba Gabba.

Tim Finnerty

Young Frank Einstein

It seems that the world has finally awoken, and with the coming of this beautiful summer weather, the overdue first issue of mathNEWS. Which is not to say that it should be returned to the library; rather, it is a case of lethargy on the part of people like myself, regular contributors to the cause, who have jumped ship. As distressing as the summer mathNEWS malaise is, this is not the sort of article which should be dwelling on it. Therefore, I shall continue my usual sinuous course of drivel.

What is the world coming to these days? This is a hackneyed little question, if ever there was such a one. And yet, it is an amusing topic of discussion via joint despair, a common cause to bemoan when conversation gets dull at parties. The common answer to the question is to say that we are heading ass-first into Armageddon. Some ardent technocrats, the likes of which are occasionally seen at the Computer Science Club meetings (their remuneration is usually dinner), will maintain, flanked by the evidence of extensive and excessive learnedness, that we are proceeding nicely towards the ideal flexible lifestyle. That is to say, man will soon be able to place control over whatever physical factors are deemed important to our prosperity, and thereby improve our lot. At which the average environmentalist will cry foul, or fie, or something else starting with an F.

As far as I can see, by the greenish light of my broken-down Tektronix terminal, the techies are right. While such disciplines as architecture, history and biology suffer enrolment problems, and their graduates find their work more and more constrained by rising costs, the sciences of physics, chemistry and the mathematical sciences grow like weeds.

What, then, is to be said about the initial question I posed: what is the world coming to? The answer depends essentially on whether we are considering the fate of the physical world, which looks to be dimming due to nonchalance, as much as anything else, or whether we mean the promise for mankind. Insofar as we are animals, we have been concerned for the entire length of our existence about the physical aspect of survival. Our development is now up to the state that we don't care anymore, but we can get away with it, and come up smelling like hothouse roses. Now that we have got this far, the importance of maintaining a pleasant, viable physical world for the use of humans starts to fall into question. Our purposes can now (or will be shortly) completely served without such preservation. This raises the spectre of abandoning the earth.

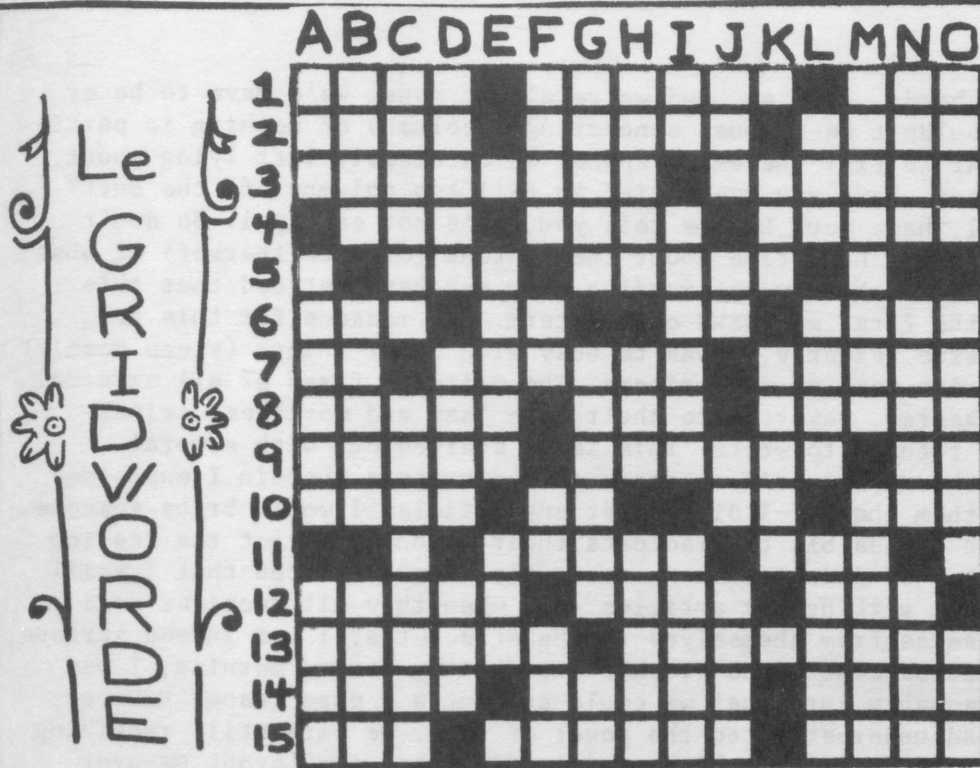
By my consideration, at least, the purposes of the other rightful occupants of the earth would best be served if we were to stop our waste and rape, and move on to a less sensitive place in space where we can have all the wild orgies we like. Without bothering our neighbours.

Be it known that I am *not* a devotee of science fiction, nor am I a dreamer, beyond the human average. I'll be very interested to see what you have to say about all this. You can put suggestions in the grey mathNEWS box in the main third floor corridor, or slip them under the door at MC 3035.

You're messin' up the water, and you're rollin' in the wine...

You're poisoning your body, and you're poisoning your mind...

Young Frank Einstein



ACROSS

- 1a Excelled (4)
 1f Blithe Spirit Song (6)
 1m $\frac{3}{4}$ of an epic (3)
 2a Solitary (4)
 2f Cache (5)
 2l So be it (4)
 3a Banker's hobby (8)
 3j Roddy and Farrah planet (6)
 4b Peppermint Patty (3)
 4f Get together (4)
 4k They're "insulated" by water (5)
 5c Computer Systems Group (3)
 5g "Growl!", said Tom early (5)
 6a Some Mad Expression (3)
 6e Siddhartha "perfect one" (2)
 6i Auntie (2)
 6l Haughtily, she put them on in pairs (4)
 7a Company (2)
 7d The dark continent (6)
 7k Inspiring with awe (5)
 8a Yellow (Brit.) (5)
 8g First stage of being a compoop? (3)
 8k His law bubbles (5)
 9a Belonging to them (5)
 9g Grungy language (6)
 9n Ease (2)
 10a Lee went to College (4)
 10f Calcium (2)
 10j Europium (2)
 10m Hiccough (3)
 11e Assessor prize (5)
 11k Victory soup weight (3)
 12a "This is how much we have", Tom quoted (5)
 12g Herbert novel (4)
 12l Really Puerile Acronym (3)
 13a QB for Baltimore Colts (6)
 13h Clam diet turned out to be detestable (8)
 14a Tease after eyes (4)
 14f Crosshatched bill (5)
 14l Onodrim (that's Sindarin, folks) (4)
 15a Ten Tired Enigmas (3)
 15e Versus Skins (6)
 15l What God withheld from man, according to Donne (4)

DOWN

- a1 Clay friend (3)
 a5 Ties favoured by turn coasts (6)
 a12 End a job (4)
 b1 Conventions are rip-offs (4)
 b6 Coffee type (5)
 b12 One that is carbon-based (4)
 c1 To allure (6)
 c8 Indicating hair on her suit? (8)
 d1 Belonging to roe (5)
 d7 $.5ab \cdot \cos(C)$ (4)
 d12 "S's and," Tom said teasingly (3)
 e5 Runner for a production (5)
 e11 Preferably Another Acronym (3)
 f1 Commenting about edge of dress (4)
 f6 Spock or Ed (2)
 f10 Copper (2)
 f13 At front of either school or UoW (3)
 g1 one Born in every crowd (5)
 g7 The raw din was not turned out (6)
 g14 Say hello to Mr. Flagston (2)
 h1 Adventure plant cry (5)
 h7 Agency is at Marcia's tail (3)
 h11 Muser disturbed by grain game (5)
 i1 Argon (2)
 i4 D&D term for one of 141 (6)
 i11 To perform (5)
 j1 Football measure (3)
 j5 Room in a storm (2)
 j9 Barnaby Jones or Jed Clampett (2)
 j12 Lodge or store (4)
 k3 Greek element (3)
 k7 A circumlocution fight (5)
 l2 @@@@ (3)
 l6 Military term is not Pink Floyd (4)
 l11 "I'll have a cream danish" (5)
 m1 Form a mixture of immiscible liquids (8)
 m10 A nymph who was never head of a faculty (6)
 n1 ---- Goriot (4)
 n6 Straightedge sovereign (5)
 n12 Play chapters (4)
 o1 Hotels aren't outs (4)
 o6 Rests (6)
 o13 Terrible Sundry Torture (3)

Interaction

This will have to be a rather impromptu column. Not expecting the paper to appear this term, I did not have anything profound prepared.

I notice that the C.C. Pub is now officially called "The Bombshester". The name is appropriate. It looks as if Doug Thompson finally got his way four years late. Though the pub will still always be the C.C. to me and many others (just like the M-C Freeway is always the 401), I am interested whether the Federation plans to put any military decor in the pub during the renovations slated for this summer. It would add a touch of interest (perhaps they could even thicken the walls to make it secure against a nuclear attack). Aside from the decor though, I would hope they mean what they say regarding improving the taste of the draft beer and selling domestic bottled beer.

I planned to mention something about the state of malaise in the Mathsoc, but I really don't have the time to delve into the problem in detail. Besides, I am not sure that it will help much and don't really care about it anymore (well, very few others do). Besides they are producing a mathNEWS this week.

My opinion of the Federation this year is rather mixed. The new president is a very private person who I really can't figure out. I tend to think that his base of support is rather narrow (witness the near-total domination of Arts people on his executive) and thus he should be reaching out to disaffected areas of the campus. I felt that the early part of the Council term was spent too much on petty personal battles and dealing with the fee hike strike. Such observations were made after being coerced into chairing an April Council meeting. Hopefully that has changed. I must say though that the president has made a positive step by attempting to change the C.C. Pub. Also entertainment on campus has been run very well this term. Considering the drop in fee refunds from last summer, while Freeman hasn't shone, I must conclude that he hasn't done a terrible job so far. Only time will tell if he becomes as good as McGuire.

In the next issue (if there is one) I will hopefully make a more detailed look into major issues and possibly discuss some aspects of the Ontario educational system.

J.J.Long

YFEedback

Dear Young Frank Einstein:

I have just read your column in mathNEWS (March 21, 1980). I suppose that it I am a little late in forwarding this letter to you but I had no way of knowing you had written anything until just now so I had better type a period or I will never get to the next sentence.

Concerning your theory that there may exist a CA [cellular automaton] which describes the earth's life system, I doubt it. (The uncertainty principle, man, the uncertainty principle...)

There is no way in which a mortal man, or indeed a world full of mortal men, could observe enough data to even begin formulating what such rules may be, without upsetting the system horrendously. This is especially true since any person who would try such a thing would have to become part of the system to observe it, as indeed we all are already.

I have no doubt that such rules exist, but if they do, they must be based upon the rules of particular interaction, which have yet to be completely formulated (who knows how two quarks are supposed to interact when they meet), as all rules ultimately must.

Since nobody knows all the rules there are (except maybe whatever form of supreme being you choose or do not choose to believe in), such rules as you describe could never exist in the minds of man, except in their imaginations.

Furthermore, everything is bound (and tied also) to be fluid. Therefore, even though I know nothing about cellular automata, I do not think such rules could be known. Bye for now.

Respectfully yours,
My friends and I

(What you say about cellular automata agrees with my view, insofar as I think such a CA exists. I also agree that it must be hopelessly complicated, and, having taken PMath 230a, as it appears you and your friends have also done, I realize that such a concept would be beyond the human capacity to know. This is an important aspect of the problem, which I neglected to bring up in the article. -YFE)

masthead: 1:55 am. and we're almost done. We'd have to be or I wouldn't be so busy concocting 2 columns of nothing in particular to fill the empty spaces we carelessly left lying about. I mean, have you ever tried to fill two columns off the cuff? Well, have you? Let me tell you, it's not easy pal. So don't give me a hard time about the content (or lack thereof) of what you're probably not reading. You may have noticed that this is the first mathNEWS of the term. The reasons for this are diverse. Firstly, I was too busy with other things (sleep mostly) to ride herd on the writers. The writers, freed of all external pressures, reverted to their true lazy and worthless selves and refused to write. This issue started out with several scathing 'bun mail messages to the writers wherein I explained to them that if I didn't get any articles I would bribe someone with a lods bit to eradicate their accounts. I got the feeling that they didn't take me seriously when I noticed that I still wasn't getting any articles. But when they all received mail messages from themselves to the effect that I was indeed serious, articles started to trickle in. Thus by Monday morning, I was reasonably sure that we could put out a 4 page issue. However, I had underestimated the power of fear. We were still receiving articles at 11:00 which greatly disturbed our Layout Manager since I decided to run them. This resulted in the 10 page issue (well, 9 1/3 really) you see before you. Hmmm, still over a column of drivel.

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tells me that I mathNEWS consti-realized that mathNEWS staffers given honouraria budget. (ie. piz-to the next pro-you might get

to go. Walter have reread the tution and I have due to a typo, are allowed to be from the mathNEWS za) So come on out duction meeting and some free munchies!

Well, on to the credits. This week saw an uncommonly large number of people take a hand in the production of mathNEWS. (No doubt this is due to my peerless leadership.) First and foremost is the eternal ASS. Editor Ross Brown who chipped in with Young Frank Einstein as well as his usual quota of photonning and graphix. "Strings" Steinemann, our Subscription Editor did all kinds of lackey-work for which we pretend to be grateful. Dave Welbourn came up with yet another gridword, but that's his job. (Oh, I forgot, Ross wanted me to thank his friends at St. Paul's for lunch.) Val Carr and Paul Stachour wrote a lot of junk about the CSC in an amazingly short period of time. "Dead" Edmonds, our Hero-at-Large is to blame for Notepad, The Empire Strikes Out, and Uniwat 2050 (which was written in 1977). Tim Finnerty, whoever that may be gave us Gone With the Wind. Good stuff, Tim, but I wish I knew who you were. I beheaded JJLong's article so that it would be compatible with its author. The almost forgotten Karen Rooke made a comeback to handle most of the layout. Luigi who is really jmrobinson (Mikey) started off another term of Real World 101, and Mike (Puppet) Albert wrote this week's uplifting Watsfic Presents. Anything else is my fault and if you don't like it, too bad. I'd like to say that we will be publishing bi-weekly from now on, but it depends on the writers. They're bound to get over their terror sooner or later. Late flash: Bradd Hart hastily scrawled the front-page article flogging Wednesday's Punk (shudder!!!) Wine and Cheese. And I suppose that's it for today, because here comes the end of the pa