

# math NEWS

## CHEVRON TO SEPARATE?

Last Friday chevron staff approved the wording of a referendum that could lead to the eventual separation of the chevron from the Federation. The move would be on the tail of a recent move by CKMS (Radio Waterloo) towards a separate refundable fee.

After over three hours of discussion, the staff approved one question which essentially has two choices. They were:

a) Essentially the status quo, the chevron stay in the Federation, but chevron and Federation functions are more clearly defined and bylaws are rewritten (commission's recommendations).

b) Separation of the chevron from the federation, through a separate per term fee and a reduced Federation fee.

The second question asks whether the fee should be compulsory or refundable.

Last month the chevron staffs voted 11 to 2 in favor of separation. They also approved a refundable fee structure.

Action regarding the calling of a referendum must still go to council and the president for approval. It is expected that the referendum could held this March and separation accomplished by September if the referendum so favours.

## Mathsoc Picks Exec

Mathsoc president Andy Mueller presented a new executive for ratification at last week's Math Society Council meeting. These appointed members join the elected senior executives, who were elected February 13th, on the Society's Executive Committee.

Kathy Kropp was approved as Administrator, replacing the retired Alex White. Rosanne Ristich joins Vice-President Geoffrey Hains as Athletics Director. Wil MacAulay was appointed as mathNEWS editor. Brian Gregory and John Ellis will retain their positions of Social Director and Speaker.

No one was ratified for the positions of Internal Affairs Director and Education Director. Dave DeBruyn and James Bakker have applied for those positions, and expect to be ratified soon.

The Council was expected to discuss the new Math Faculty essay requirements at its next meeting. VP Hains also was to present a plan to revive the Society's Anti-Calendar. The meeting was to be held yesterday and at press-time we did not have any results from the meeting.

Flappity, floppity, flip!  
The mouse on the mobius strip.  
The strip revolved,  
The mouse dissolved  
In a chronidimensional skip.

1193

## Essay Requirements

Some of you might have read an article in Friday's Chevron (who reads the Chevron? I use it for shelfpaper) that claimed that us MATHIES might have to write essays as a requirement for the Bachelor of Mathematics Degree.

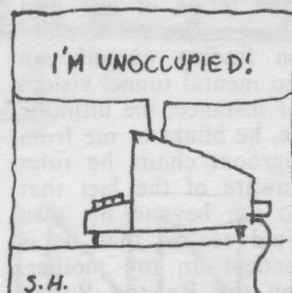
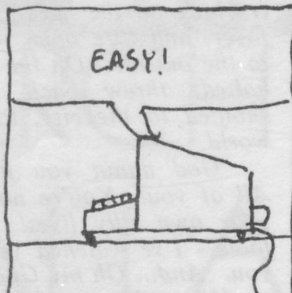
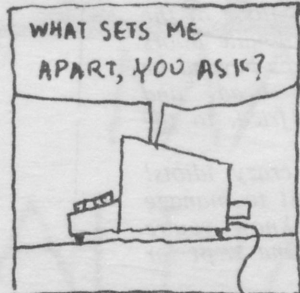
In a meeting with Dr. P. J. Ponzo, it was discovered that these essays could be in the form of co-op work reports. (I can hear some of you co-op'ers cheering right now). Dr. Ponzo also noted that these essays could be any essay from a course that you have taken if the essay constitutes a significant portion of your final mark in that course. This will not pose many problems to most people, but it could become a bit of a bother if you are the type of student that does not like to write essays and therefore avoids such courses at all costs.

It was also stressed that these essays would be marked by a prof that you were assigned to. One of the biggest problems appears to be the reluctance of the faculty to adopt such a programme.

As it seems right now it will be awhile before the essay requirements would come into effect as the faculty still has to approve the motion. Until that time Mathsoc will decide its official stance on the matter and will present it to the faculty.

If you want to voice your opinion drop into Mathsoc (3038) or write to us via the bun (mathsoc or gmhains) and let us know how you feel about the subject.

Geoff Hains



## Ramblings, Ravings, and Incoherent Mumbles

It comes to me, in the middle of my thirty-third circuit of the livingroom - diningroom - kitchen circuit in my home, that this column is soon going to start living up to its name, because there's basically very little to write about any more. We started going somewhere in the mid-Sixties, launched by the destruction of the New Republic as JFK would have implemented it, and it was only recently that we noticed the second stage had disintegrated on ignition and we were pulling ourselves up by the ancient if somewhat dubious method of pulling ourselves up by our own bootstraps. Which is not the much-documented process that hacks are familiar with; that being a practical process, it requires a starting point. No, the struggle against the reactionary establishment being largely abandoned (the question of success or failure being made irrelevant by time), we are now proceeding to combat each other, armed with the perfect truths that are self-evident to us but difficult to get into the heads of others. We fail to notice that the sum of two opposing forces is invariably zero, or that we have all begun the long descent back down into conservatism.

The era we live in isn't perfect; one of its major flaws is that the enemy, despite overwhelming rhetoric to the contrary, is nowhere to be seen. Rebelling without a cause leads to paranoia, a fortress that is very appealing to an action with no corresponding reaction to offset it. The last decade pulled our heads out of the sand; this one seems bent on encouraging us to stick them up our assholes. Self-discovery is a noble goal, but if it's not done the right way it usually entails the rediscovery of the outside world afterwards. The problem with the whole concept is that there's no true boundary between inside and outside, even the interface of our senses (which is what I suspect Timothy Leary was trying to tell us all along); the world needs to be grasped as a gestalt, not in the limited terms of our own conceptions.

Focussing on finding oneself can ultimately lead to mental tunnel vision. Take my cat, for instance; the ultimate in self-indulgence, he blinks at me from one of the livingroom chairs he rules over, totally unaware of the fact that were he able to see beyond his own whiskers he would realize that he is completely dependent on my mother, and indirectly on the Ralston Purina corporation. Or take your average university student who seems to be incapable of agitating for anything not directly connected with his own

existence. Viewed in this light it is possible to even admire the members of the AIA; despite the many gaps in their view of the cosmos and the numerous self-contradictions in their ideology, they are for the most part fighting for causes outside their limited sphere of influence. It is **not possible** to admire the people who are criticizing **mathNEWS** without offering any alternatives; when I sort out all the comments involving the passive word 'sucks' and all references to the good old days when Trob and Burloaf were King, I am left with only one constructive criticism, that being a suggestion not to feel compelled to write a column every week. Part of the reason that **mathNEWS** has fallen from grace is the lack of communication going on all over; the last issue was garbage, due as much to my own idiocy as to the idiocy of others, yet when with a few simple arrangements a prospective writer can sit down at a Honeywell terminal any day of the week and type in his submission in less than an hour, why were the editors forced to reprint three pages' worth?

Look at it another way. I was acclaimed to mathSOC council; hell, I could have been acclaimed to Fed council if I had felt that I could make a meaningful contribution while still in first year. I can see that people are not infused with a desire to govern themselves; what I can't understand is why??? It seems to me that the general apathy is a result of being overly concerned with oneself. I mean, self-respect is one thing, self-adulation is another. There's a basic empathy for the rest of mankind inherent in all of us. I don't care whether you think it's your religious or philosophic duty or if you just feel like doing it; but try and feel some concern for things that don't concern you. And if you think love and brotherhood are idealistic and rather maudlin concepts, think of it the way John Brunner did in his masterpiece, "Stand On Zanzibar". At the end of the book, a sociologist who has become famous uttering pithy but incredibly piercing statements about his fellow man suddenly realizes where his cynicism is coming from:

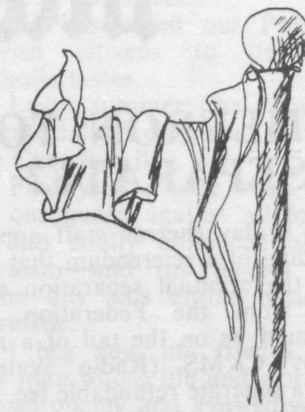
*He ran forward suddenly, heels crashing on the hard tiled floor of the foyer, and tore open the double doors to the outside. On the steps beyond he halted, threw back his head, and shouted to the city, to Africa, to the world.*

*"God damn you for crazy idiots! All of you! You're not fit to manage your own silly lives! I know you're fools - I've watched you and wept for you. And... Oh my God!"*

*His voice cracked to a breathy moan.*

*"I love you! I've tried not to, and I can't help it. I love you all..."*

Drop me a line and let me know if I'm getting through to anyone or if I should return to the self-indulgent drivel so suited for Friday afternoon veg-outs. My userid is pragde, real name Prabhakar, but you can call me pogo.



1194

Dear **mathNEWS**;

Where have all the water—fountains gone? Is there some plot in progress to slyly overcome all mathies by depriving them of such a fundamental substance? In my panic— **stricken** for one of these "fountains of youth"(?) I have discovered H<sub>2</sub>O absences in randomly changing corners of the second and third floors! Please investigate and report on this desperate situation, before I am forced to take up eating the now dirty snow....

Lutek the Thirsty



A Mathematician named Klein  
Thought the mobius band was  
divine  
Said he, "If you glue  
The edges of two,  
You get a weird bottle like  
mine!"



This Monday 27 February 1978  
Mathsoc proudly opens Math Week  
with

## THE TALK

"The Talk" is a contest. The winner is the person who can deliver the "best" 3-minute dissertation on any subject, period.

"The Talk" will take place 12.30 Monday in the smoking half of the third floor Math Lounge. To judge the "best" there will be a 3-man panel comprised of Mathsoc President Andy Mueller, VP Geoff Hains, and Social Director Brian Gregory. Prize for the best Talk is a ticket (for one couple) to the Math Society Semi Formal (\$16 value) on Saturday 4 March. All members of the Math Society and Faculty are welcome to compete (hopefully some of the high-ranking profs will demonstrate their well-known oratory skill).

For info wander into Mathsoc, MC3038, where you can enter the competition, or just show up at the event and give your spiel then. Or just come to listen. May your tonsils run on forever!

## T.O.PUBS

The telephone number for the Toronto pub is 481-5382. For more information, ask at Mathsoc, mc3038.

*Journ. Mindss. Rvngs., 5, No. 3, 253-255 (1976).*

## "Oh Yeah?",

## The First Sarcastic Programming Language.

E.A.Ashcroft

Just as the general public is coming to believe that computers are *not* intelligent, but are in fact "morons with prodigious memory", advances in computer technology are clouding the issue once again. With the advent of "sceptic circuits" (see E.Ashcroft, *Doubting Devices. The Computer Generation Gap Widens*, [2]), it can no longer be said that computers slavishly follow the instructions of their programmers. This development is feared by some programmers, and welcomed by others (coining the slogan "Computer Liberation"). The moderate middle-of-the-road approach is to try and live with the new components, and try to harness their undoubted potential for producing startling insights. A first step in this process of cajoling the machines into working for us is, of course, to communicate with them.

Since the latest machines don't believe a word we tell them, programming

in a straightforward way is self-defeating. One has to be more devious, and say the *opposite* of what one intends. In other words, one must be *sarcastic*, and the new programming language "Oh Yeah?" has been designed as the first of what is anticipated to be a whole series of languages based on sarcasm. As the machines get more sophisticated, we anticipate the necessary evolution of the languages, from sarcasm to irony, to reconditeness. But at the current primitive stage, "Oh Yeah?", with its rather clumsy, "low" witticism constructs, seems to be an adequate and effective tool.

This paper explores the semantic problems raised by the use of sarcasm in a programming language. One of the reasons why the semantics of computation has progressed further than the semantics of natural language is that computer programs have (or had) no hidden meanings. By abandoning this most basic of properties, we are forced to rethink the whole basis of the classical semantic approach. For example, if I were to say

Author's present address: Computer Science Department, University of Waterloo, Waterloo, Ontario, Canada.

# MATH SOCIETY

## SEMI-FORMAL

WITH

# DOCK SAVAGE

## MARCH 4

# VALHALLA INN

\$16.00 COUPLE -- TICKETS AT MATHSOC MC3038

1195

# We have **FEEDBACK!**

Dear **mathNEWS**:

G. Ashby's article and subsequent letter about the new UNIX account policy were uninformed and misleading. I am afraid this misinformation may discourage undergraduate students from applying for UNIX accounts.

There are several reasons for instituting the new UNIX Policy which, by the way, is the same policy used by MFCF for assigning Honeywell accounts. The policy isn't intended to make it difficult for undergraduates to obtain accounts. In fact, it isn't particularly aimed at undergraduate students. Part of the policy is intended to help solve the problem of professors failing to notify the UNIX Director of their intention to use UNIX for course assignments, which has caused serious overloading of UNIX in the past. It is also intended to notify students and faculty outside the Computer Science Department that they too can obtain UNIX accounts since the PDP-11/45 is a Math Faculty resource.

The most important reason for the required proposals and progress reports is to obtain information on who is using UNIX, and what they are doing with it. Such information is necessary for justifying expenditures for maintenance and new hardware. For example, the PDP-11/45 is badly in need of more memory to support the current load. The usage information is currently being used for making a case to purchase more core (or possibly MOS) memory. The information can also be used in making decisions such as which courses should use UNIX each term. If there is a large demand for special projects or research use, certain courses can be moved to other machines.

The new Policy will enable us to determine who isn't using UNIX so we can reclaim filespace from unused users. In the past, students would graduate and many months later we would delete the file space due to inactivity. We are also short on filespace, so reclaiming unused space is important.

Often a user is unaware that he or she is making excessive use of UNIX, causing poor response for other users. Excessive use sometimes results from course assignments which could be designed to use fewer system resources. The new Policy should help avoid these unfortunate situations.

Obviously when the demand for UNIX computing exceeds the supply, as has been the case this term, cutbacks need to be made. But there is no implication by the new Policy that cutbacks will be made by simply preventing undergraduates from using the machine. So far no undergraduate applications have been turned down.

I believe that the availability of good computing facilities has contributed greatly to the education of many U of W students. I encourage students to obtain UNIX accounts to do individual projects, or to explore UNIX and learn the C language. To have your proposal accepted you must have a clear idea of what you intend to do with your account, your proposed use must be academically beneficial (to you), and your plan should make reasonable demands on system resources. The proposal must be at most one page in length (since I read them!) and on hardcopy (since I file them). A copy of the UNIX Policy is posted in the UNIX Lab and on my office door (room 6106).

Michael A. Malcolm

Dear **mathNEWS** :

About Mike Malcolm's letter:

As you may guess, it was never my intention to discourage undergraduates from applying for accounts, rather I was worried about the new *policy* discouraging them. Mike Malcolm has given me his personal assurances that this will not be the case, so I can but believe him.

I was particularly worried that the sort of things I used to use UNIX for (text editing and playing with UNIX itself) would not be legitimate, but he tells me they would.

His other reasons for having proposals seem good, since they all have to do with making UNIX better. The one inconsistency is that they only apply to those who supply written proposals. Thus graduate students, who are frequently heavy users of UNIX, will be exempt. Malcolm has told me that he will get in touch with each grad student individually, and find out what they are using UNIX for. I hope he succeeds.

Thus my concern for UNIX boils down to a mistrust that Mike Malcolm would be fair in allocating accounts. Thus far he has. We can only hope he keeps his word for the future.

Graham Ashby

Dear **mathNEWS** :

May a retired **mathNEWS** editor be allowed a few words of gentle, understated criticism?

*Re the Roman numeral controversy:* Ben Lutek is right, of course. Roman numerals were introduced in the first place in order to terminate silly arguments over what base and origin to use, for they are baseless. I think XCIX and IC are both correct.

*Re the use of 8-point type for articles:* this is simply absurd. Any type smaller than 10 points is intended for subscripts (and similar small things) and random-access tables only. Setting articles that you want to be read in small type is counterproductive. (And if you don't want them to be read, you should not use them!)

*Re the front-page logo:* its purpose is not to reduce the amount of space on the front page. Nor is it for infantile misspellings. If the people with the most interest and enthusiasm for **mathNEWS** in the whole Faculty have so little respect for that on which they are spending their time and students' dollars that they do not even print its name correctly, then perhaps the newspaper should be meeting a quiet end.

*Re typography:* printing all headlines in 18-point boldface is **boring!** You have two non-Roman fonts [*sic*] and two larger-than-10-point sizes on your machine—use them! Also, lines should be ruled between adjacent articles on the same page, at least when no other visual separation is provided.

*Re staff shortages:* you have repeatedly printed things lately of the form "If you don't like it, come out and change it". This is fine, but when you follow that with "If you can't make it, write something down and ... I'll personally see that it gets in", you are missing the point. To become viable, **mathNEWS** needs not more columnists but more of what a **NEWS**paper has—reporters, proofreaders, editors. (Don't tell me to try it—I did, and I enjoyed it. Being Editor gives a feeling of power...) Anyway, perhaps the present Editor should consider a reduction in his workload, which could easily be effected by a corresponding reduction in the amount of *filler* printed. **The February 10 issue\* contained 8 pages of which an aggregate of rather less than 1 page contained NEWS! The longest-running regular feature was omitted! Nine-year-old non-math politics was PROUDLY presented!** I am disgusted; I will not read **mathNEWS** again†.

Mark Brader

\*This letter was intended for the February 17 issue, but I wasn't feeling well enough to get to UW to type it in.

†Except to verify that this was printed properly.



**MATH WEEK**  
**FEB 27 - MARCH 4**

**MONDAY**

12:30 **Contest For The Best 3 Minute Talk** in the Math Lounge

Prize: Ticket to Semi

7:00 **Monopoly Tournament** in Math Lounge

Prize: Tickets to Liverpool Pub & T-shirts

**TUESDAY**

12:30 **Slide Rule Contest** in Math Lounge

Prize: Dinner in Laural Room

8:00 **Wine & Cheese Party** in MC 5136

\$0.50 Mathies \$1.00 Others

*Music by Ghost*

**WEDNESDAY**

12:00 **Paper Airplane Contest Judging** in Math Lounge

Must get Construction Materials From Mathsoc.

Prizes Tickets to Liverpool Pub

7:00 **Sanctioned Bridge Tournament** in Math Lounge

Entry Fee: \$0.50 Mathies \$1.00 Others

Prizes: Cash

**THURSDAY**

1:30 **Tug of War** on Village Green

Teams of 3 Girls and 3 Guys

Prizes: 2x\$7.85 Worth of Refreshments

8:00 **Liverpool SCH Pub**

\$1.00 OFF for Mathies

**FRIDAY**

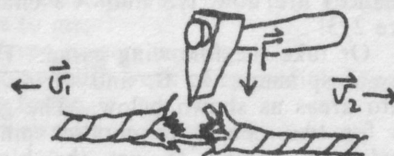
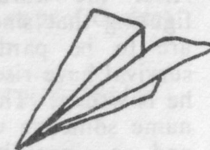
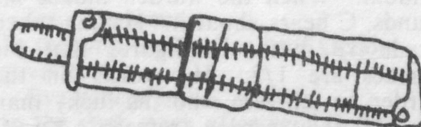
2:00 **Broomball** Mathsoc vs. Faculty at St. Clements

**SATURDAY**

6:00 **THE SEMI FORMAL**

with Dock Savage

\$16.00 per Couple



(this is a broomball)



Register for Events in Mathsoc

Do it Now

## Mathematics for a Friday Afternoon

Probability can be quite a frustrating topic, as anyone who has spent any time in Stats 230 can attest to. A good friend of mine complains about always being off by a factor of 2; and most people never recover from their first taste of perms and combs in Grade 13. What makes it even more frustrating is that the result one gets often runs contrary to intuition. Take the following situation:

A, B, and C are waiting on Death Row. The governor decides to pardon one of them, and chooses the name at random. When the warden makes his rounds, C hears about it. Having taken Grade 12 math, he figures that his chances are  $1/3$ . He works on the warden to tell him who the lucky man is, but the warden refuses. So C convinces the warden to tell him the name of one of the other two who is to be executed. The warden agrees, naming B as one of the doomed men. After the warden leaves, C gloats, figuring that since either A or himself are to be pardoned, his chances of survival have risen to  $1/2$ . But in fact, he is wrong! The warden could always name someone who is to be executed, and so since this does not give any additional information, it does not affect C's chances. But since the probabilities must sum to 1, C's chances are now  $1/3$  and A's chances are  $2/3$ !

Or take the following game. There are 3 spinners, A, B, and C, divided into areas as shown below. The game is for two people to choose spinners and spin, trying to get the highest number. What's the best bet?

A beats B with a probability of (.56). A beats C with probability (.51). B beats C with a probability of  $(1 \cdot .22) + (.22 \cdot .51) + (.56 \cdot .51)$  or (.6178). Clearly, A is the best choice since it beats the other two with probability greater than  $1/2$ . C is the worst choice, since everything beats it.

Now bring a third person into the game. A wins if the others show 2 and 1, with a probability of  $(.56 \cdot .51)$  or (.2856). B wins in two cases: if he has 6 or 4 and the others have 3 and 1, probability  $(.44 \cdot .51 \cdot 1)$ , or if he has 6 and the others have 3 and 5, probability  $(.22 \cdot .49)$ . So B wins with probability (.3322). C wins if it has 5 and B has 2 or 4, probability  $(.49 \cdot .78)$  or (.3822).

Now the tables are turned. C is the best choice; A is the worst! If this seems a rather artificial situation to you, consider A and C as drugs with efficiencies distributed as shown. (New drugs often have efficiency spectrums). Doctors prefer A; but when B comes on the market, they switch to C!

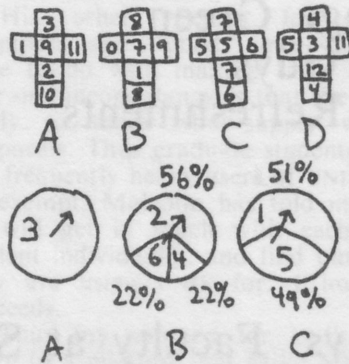
This contra-logical situation is called nontransitivity, and it provides a neat way for us to rip off our fellow man. The dice shown unfolded below are such that each one is beaten by at least one of the others. A beats B, B beats C, C beats D, and D beats A, all with probability at least  $.647$  ( $22/34$ ). In practical terms, this means that if you let the other guy choose his die first, you can expect to win a dollar from him for every 64 cents he wins from you.

I'll leave you with a gambling paradox. There's a game called Chuck-a-Luck, where three dice are rolled while spectators place bets on a single number. If your number comes up once, you get twice your money back; if it comes up twice, you get three times your money back; and if it shows on all three dice, you get four times your money back. Since the probability of one dice showing your number is  $1/6$ , three would give you chances of at least  $1/2$  at doubling your stake, not to mention chances of getting at the higher-money payoffs. Yet it is one of the most popular games in travelling carnival sideshows, since it makes the operator more than roulette does. What makes this game economical?

(Thanks to Martin Gardner and the *Mathematical Games* column in *Scientific American*)

-prlagde

### 1198



**FOR SALE SONY TC-377** reel-to-reel tape recorder and 27,000 feet of tape. Asking \$425. Contact Mark at 885-0595 or *mrhasselback* on MAIL.

There will be a sanctioned duplicate **BRIDGE TOURNAMENT** on Wednesday March 1, 7:00 P.M. sharp in the third floor math lounge. Everyone is welcome. (If you don't have a partner, we will try to find you one.) Entry fee is \$1.00 per player, and if you are a member of the math society, mathsoc will pay \$.50 of this. All entry fees will be returned as prizes.



↑  
person with  
a cigar

**WANTED** Young, about-to-be-married couple is looking for an apartment, or other accomodation, near the U of W campus, starting in September/78. Would like rent to be reasonable. Please contact klstauton or eamacneil on the 'bun. Or, if not possible, call Karen at 884-7969 or Ted at 884-5385.

**NEEDED:** Two people to work as roadies for semi-formal. Will pay \$20.00 for 6 hours work. March 4th 2:00pm to 6:00pm and 1:00am to 3:00am. Contact bjgregory in mathsoc or on TSS.

**WATSFIC:** The University of Waterloo Science Fiction Club holds its meetings every Tuesday at 7:30 pm in MC 3011. New members and others welcome. Free donuts for members.

**GUITARS!!** for sale. One El Degas cherry sunburst dreadnought (acoustic), with soft-shell case. One El Degas Telecaster copy (electric), black, with hard-shell case. Also Hohner practice amp. Best offer. Call 885-0595 and ask for Wil, or mail jwbmacaulay on TSS.

**ANNOUNCING** the first annual "Miss Beautiful Big Toe" Contest. Any female under the age of 65 is eligible to win. The winner will receive a customized toe nail file and a picture of the Most Beautiful Big Toe" will be placed outside the Math Lounge for posterity. Deadline is Feb. 24 so don't delay, males make your selection now.

**WIN\$\$\$** A prize will be awarded to the best answer to the following problem: "Give in 72 characters or less a description of WIDJET." Mail all solutions to *djkeenan* or mathNEWS, or drop them off personally at Mathsoc. Judge's decision (mine) is final. All entries must be submitted by March 7/78.

**WIDJET** lovers (likers?) here is a serious add. If you are interested in buying a "Wonderful WIDJET of Oz" T-shirt contact pckelly or jwbmacaulay or phone 885-0595.



# CSCTRAMP

## back by popular demand!

*the editor is forbidden to change or edit in any form any of this article. this article is entirely the responsibility of the author who will take no responsibility in event of any slander (libel?) suits.*

i have been requested (told) to write an article for **mathNEWS**. now my abilities in this area are not all that great, this is why i have not continued to write this article. however, i have been informed that **mathNEWS** has gone so far downhill, that i am **needed** to help pull it up again. (however i think that it is more likely that i will send it further downhill (is this possible???). so here goes... the return of the dazzling *csctramp*.

i have recently been informed that all the assets of the csc will, if we should fold, go to the association for computing machinery (acm). after literally years, suddenly **mathSUC** has started to complain about this (mainly since we are attempting to purchase a micro computer and they are afraid that the acm would get it if we were to fold (i.e. the feds fold with refundable fees -> **mathsoc** folds -> **the csc** folds???). i don't really think this is a distinct possibility, the acm (which is very large) is not going to care a bit about a lousy \$2k computer. (also we are in canada, they are in the states, it would cost them more than it was worth).

mainly, it is a matter of newly elected prez-ass (hains, better known as pre-school) (elected by the massive total of 4 votes) wants to exercise his power. he also claims that the csc constitution that was approved by **mathsoc** is different from that which we currently have. (who knows? nobody around now was around when it was passed). (also, who cares?)

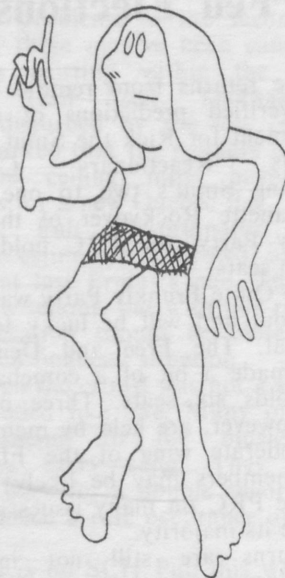
the photon is down (again).

the method of allocation of resources for courses using vm is just terrible. take for example the database course (448). we are allocated the massive total of \$50 for the semester, however i found that in just one hour and fourteen minutes working on the computer i spent \$24.50! or about half the allocation. i believe that they have been persuaded to give us another allocation for the next assignment (i really hope so, i know a number of people who have already run out). of course the graduates taking the course have an advantage, they may use money for their other courses for this, that is distinctly unfair to the undergrads who are strictly limited by their \$200. and supposedly the grads know more and should therefore be able to do it quicker.

for those of you who know johann george (i think everyone knows him), you realize that there is a great demand on his time. he is constantly being kidnaped to somewhere to be shown something, further people are always wanting him to do things for them. therefore the scheduling system for the photon will be implemented shortly for johann, simply type to the system `jgeorge/sched -r` and then follow the instructions for scheduling a time. (it will not be permitted to schedule johann for more than 36 hours at a time.) (it is your own responsibility to locate him at your slot time).

the glitch in the photon which cause it mysteriously to foul up at strange unpredictable times has been fixed. you see the micro in the phototypeseter works with sixteen bit words... but has an accumulator of only twelve bits. they do a divide by hiding the high order four bits in a magic location. however they say that zero divided by anything is zero... but only check the low order bits! and mysteriously the result is zero, even though the high order bits weren't. isn't that terrible?

this is the end of this article. unlike other articles in this paper you are not to send me any mail. i couldn't care less what you think of this article, i didn't want to write it anyway.



## 1199

A mathematician confided  
That mobius strips are  
one-sided,  
And you'll get quite a laugh,  
If you cut one in half,  
For they stay in one piece when  
divided.

## THE 12 WEEKS OF CS240

(sung to the tune of "the twelve days of christmas")

In the first week of cs prof Geddes gave to me,

**FORTTRAN** in the *garbage*

In the second week of cs prof Geddes gave to me,

two algol books and fortran in the *garbage*

In the third week of cs prof Geddes gave to me,

three DO whiles, .....

In the fourth week of cs prof Geddes gave to me,

four for loops, .....

In the fifth week of cs prof Geddes gave to me,

five procedures, .....

In the sixth week of cs prof Geddes gave to me,

six semi-colons, .....

In the seventh week of cs prof Geddes gave to me,

seven record classes, .....

In the eighth week of cs prof Geddes gave to me,

eight call by values, .....

In the ninth week of cs prof Geddes gave to me,

nine call by results, .....

In the tenth week of cs prof Geddes gave to me,

ten if— then—else .....

In the eleventh week of cs prof Geddes gave to me,

eleven parsers parsing, .....

In the twelfth week of cs prof Geddes gave to me,

Twelve step refinement, .....

once again

Troubled in 240  
ps I'm seriously considering joining the  
**ARA**  
(Anti— Recursion Alliance)

There was a young lady named  
"Bright"

Whose speed was far faster than  
light;

She went out one day

In a relative way,

And returned on the previous  
night.

To her friends said the Bright  
one in chatter,

"I have learned something new  
about matter;

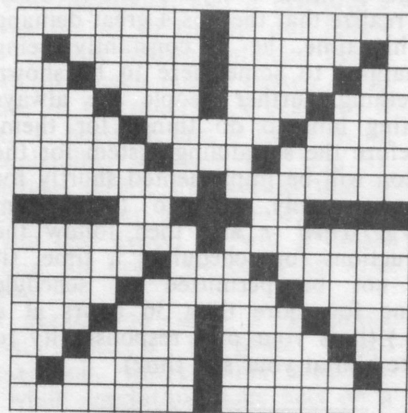
My speed was so great

Much increased was my weight,

Yet I failed to become any  
fatter."

ACROSS

- 1a hack columnist
- 1i consumes
- 2c greek letter
- 2i omit
- 3a example
- 3d fee
- 3i dispatch
- 3n if (f)
- 4a an appendage
- 4e a tense of sit
- 4i get upset?
- 4m arithmetic operation
- 5a abound
- 5f an Irish county
- 5l a digit
- 6a menelaus' wife
- 6g in its own (l)
- 6k superior
- 7a competitor
- 7i discolors
- 8e musical note
- 8j right on
- 9a inhale
- 9i forgive
- 10a one who notes
- 10g biblical book
- 10k foretold
- 11a \*
- 11f cross-referenced
- 11l you are? are you?
- 12a slippery
- 12e lake (f)
- 12i umpire
- 12m 595
- 13a basic measure
- 13d rifle part
- 13i hair style
- 13n 2/5 of McDonald's Farm chorus
- 14c sunny
- 14i longings
- 15a inhabitant
- 15i cornering



The Return of the  
**GRIDWORD!!**



DOWN

- a1 respire
- a9 bland
- b3 a color
- b9 nick
- c1 ancient god
- c4 liquify
- c9 support
- c14 pronoun
- d1 a degree
- d5 sea (f)
- d9 every
- d13 measurement of sound
- e1 work
- e6 lowest of the low
- e12 calm
- f1 in front of
- f7 goes with neither
- f11 woman's name
- g1 quickest
- g9 expelling agent
- h5 ruthenium
- h10 goes with vay
- i1 consume
- i9 abnormal
- j1 lamentation
- j7 Waterloo street
- j11 postpone
- k1 grape
- k6 toothy operation
- k12 let go
- l1 1,3,5,7,...
- l5 naught
- l9 the first 3/4 of a work
- l13 epic
- m1 upper eschelon
- m4 terrible - suffix
- m9 fat
- m14 silicon
- n3 tendon
- n9 vigor
- o1 shatters
- o9 deducing

This week's *gridword* (we have returned, again!) is by Boff. Not Roff or roffed. If you think you have solved it drop or push your solution into the gray box on the wall on the third floor. Do not put it into an ashtray. They can be distinguished by touch (one is wood, one metal) by taste, (one tastes of ashes, the other of raw wood) and of course, sight. (One is parallelepiped and the other is half a hemisphere).

If you feel that this puzzle was a) too easy or b) too hard you can still win a T-shirt by submitting a gridword. The submitted gridword (if you choose option a or b) must be at least 15x15 squares big and have no more than 20% blank spaces in it. Otherwise I can do better myself on a slow afternoon.

There are no winners this week as there was no contest last week and also no gridword.

### Fed Elections

Late returns from remote faculties have verified predictions of majority government for Rick the Smut and the People's Reactionary Coalition. Following Smut's two to one victory over Janette Rockyover of the Quite Frankly Party, the PRC holds about thirteen seats.

The Quite Frankly Party was nearly wiped out and will be lucky to retain one seat. The Free and Democratic Party made a bit of a comeback and now holds six seats. Three of those seats however, are held by members of the moderate wing of the FDP and these members may be likely to vote with the PRC on many issues and this increase its majority.

Returns are still not in from Iguneering where the separatist Parti Iguneer led by Peter Queen is running a full slate of candidates. This action is part of a plan to make the whole council refundable.

In a related development students approved compulsory athletic fees. Though an increase was rejected by 400 votes, the athletic BOG got bogged down and passed the increase anyways.

### Trob Switches!

On Tuesday (St. Valentine's day), the Admissions Committee of UW's Integrated Studies Programme accepted an application for admission from **mathNEWS's** own Exil Q. Trob.

In a related development, Waterloo became the new home of TSS (Trob's Stereo System), which includes one flaky disk drive and 2 removable disks (one of them perma-flopped). Due to problems with one output unit, system performance actually improves with volume.

Further details of these and other stories as they develop.

1200 (whee!!)



## Math Loses Its OWN Tourney

On Friday Feb. 10, Mathsoc held its fifth semi-annual broomball tourney and for the fifth time Mathsoc did not win any of its own beer.

The first game of the tourney saw Team Hot Dog win their game over Science by default.

The next game was a one sided battle as Yaesh toppled Math 1-0. Yaesh had complete control of the game but Math's tight defensive play held them to their lone goal.

In the third game, Renison defeated Team Hot Dog 1-0 in overtime. The game was very wide open with many missed opportunities for both sides.

In the fourth game, ESS squeaked past Math with a 1-0 win. Math play a very strong game on both offence and defence but some how they could not put the ball past the opposition goalie.

In the fifth game, Science defaulted again against the Renison team.

In the sixth game, Yaesh demolished thier opposition, ESS, 4-0. As the score suggests, the game was played mainly in the ESS end of the rink.

The consolation finals a much weaker ESS team was put out of their misery by a score of 3-0 by the Team Hot Dog. The Hot Dogs completely dominated the game but they missed many scoring oppertunities.

The final game was a battle between Renison and Yaesh. Renison was embarassed by a 5-0 score. (jrbakker of **mathNEWS** ~~famed~~ to keep pace by drinking a beer for each goal scored, but....)

Math also played a regular season game on Friday and lost 3-0. I would give more details but I was side-lined with a knee injury from the tourney. It was only the first game in which Math has lost in league play.

I would like to thank all those people who participated in the tourney and I hope that the next time we might be able to win some of our beer.

HS

ps jrbakker only consumed 4.5 beers instead of the 5 he claimed he drank.

pps Both of us would like to thank all the nice girls who got penalties and kept us company at the time-keepers bench.

The topologist's mind came unguided  
When his theories, some colleagues derided.  
Out of mobius strips  
Paper dolls he now snips,  
Non-Euclidean, closed, and one-sided.

## Thomas Receives Warm Welcome

Ottawa recording artist Ian Thomas returned to Waterloo last week for an appearance at the South Campus Hall Pub. As was the case last September, Thomas was received by a very enthusiastic audience.

Thomas kept the audience interested in his performance. He mixed such old favorites as "Painted Ladies", "Mother Earth", and "Mary Jane" with cuts off his upcoming album. One of the most notable songs of the evening was "Calabash", the title cut off his last album, which was written as a tribute to Jimmy Durante and other old-time entertainers.

Thomas is backed up by four capable Southern Ontario musicians. Dave Cooper plays guitar and Dave Sawyer plays bass. The drummer is Micheal T. Overly and Hugh Syme is on keyboards. Thomas reminded the audience that Syme wasn't actually "on" the keyboards, but really "sat behind them".

Such satirical remarks are characteristic of Thomas' style. Between some songs he would take time out from singing to joke with the audience. He was quite adept at directing remarks to some of his friends who were photographing the band during the show.

Though Thomas' sound system was far superior to that of Hott Roxx, the band did encounter some electronic feedback problems in the second set. Some of these may've been caused by problems existing within the South Campus Hall itself. Thomas was himself disturbed by the low ceilings, and remarked that the banners hanging from the ceiling must have been nominees for a new Quebec flag.

SCH Pub Co-ordinator Dave Jennon estimated a crowd off 338 persons at last Friday's pub. This was short of a sellout, but with bar receipts the Federation should be close to a break-even financial situation.

Though the crowd was not a sell-out they sounded like one. Many of them were dancing to the music and appauding every song. They called Thomas back for a double encore, and that is indeed a rare occurance at SCH Pubs.

There is no SCH Pub this week on account of Arts Reading Week. Two SCH Pubs will be held on Thursday March 2nd and Friday march 3rd. Liverpool will appear both nights.

Absentmindedly, the late poet  
Moore,  
Jaywalking, at work on line  
four,  
Was killed by a truck.

There was a young girl in Japan  
Whose limericks never would  
scan;

When someone asked why,  
She said with a sigh,  
"It's because I always attempt to  
get as many  
words into the last line as I  
possibly can."

## CSC Flash

Last Thursday the Computer Science Club held yet another astounding meeting. The guest speaker was Professor Gordon Savage of the Systems Design Department, in this university. He was speaking on **CHOREO**, a computer model for dance.

What does it mean to model dancing on a computer? First you must "store" a dance in the computer. But how do you store a dance?? There are many notations for this, you must be able to specify the rotations and positions of all parts of the body, and the duration that a position is to be held. This is done for many intervals. Next, the computer models the dance. This is done using a simple stick model of a human that is positioned as specified by the stored dance. The computer uses various techniques to fill in the movement between two successive positions. (This has been done for many years in the making of animated films.)

However there are still many problems, for example, how to describe a jump to the computer. These problems are still being worked on.

The work on **CHOREO** has been set back by about a year and a half by the purchase of a PDP/15 to replace the PDP/9 that was previously in use. This was due to the conversion of the graphics software that was mainly written in assembler.

Next week (Thursday, March 2) the CSC will present Jim Smith of this university's CS department who will talk on *Design Automation*. You probably already have heard of Jim Smith, he wrote the pamphlet on *the Architecture of the Watiac Computer*. The meeting will be held in MC5158 (the Colloquial Room) at 19:30. I'll see you all there. Dear **mathNEWS** :

In keeping with Christmas spirit (who says I'm late: I'm early) I would like to submit the following in the "NEW REVAMPED CAROL" category.

1201

So quick a verse writer was  
Tuplett,  
That his limerick turned out a  
couplet.

## UW Arts Centre

### Northern Drama

"Esquer Mike and His Wife Agluk" is a play that deals with the Canadian North, set in the Northwest Territories, and written by Canadian Herschel Hardin, but it took the U.S. to recognize its merit and publish it in its distinguished theatre journal, The Drama Review. Since then, the Factory Lab Theatre in Toronto is the only Canadian theatre that has produced it. Now, at UW, guest director Paul Mills is staging this Canadian play for the Creative Arts Board. It will be presented March 7 to 11 in the Theatre of the Arts, University of Waterloo, at 8 p.m.

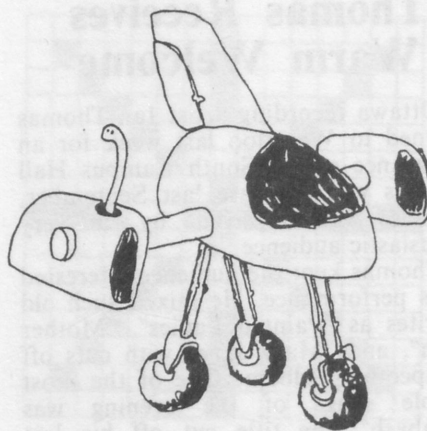
### Dance Company

The University of Waterloo Repertory Dance Company will again hail the coming of Spring in their major dance presentation in the Humanities Theatre, 8 p.m. on March 2 and 3. The Carousel Children's Performing Group will be the guest dancers. In addition to original choreography by students and faculty, several pieces from outside choreographers will be included in the programme.

### Art on View

Gobelin and Rya tapestries, landscapes, "female armour", and cloth fabrications are on view in an exhibition entitled **WOOL AND CLAY** that is open at the UW Arts Centre Gallery until February 26.

The collection of works is by two Canadian women— **Thomaveh** and Ann Roberts— whose imaginative creations are not only thought-provoking, but also approach the fantastic.



A Devio  
with Worm

Dear mathNEWS,

I thought this might be timely, since we're well into midterms.

"Alas, I have explored  
Philosophy, and Law, and  
Medicine,  
And over deep Divinity have  
pored;  
Studying with ardent and  
laborious zeal;  
And here I am at last, a very  
fool,  
With useless learning cursed,  
No wiser than at first!"

J.W. Goethe

(Faust, trans. by J. Anster)

Mike Moran

in 30 minutes i will have  
"your not the only one"

Finishing up at 6:30 am wed

Philip Kelly, and just going out the door was John Vanhezewyk. In during the night were Rob Collins, John Lee, JJ Long (who actually typed!) Jill Kilpin who came with Rob, Alex White contributed a flashy tramp, Prabhakar Ragde with some light and not-so-light Friday reading, Ruth Harris our new gridword editor, Mike Webster has some ideas, EA Macneil's article didn't get in this week, neither did jrbakker's.

I was going to tell you all about a great book i read... oh well..

If I've forgotten anyone I'm sorry... at 6:45, I'm going to bed for 2 hours.

under new mangement... Wil Macaulay

Once again we are proud to announce the First Annual Mathsoc Math Week

## GREAT PAPER AIRPLANE CONTEST

on Wednesday 1 March in the Math and Computer building third floor foyer. The time: 12.00 noon this Wednesday.

Let's see your own pet design compete for one of these coveted awards:

1. Longest Flight Distance
2. Longest Flight Time
3. Most Interesting Flight Plan
4. Most creative Design (Origami)

First Prize in each of these divisions is 2 tickets to Thursday's Liverpool South Campus Hall Pub.

To enter, come to Mathsoc (MC3038) and get your Mathsoc Math Week G.P.A.-approved official entry form/ airplane construction sheet. Besides your Name (and Sex if you think it will help), I.D., number, and Aircraft Name, you may add only decorative ink to your official form; then fold it with trembling, tender hands into your favourite shape. All launches, however, will be made by an unbiased panel of judges (you may specify any special launch directions, if necessary).

The best planes will be retired to the Mathsoc Aeronautical Museum (well, the third floor showcase, anyway).

1202

been up for 24 hours

3B AM says High School.

are BJ Gregory, Geoff Hains