The Facts Behind the chevron Lockout

by Gary Dryden

The Federation of Students' Executive sealed the offices of the chevron Friday following the resignation of the editor-in-chief and the Board of Publications Chairman. This was done in order to prevent possible trashing or occupation of the premises.

Fears that the offices would be occupied were based on past actions of a Maoist group, the Anti-Imperialist Alliance (AIA), who it was felt would react angrily upon hearing that the Executive was giving notice of motion to an emergency Student's Council meeting to fire Neil Docherty, full-time production manager of the chevron, and Henry Hess, its news editor.

In a statement released to Council and the press, the Executive Board stated: "Members of the Federation Executive believed from what they had seen and heard of the relationships in the paper that a minority bloc of individuals within the chevron had been exerting pressure on the editor (to resign) for some months."

The statement went on to say that "Part of the conflict within the paper appeared to revolve around the affinity of Hannant (a volunteer reporter and UW grad student), Docherty, and a few others to the Anti-Imperialist Alliance."

The statement also expressed fears that members of the AIA party were conspiring to take control of the paper in order to use it to further their political ends. As the body accountable for overseeing the responsible use of student activity fees, it was felt that the issue should be taken immediately to Students' Council.

In an emergency meeting Sunday evening, Council was informed that a group of AIA sympathizers including some chevron staff had occupied the office in spite of the Executive's precautions. The group included one faculty member and one grad student (Hannant) but no undergrads at all.

In the face of the forcible occupation of the offices and because it was felt less dangerous to risk damage than to see the paper shut down, it was decided at the council meeting not to shut the paper down at this time.

Docherty claimed that the Executive Action represented a "Muzzling of the Press." The Executive explained that, had it wished to muzzle the press, the obvious way to do it would have been to enforce the by-laws of the Federation of Students, which provide for total control of editorial policy to rest in the hands of the editor.

The AIA party occupation forces spread the rumor to

RESIGNATION

My resignation from the executive of the Federation of Students has been under consideration for some time. It comes at a time when I am no longer registered at the University of Waterloo, at a time when I have taken on considerable other commitments, and following the resignation of the editor of the chevron earlier today.

I regret that I have failed as Board of Publications chairperson to improve the relationship of the chevron to other parts of the Federation. Communication with the paper has broken down largely because there is simply no clear definition of the relationship of the chevron to the Federation, which publishes and finances the paper. Because this definition is missing, and because attempts to remedy the situation using conventional methods have failed, I support the executive action that it feels must be taken following my resignation.

What is important now is that the students who care about the paper sit down together and design an independent structure for the paper which protects and guarantees autonomy from the Federation and which also ensures that the paper will be directly responsible to the students who own it, fund its operation, and for whose ultimate benefit the paper is published.

Ralph Torrie

The 100th math NEWS

SPECIAL LECTURES

Seasonal Adjustments of Time Setries

By Prof. G. A. Barnard, of the University of Essex, England, *via* UW's Stats department. 2:30 p.m. Tuesday, October 5, in MC 5158.

Real Numbers From Cauchy to Robinson

By Prof. J. G. Dhombres, of the University of Nantes, France, and the French Embassy in Ottawa. Presented by the Faculty. 3:30 p.m. Wednesday, October 6, in MC 5158.

Prof. Dhombres will be happy to meet students who are interested in studying mathematics in France.

Math soc news

A meeting to form a Social Committee is being held Tuesday at 12:00 in the Mathsoc office, so that all interested people can see me or leave their name and telephone number in my box in the Mathsoc office. All are welcome.

We will be organizing Math Week (in association with other Societies), a Christmas Party, and other activities (such as pubs, coffee houses, etc.) depending on the interest shown and the feasibility of these events.

Mathsoc is going to compile a list of interested programmers, including their:

Telephone number;
School year;
Experience; (i.e. knowledge of:
Which computer systems or terminal systems;
Which languages; and,
Level of competence in each;)

This list will then be circulated to interested professors in Environmental Studies (and probably Arts and HKLS as well). Hopefully, by offering this service we will stimulate some interest in it.

Notes:
[1] These jobs will vary in length as well as time of involvement.
[2] Some of them may be paid jobs.
[3] It may be possible to get some kind of credit (perhaps as a "reading" course) for work done, if the project involves enough work.

Selma
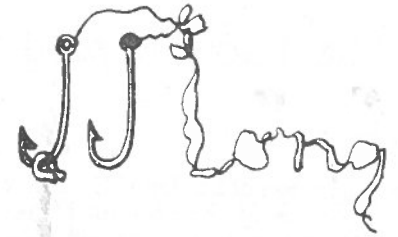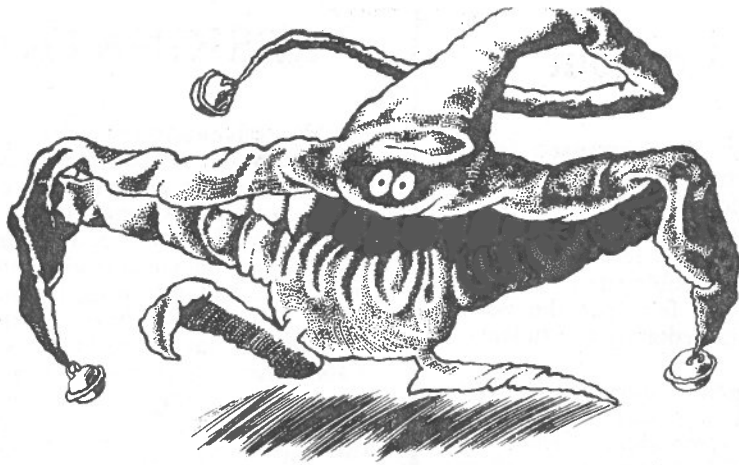
chevron staff and friends that the paper had been "shut down" and arrived at the Students' Council meeting with a number of supporters. After disrupting the proceedings and loudly condemning the action of the Executive, part of this group walked out. Others, having heard the other side of the story, namely that the chevron was not in fact shut down, remained in the council meeting to the end.

Also present at the meeting were observers from the Ontario Federation of Students and Canadian University Press, called in by Douglas Thompson, OFS Liaison Officer and member of the Federation Executive.

Thompson said, "We were not trying to hide anything from anyone. I asked these people to come in order to demonstrate that. The chevron is not in danger of being muzzled by us—the danger is from the AIA."

Many of the problems in the chevron were felt by Shane Roberts, President of the Federation of Students, to derive from the obsolesence of the by-laws.

"The AIA is taking advantage of the democratic but informal way by which decisions are made in the chevron, to manipulate the rest of the staff and news coverage. With the defeat of the AIA at every council election and presidential election, they are trying to gain influence through the chevron. The AIA has been using the chevron as a Trojan Horse to propagate their politics. The fact that they drove out the editor; and the resignation of the Board of Publications Chairman (Ralph Torrie) has left the paid editorial staff in the hands of an AIA man and an AIA supporter."

The Council meeting established a committee to make recommendations concerning changes needed in the chevron, and especially the by-laws. The committee will have one member selected by each of the six faculty societies plus Integrated Studies. In addition the Ontario Federation of Students and Canadian University Press will send one non-voting member each.

Kevin Shwenker, an executive member of OFS, was their observer at the meeting. He said of the committee, "This is the way it should be: it is the students who must decide."

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mathNEWS will print your **ads, free of charge**. Just jot them down on a piece of paper and put it in our *mailbox* on the third floor across from the C&D lounge, or take it to Mathsoc and have them put it in our mail slot, or put it in the mail addressed to **mathNEWS**, MC 3038, or send them in the mail subsystem on TSS to userid **mathNEWS**.

Come one come all, or welcome to the J. J. Long Fed REPort special **mathNEWS** Centennial Edition. I congratulate **mathNEWS** on its 100th edition in its 3½ years of operation. This column, like most others in this paper, is solely the opinion and observations of the writer's. In no way is this column deemed to represent the offical opinion of **mathNEWS**, Mathsoc, the Federation of Students, or any other organization or group. This article may be reprinted free of charge by anyone, provided proper credit is given to the author.

Since I started writing this column in 1974, I have been concerned over the worsening state of the Chevron, and have recommended changes in its structure. Today, with the near takeover of the paper by the AIA, I am even more concerned and believe action is needed now in order to change that paper. I do not want a paper paid for by the students through their Federation fees, to become a mouthpiece for Hardial Bains and the CPC-ML. They talk about "freedom of the press", but from what I've seen and heard from the AIA, it doesn't seem that freedom is a major concern of theirs. I do not believe true freedom of the press exists unless you have responsibility to those who pay for the press. Under its present structure I do not believe that the Chevron is a "free press". You have probably heard about the recent happenings on campus concerning this. While I did not agree with all the methods of the Roberts executive, I do agree with their premise that action is needed soon, in order to reform the chevron.

Another sore point with me is the Anticalendar. If you wanted to, you have probably seen it by now. I did not like what I saw. The major problem with it, besides a poor format, was the fact that there were no comments. I believe Antical should serve the students' interests before the professors' interests, and thus be controlled by and paid for by the students through Mathsoc. If Mathsoc is not allowed to print even non-slanderous comments in the Antical, then I believe that it should seriously consider getting out of the whole course evaluation business. If Faculty want to exercise their rights and start their own questionnaire, organize it, work on it, and control it as their own evaluation.

J. J. Long

English is the international language of BURLOAF

The Mathsoc Anticalendar for this year has been published (there's piles of copies waiting in the Mathsoc office for people to pick up). After looking through it, all I can say about the format is 73 26 94 23 75.

It would seem to me that if the Antical is to be reduced to tables of numbers, the least that could be done is some minimal statistical calculations to make the results more usable to human users. For example, for each question, an average could be printed so that readers wouldn't have to guess what the average response was to a question from the five answer totals given.

From the Globe and Mail comes the story of poor Dr. Al Roberts who has problems with his address, which has a house number of 0. The good doctor lives in a house that exists at the bottom of a dead end street named Appledore Place. All the other houses on Appledore, seven or eight on each side of the street were built and given house numbers before Dr. Robert's house was. As a result, the house was given the number 1A.

Dr. Roberts said this led to problems because 1A indicates an apartment number. He figured delivery boys and mailmen used to get confused, going around to the side of the house numbered 1, looking for an apartment, and then leaving thinking they had the wrong address. Another problem arose when Dr. Roberts applied for a credit card. He was turned down on the grounds that he wasn't a propery owner because his address indicated he lived in an apartment.

Dr. Roberts finally asked City Council to consider renumbering the street. They were agreeable to the idea; however, all the other residents complained that it would cause much inconvenience in signing over mortgage papers and other things, so the Council said that 1A would remain 1A.

Undaunted, Dr. Roberts appealed and so city council thought about it and then decided that his address would be 0 Appledore Place.

The doctor has given up on city council and is considering naming his place Appledore House—"Anything to avoid 0".

Another news item...
John Cardinal Cody and five Chicago churches are being sued for $180,000 by a Los Angeles composer-publisher who claims that the faithful have pirated his copyright hymns. The plaintiff's case: All things bright and beautiful, if you insist, but never by mimeograph and only with permission.

This summer was slightly tarnished by the fact that there weren't as many good pubs at the University to go to because everyone was insisting on featuring Disco music. Mathsoc social function were infamous for the   ...continued on page 4

READ THIS!

Now that the term is well under way, it would be appropriate to introduce to you people you will find in the Mathsoc office and how they are helping you.

John Ellis, a council rep and Mathletics Director for winter '75, is our Mathletics Director this term. He is back again helping mathies break into the sports scene.

Ernie Burke, a council rep, is Internal Affairs Director. One of his tasks is to prepare for the upcoming by-elections and elections to fill the more than 20 empty rep seats on council. He is also looking into the finer points of the Math constitution in case questions of legalities should arise in council business.

Ken Lynch, a first year rep 75/76, is now Education Director. He has just received a list of faculty committees that we have reps on. They are: Faculty Council, Executive, Curriculum, Timetable and Library. Our need is for people to sit on them so that we can have some student input in the faculty. If you are interested in any of these committees, see Ken. We have a chance to voice our opinions—let's use it.

Selma Sahin, Social Director 75/76 and presently a Fed rep, is Social Director just for this term. We had some very successful events last year and her hope is to do them again this term. Watch **mathNEWS** and the bulletin boards for announcements.

Hilary Snow, a grad and someone new to Mathsoc, is Coffee and Donut Manager. She is just taking over from *Robert A. G. "Rag" White*, a steady Mathsocer and previous council rep, who was appointed manager until another could be found. He is now speaker of the council.

Kevin Willis, 2nd year rep 75/76, is vice president. This is our P.R. man and will help keep the society on the go when things need to be done.

John J. Long, Fed rep, previous council rep and Fed treasurer 75/76, is Mathsoc Treasurer. John speaks for himself in his **mathNEWS** articles.

To the Management of WIDJET

The following are questions and/or comments concerning WIDJET, addressed to faculty, tutors and students.

☐ Why can't students with spare time be allowed to use terminals that are not in use while tutorials are in session? *N. B.* This problem has been partially solved by the opening of room MC 2018A, with thanks to those who provided us with the extra terminals.

☐ Is there a bottleneck on the communications link between the PDP/11 and the IBM 370? If so, is there any way of dealing with this problem?

☐ A suggestion: when the system comes back up, either:

(a) have people run, print, etc., in relays so that the system doesn't go down again and/or people get in long queues.

(b) have WIDJET take care of the problem by bringing up only a few terminals at a time.

☐ Is it possible to keep permanent files on the PDP/11 so that when communications between it and the IBM break down it is still possible to archive and/or dearchive? This would save having to wait until either you are forced off or the communications are sorted out.

☐ Overheard: A few of the tutors have a very condescending attitude towards first-year students. If there is a reason for doing/not doing/not touching something, say *why*, truthfully and with no little white lies.

Replies to this article may be sent to **mathNEWS** in any of the usual ways, as detailed on the *Gridword* page.

Other names are *Mike "Mad Dog" Dillon, Randall S. McDougall, Mark S. Brader*, our **mathNEWS** greats. *Kathy Wilson*, our mathletics director 75/76. *Irene Hanson*, resident Science student. *Steve Locke*, resident grad. *Brad St. Pierre*, Social Director Summer '75 and a council rep.

Then there is *Gary G. Dryden*, the oldest Mathsoc member (in both respects). Mathletics Director supreme 74/75 (4 terms) and Summer '76, Orientation Director Summer '76, a previous Fed rep and Fed Director, Mathsoc President 75/76.

Finally myself: *Gary Prudence*, Coffee and Donut Manager Winter '75, Mathsoc vice president 75/76, Creative Arts Board Chairperson 75/76 and Mathsoc President 76/77.

Put us all together in MC 3038 and you have an organization that cannot be beat and services abundant.

Mathsoc is our name and students is the game. We need the business so come and see us. We don't bite though we bark a lot. To join the office staff just come in, sit down, observe and participate. Hope to see you.

omnipotence of Disco within them. However, I had a slight feeling that the fall would see better entertainment with the off chance that the social organizers might get a few sensible people in their ranks. After all Disco isn't just not worth listening to, it's worth not listening to.

This doesn't seem to be the case however. Just last week I saw signs all over advertising a Disco Pub on Friday the 24th.

Now the time has come for us to get moving and eradicate Disco and replace it with Good music. This current disease of the sound waves has pervaded too long and should be routed.

Not that I'm totally against Disco—at a pub I feel it's not totally unreasonable to play the odd Disco disc but let's stick for the main part to Good music worth listening to. After all, it's like listening to the noise of a garbage truck mulching garbage—you don't mind hearing it once a week or so, but having to listen to it all the time makes it worse than Chinese water torture. It's done away with complicated artifical things like melody, rythym, *[end of sentence accidentally lost!]*

Many people today are acquiring their very own minicomputers. Minicomputers tend not to have very sophisticated instruction sets, and in particular, if the user wants to do floating point arithmetic and other things like taking sines and cosines, he finds himself implementing all sorts of memory-filling floating point subroutines.

A recent article in a computing magazine gives a novel solution. Relatively inexpensive pocket calculators can perform all these floating point and mathematical functions, so what you do is build an interface between the calculator and the minicomputer. You make the somewhat slower calculator look like a peripheral device to the minicomputer. Then whenever the computer needs a floating point calculation done, it merely "writes" the problem to the calculator, and a tiny time later, it can "read" the answer back from it.

The INTEGER_OF_THE_WEEK this week is

49

49 is a perfect square, the square of 7. It falls one short of 50 which is what you need to pass most courses. 49 also has something to do with a football team (I'm not sure exactly what, though).

Also, during the Manhattan Project of World War II, "copper" was used as a codename for plutonium, because copper has atomic number 49 and plutonium is 94. The code sentence "The Italian navigator has entered the new world" was used in 1942, and of course Columbus didn't discover America in 1492.

I see the LCBO has taken kindly (in their own unique way) to K-W's Oktoberfest. Last year, you may remember, they declared that the ceremonial keg tapping that opens Oktoberfest was not kosher because it wasn't done in a licensed place. Well this year, they've decided that they'll allow the keg to be tapped and a glass of beer to be poured—but no one can drink the beer. I guess that means the mayor can get up there out in the open and open Oktoberfest by tapping the keg, but as the oom-pah-pah band starts playing, he makes a mad dash with the beer to the nearest beer hall (assuming the LCBO allows him to carry an unsealed container of beer in the street), attempting to get there before the band finished their *Ein Prosit* recital which indicates that the drinking should begin.

From what I can tell, the world is starting to get hyped up on a new programming language called Pascal. In fact it seems Pascal is to replace Algol in a lot of places.

It seems to me Pascal suffers from the same problem that Algol has. While both languages are great for defining algorithms in an abstract manner (*i.e.*, writing down procedures on paper), they don't make the best programming languages. It is my opinion that languages designed more for the machine rather than abstract algorithm writing should be used for implementing an algorithm for a computer. The language lets you take better advantage of what the machine provides, while not imposing as many restrictions as the theoretical languages usually do (restrictions that often prove more of a hindrance than a help).

This doesn't mean I'm all for assembler languages; rather, there exist languages that have decent control structures, data types, operators, etc., (the best example I know of is C) that make actual programming more pleasurable than when using a more abstract language.

Mathsoc cares about what you drink. Mathsoc has a cooler for Lemonade which is made from a powder. I came across a can of the stuff, and when I saw the label it became clear where Mathsoc's priorities are. The brand name of the Lemonade is "Profit Plus".

Five More Wins for JJBT

*I mean there was an elephone,
Who tried to use the telephone.*

This was one of the busiest weeks ever for **JJBT**. On Wednesday was the wine and cheese party, with "Press" Ashby, "Merlin" Biddle, "Boon" Bond, and "Brad" St. Pierre overwhelming Gary Dryden's Mathsoc team, 6-love, 6-love, 6-love, 6-ε (a spirited comeback attempt) to successfully defend the wine and cheese title they had won the previous winter. Catfish was cast in the role of non-playing captain, so he decided to be the only one at the party to consume neither wine nor cheese—he reports that the crackers were delicious.

On the weekend came the Mathsoc pub rally, and **JJBT** star Roscoe Statchuk crossed the finish line with the winning point total, even if he was disqualified on the flimsy pretext that he is a professional rallyist. Boon and Goo Oue, the other **JJBT** entry, finished in a credible tie for fourth, approximately.

On Tuesday, one of **JJBT**'s most awesome tasks ever—a doubleheader organisational meeting. Remembering how easily **JJBT** dominated last spring's volleyball meeting, the intramural department deliberately scheduled this term's volleyball meeting *immediately* after the water polo meeting. Nevertheless, **JJBT** proved equal to the task, and swept both meetings virtually unopposed. When asked to comment, Catfish said, "I expected something like this to happen, so I entered the volleyball team rather late. As a result, we were the 40th team called up, so we had enough time to rest up after the grueling water polo meeting." Merlin, Press, and Boon all played key roles in the victory.

Finally, the Perpetual Date competition (see **mathNEWS** issue 11.4) was closed when only two entries had been received after some months, and the results were:

1. Owen (Catfish) Leibman, JJBT
2. Frank Bax

The **mathNEWS** staff reached their decision after Catfish pointed out that Bax's program failed on January 1, 2001.

Volleyball begins this week. The highlight of the term should definitely be October 14, when **JJBT** meets Math.

Incidentally, **JJBT** gives its heartfelt congratulations to **mathNEWS** on its cent-ssual edition.

radicals supporting change

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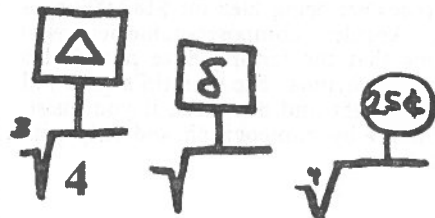
A Contribution to the mathematical theory of big game hunting

H. Pétard, Princeton, N.J.
in an *American Mathematical Monthly* of
1938.

This little known mathematical discipline has not, of recent years, received in the literature the attention which, in our opinion, it deserves. In the present paper we present some algorithms which, it is hoped, may be of interest to other workers in the field. Neglecting the more obviously trivial methods, we shall confine our attention to those which involve significant application of ideas familiar to mathematicians and physicists.

The present time is particularly fitting for the preparation of an account of the subject, since recent advances both in pure mathematics and in theoretical physics have made available powerful tools whose very existence was unsuspected by earlier investigators. At the same time, some of the more elegant classical methods acquire new significance in the light of modern discoveries. Like many other branches of knowledge to which mathematical techniques have been applied in recent years, the Mathematical Theory of Big Game Hunting has a singularly happy unifying effect on the most diverse branches of the exact sciences.

For the sake of simplicity of statement, we shall confine our attention to Lions (*Felis leo*) whose habitat is the Sahara Desert. The methods which we shall enumerate will easily be seen to be applicable, with obvious formal modifications, to other carnivores and to other portions of the globe. The paper is divided into three parts, which draw their material respectively from mathematics, theoretical physics, and experimental physics.

The author wishes to acknowledge his indebtedness to the Trivial Club of St. John's College, Cambridge, England; to the MIT chapter of the Society for Useless Research; to the F o P, of Princeton University; and to numerous individual contributors, known and unknown, conscious and unconscious.

I. Mathematical methods

1. The Hilbert, or axiomatic, method. We place a locked cage at a given point of the desert. We then introduce the following logical system.

Axiom 1. *The class of lions in the Sahara Desert is non-void.*

Axiom 2. *If there is a lion in the Sahara Desert, there is a lion in the cage.*

Rule of procedure. *If p is a theorem, and "p implies q" is a theorem, then q is a theorem.*

Theorem 1. *There is a lion in the cage.*

2. The method of inversive geometry. We place a *spherical* cage in the desert, enter it, and lock it. We perform an inversion with respect to the cage. The lion is then in the interior of the cage, and we are outside.

3. The method of projective geometry. Without loss of generality, we may regard the Sahara Desert as a plane. Project the plane into a line, and then project the line into an interior point of the cage. The lion is projected onto the same point.

4. The Bolzano-Weierstrass method. Bisect the desert by a line running N-S. The lion is either in the E portion or the W portion; let us suppose him to be in the W portion. Bisect this portion by a line running E-W. The lion is either in the N portion or the S portion; let us suppose him to be in the N portion. We continue this process indefinitely, constructing a sufficiently strong fence about the chosen portion at each step. The diameter of the chosen portions approaches zero, so that the lion is ultimately surrounded by a fence of arbitrarily small perimeter.

5. The "Mengentheoretisch" method. We observe that the desert is a separable space. It therefore contains an enumerable dense set of points, from which can be extracted a sequence having the lion as limit. We then approach the lion stealthily along this sequence, bearing with us suitable equipment.

6. The Peano method. Construct, by standard methods, a continuous curve passing through every point of the desert. It has been remarked [1] that it is possible to traverse such a curve in an arbitrarily short time. Armed with a spear, we traverse the curve in a time shorter than that in which a lion can move his own length.

7. A topological method. We observe that a lion has at least the connectivity of the torus. We transport the desert into four-space. It is then possible [2] to carry out such a deformation that the lion can be returned to three-space in a knotted condition. He is then helpless.

8. The Cauchy, or functiontheoretical, method. We consider an analytic lion-valued function $f(z)$. Let ζ be the cage. Consider the integral

$$\frac{1}{2\pi i} \int_C \frac{f(z)}{z - \zeta}\, dz,$$

where C is the boundary of the desert; its value is $f(\zeta)$, *i.e.*, a lion in the cage. [3]

9. The Weiner Tauberian method. We procure a tame lion, L_o of class $L(-\infty, \infty)$, whose Fourier transform nowhere vanishes, and release it in the desert. L_o then converges to our cage. By Weiner's General Tauberian Theorem [4], any other lion, L (say), will then converge to the same cage. Alternatively, we can approximate arbitrarily closely to L by translating L_o about the desert. [5]

II. Methods from theoretical physics

10. The Dirac method. We observe that wild lions are, *ipso facto*, not observable in the Sahara Desert. Consequently, if there are any lions in the Sahara, they are tame. The capture of a tame lion may be left as an exercise for the reader.
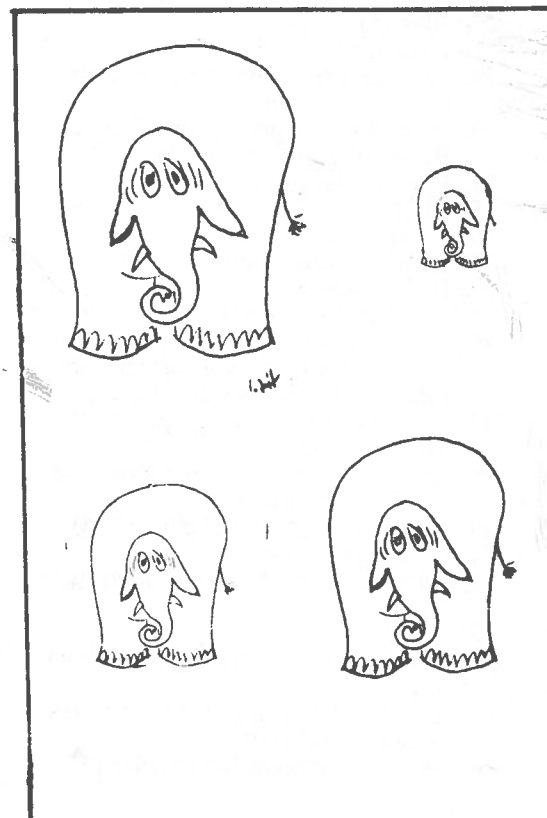
11. The Schrödinger method. At any given moment there is a positive probability that there is a lion in the cage. Sit down and wait.
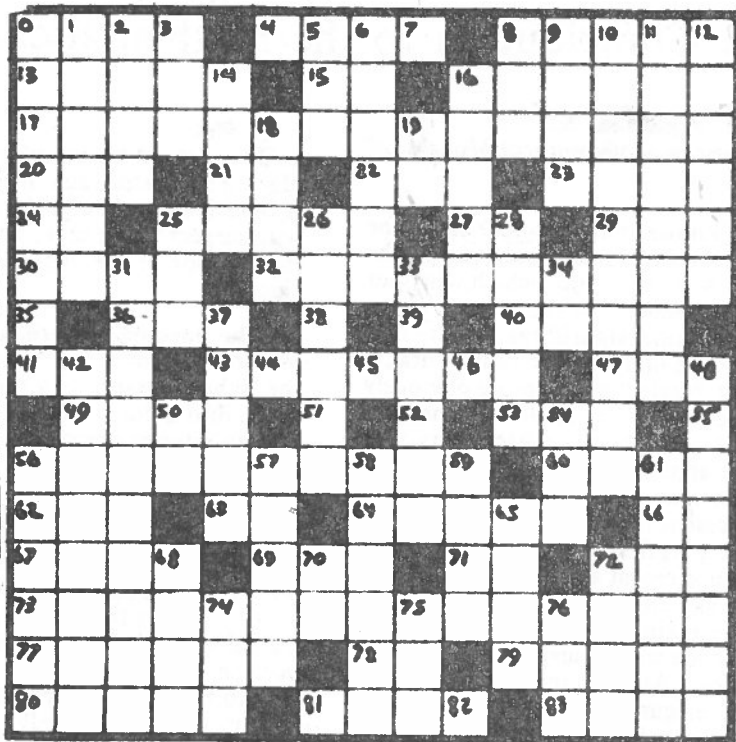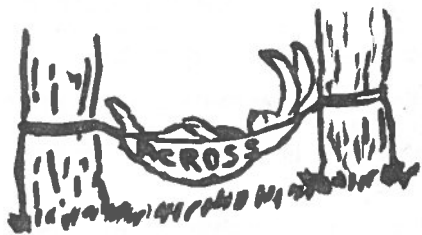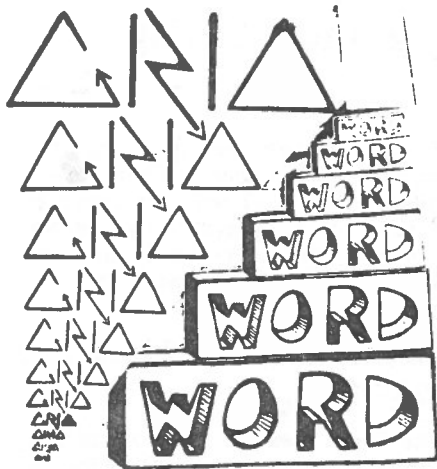
12. The method of nuclear physics. Place a tame lion in the cage, and apply a Majorama exchange operator [6] between it and a wild lion.

As a variant, let us suppose, to fix ideas, that we require a male lion. We place a tame lioness in the cage, and apply a Heisenberg exchange operator [7] which exchanges the spins.

13. A relativistic method. We distribute about the desert lion bait containing large portions of the Companion of Sirius. When enough bait has been taken, we project a beam of light across the desert. This will bend right round the lion, who will then become so dizzy that he can be approached with impunity.

ARIA ARIA ARIA ARIA ARIA WORD WORD WORD WORD WORD

Ego

ID

Superego

M. G. Bruder 72040281

ACROSS

0. Nothing at all (4)
4. Cher keyword (4)
8. So Few Tarantulas Are Valuable (5)
13. Acrophobic authoress (5)
15. Edible-sounding, if Spartan, letter (2)
16. British cartoonist (6)
17. 15, 35, *etc.* (15)
20. Subjective unit of pitch (3)
21. First note of dis-tempered scale (2)
22. Take 1.37×10^{18} kg nitrogen, 0.37×10^{18} kg oxygen, stir well... (3)
23. Exactly 51 4/9 (fifty-one and four-ninths) cm/s (4)
24. Element 68 (2)
25. J00s (5)
27. Lava (2)
29. Juan de Fuca, for instance (abbr) (3)
30. How do you get to the Reading Railroad from Pacific Ave.? (2,2)
32. Unimportance (10)
35. 14 (1)
36. Given; ____; Proof (3)
38. Ordinary ordinate (1)
39. It's commonest (1)
40. October 1, 1976 (4)
41. ...but *your* m.p.g. will depend on the condition of your car and the kind of driving you do (3)
43. A programming language for the IBM 360 (7)
47. They're green and punched and stamped all over (3)
49. Riots Now, And Rebellions? (4)
51. ____ Canada (1)
52. Burmese title of respect, used like "Mr." (1)
53. 205 (3)
55. Where Lima is (obsolescent abbr) (1)
56. Could **17** also refer to its pracitioners? (10)
60. He has a motive for murder (4)

62. Extra-Vehicular Transportation? (3)
63. Tommy Beresford's partner (Agatha Christie) (abbr) (2)
64. Northeastern Nigerian tribesman (5)
66. Island separated from Europe by the English Channel (abbr) (2)
67. Desparate (4)
69. Pair (3)
71. The godsun (2)
72. Terrorists against erasures (3)
73. Just change the E to a D (6,9)
77. Thrusted violently (6)
78. Conjunction expressing disjunction (2)
79. Expelled tape worm (5)
80. Souvenir of glaciation (5)
81. * (4)
83. Undergo lysis—what else? (4)

DOWN

. What the reclusive apiculturalist said? (3,2,3)
1. Planetarium (6)
2. Container beginning with **46** (4)
3. Easy Clue, Now (3)
4. 5 (1)
5. "Is man an ____ or an angel?" (3)
6. 1,673 miles this side of Vancouver, *via* CN (6)
7. Softly (1)
8. Money in Cambodia, Indonesia, and Japan (3)
9. f(k) (1,2,1)
10. Relational property of bus drivers? (adj. form) (10)

11. Distributed (8)
12. Room or building attached to church (6)
14. M ____ ____ math (2,2)
16. Caravansary (5)
18. One of those acronymous tests (4)
19. Prefix: 2 (2)
25. Drunkard (3)
26. An emotional person might ____ a ____ (3,3)
28. A hexadecimal number (5)
31. Railway fondly remembered by elephants (5,5)
33. Bunch of hams (6)
34. Note the French (2)
37. *Walking Tall*, ____ ____ (4,1)
42. 12.1 (8)
44. Chessman is not a piece (abbr) (1)
45. Wait! (1)
46. Low-level linked-list language — 50 (1)
48. Would your radius be inflamed if you studied there? (8)
50. Sloth (2)
54. X (3)
56. Interfere (6)
57. Have you ____ the augend on yet? (5)
58. Northern Luzonian (Philippines) tribesman (6)
59. Might be planted (4)
61. People who live in ____ shouldn't light fires (6)
65. Water fall (4)
68. Extended, But Good, Education (4)
70. UPI — INS (2)
72. Fairy (4)
74. Former electric railway (tube) company in London (abbr) (3)
75. Word sometimes periodically used after **79** (3)
76. This clue is rather ____ly (3)
81. $\sqrt{[(S+T)(S-T) + T^2]}$ (1)
82. .8 × °C = °____ (1)

6

Gridcomment

We only received two submissions for the *Gridword* this week. This may have been due, in part, to the fact that a large number of the clues were omitted in some places while others were given in the wrong places. In spite of this, it was not impossible as

John Ellis

was able to get a correct solution, and in so doing, he won himself a math T-shirt, courtesy of Mathsoc. All you have to do, John, is show up at the next **mathNEWS** production meeting in MC 3011 at 7:00 next Tuesday, to receive an official voucher for one (1) T-shirt, and upon presentation of said voucher to the Mathsoc office, you will receive your T-shirt. The other solution was submitted by tjthompson whom we thought had won for a moment, until we realized that he had made a mistake on the last clue putting in place of a "W" a ½"W" (*i.e.*, a "V"). Better luck next time, Trevor.

You may submit your solution to this week's *Gridword* by dropping it in the box opposite the third-floor lounge, or handing it in at the Mathsoc office (MC 3038), or by mailing it to **mathNEWS**, MC 3038, *University of Waterloo, Waterloo, Ont. N2L 3G1.* The italicized part may be omitted if you are using the (free) on-campus mail!

Or you can bring it in to the beginning of the next production meeting, 7:00 Tuesday in MC 3011, which is also the deadline for other forms of entry.

Warning! This rather tricky, UASCI Gridword contains all sorts of word (and non-word) play. For instance, watch for odd spellings and typefaces in the clues.
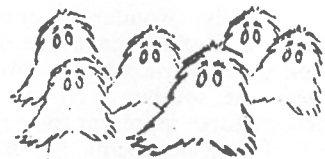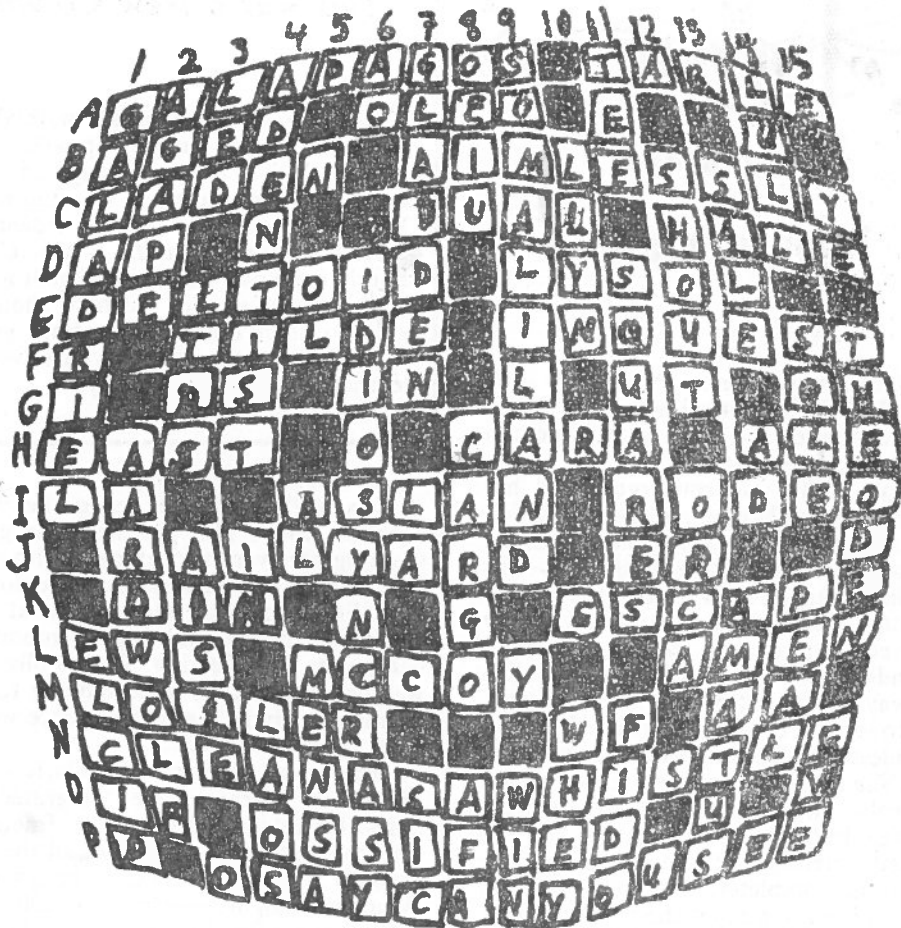
(of Oak) (brisk march, - with triumphant enthusiasm) Come, cheer up my hacks/ 'us to glo-ry we steer, The prize more than all to a programmer dear, We shall rule the world through the use o-of "B", If not "B" per-haps "C" or may-be "D". Chorus: Hearts of core our ma-chines Jolly hacks are our men We always are ready! Steady boys, steady We always try and crash her again (pom-de-pom) and again (pom-de-pom!) We ne'er see our Blues but we wish them to stay Typing hard all the night, to the break of the day, If it weren't for sleep-ing and getting our 100s We'd put all our time to this glorious use. (Chorus) Not a bit nor a priv-i-lege shall go un-dis-turbed E'en though those in charge be-come ra-ther per-turbed Normal peo-ple ab hor us, but they are such zits For who are as free as the sons of the bits. (Chorus) Don't mis-under-stand us; we do wish to serve Man-kind by wri-ting with a-ll of our verve Decent pro-grams and soft-ware that re-lieve man's pain And finding the bugs and re-writing a-gain (Chorus) For we are the hacks of the M-F-C-F and we'll chase those bugs til there's no bu-ugs left But then what would we do - It would be a bore - It's clear that we must add a few bu-ugs more! (Chorus)

III. Methods from experimental physics

14. The thermodynamical method. We construct a semi-permeable membrane, permeable to everything except lions, and sweep it across the desert.

15. The atom-splitting method. We irradiate the desert with slow neutrons. The lion becomes radioactive, and a process of disintegration sets in. When the decay has proceeded sufficiently far, he will become incapable of showing fight.

16. The magneto-optical method. We plant a large lenticular bed of catnip (*Nepeta cataria*), whose axis lies along the direction of the horizontal component of the earth's magnetic field, and place a cage at one of its foci. We distribute over the desert large quantities of magnetized spinach (*Spinacia oleracea*), which, as is well known, has a high ferric content. The spinach is eaten by the herbivorous denizens of the desert, which are in turn eaten by lions. The lions are then oriented parallel to the earth's magnetic field, and the resulting beam of lions is focused by the catnip upon the cage.

References

1 by Hilbert. See E. W. Hobson, *The Theory of Functions of a Real Variable and the Theory of Fourier's Series* (1927), Volume 1, pp. 456-7.

2 H. Seifert and W. Threlfall, *Lehrbuch der Topologie* (1934), pp. 2-3.

3 *N.B.* By Picard's Theorem (W. F. Osgood, *Lehrbuch der Funktionentheorie*, Volume 1 (1928), p. 178), we can catch every lion with at most one exception.

4 N. Weiner, *The Fourier Integral and Certain of its Applications* (1933), pp. 73-74.

5 N. Weiner, *loc. cit.*, p. 89.

6 See, for example, H. A. Bethe and R. F. Bacher, *Reviews of Modern Physics*, 8 (1936), pp. 82-229; especially pp. 106-7.

7 *Ibid.*

beware the dreaded baseball bat

Impure Math

Once upon a time (1/T) pretty little Polly Nomial was strolling across a field of vectors when she came to the edge of a singularly large matrix.

Now Polly was convergent and her mother had made it an absolute condition that she must never enter such an array without her brackets on. Polly, however, who had changed her variables that morning and was feeling particularly badly behaved, ignored this condition on the grounds that it was insufficient and made her way amongst the complex elements.

Rows and columns enveloped her on all sides. Tangents approached her surface. She became tensor and tensor. Quite suddenly, three branches of a hyperbola touched her at a single point. She oscillated violently, lost all sense of directrix and went completely divergent. As she reached a turning point she tripped over a square root which was protruding from the erf and plunged headlong down a steep gradient. When she was differentiated once more she found herself, apparently alone, in a noneuclidean space.

She was being watched however. That smooth operator, Curly Pi, was lurking inner product. As his eyes devoured her curvilinear coordinates, a singular expression crossed his face. Was she still convergent, he wondered. He decided to integrate improperly at once.

Hearing a vulgar fraction behind her, Polly turned round and saw Curly Pi approaching with his power series extrapolated. She could see at once, by his degenerate conic and his dissipative terms that he was bent on no good.

"Eureka!" she gasped.

"Ho, ho", he said. "What a symmetric little polynomial you are. I can see you're bubbling over with secs."

"O Sir," she protested, "Keep away from me. I haven't got my brackets on."

"Calm yourself, my dear", said our suave operator. "Your fears are purely imaginary."

"I,I", she thought, "Perhaps he's homogeneous then."

"What order are you?" the brute demanded.

"Seventeen," replied Polly.

Curly leered. "I suppose you've never been operated on yet?"

"Of course not," Polly cried indignantly. "I'm absolutely convergent."

"Come, come," said Curly. "Let's off to a decimal place I know and I'll take you to the limit."

This was a New Colum

After reading last week's **mathNEWS**, we must say that we were appalled by the content, lack of literary ability and careful work, and total absence of imagination. We refer especially to the ridiculous passage entitled *This Is A New Colum*. Surely everyone who is intelligent and/or educated enough to be here should be able to spell *colunm*. It's time you illiterates stopped fooling yourselves and learned to use a dictionary.

"Never!" gasped Polly.

"Exchlf!" he swore, using the vilest oath he knew. His patience was gone. Coshing her over the coefficient with a log until she was powerless, Curly removed her discontinuities. He stared at her significant places and began smoothing her points of inflection. Poor Polly. All was up. She felt his hand tending to her asymptotic limit. Her convergence would soon be gone forever.

There was no mercy, for Curly was a Heaviside operator. He integrated by parts. He integrated by partial fractions. The complex beast even went all the way around and did a contour integration. What an indignity—to be multiply connected on her first integration! Curly went on operating until he was absolutely and completely orthogonal.

When Polly got home that evening, her mother noticed that she had been truncated in several places. But it was too late to differentiate now. As the months went by, Polly increased monotonically. Finally she generated a small but pathological function which left surds all over the place until she was driven to distraction.

The moral of our sad story is this: If you want to keep your expressions convergent, never allow them a single degree of freedom.

Post No Bills
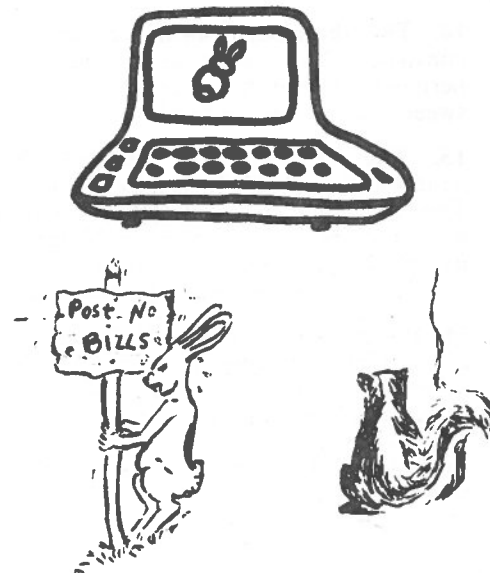
Did you get your free Mathsoc ruler? We did, and ours is over 15.2 cm long, even though it was advertised as only 15 cm. This goes to prove one or both of two adages: (1) The third significant digit is the most important, and (2) Give 'em 15 cm and they'll take 6 inches. Anyway, it's a pretty neat ruler, even if it doesn't have Gary Prudence's autograph on it.

Before we forget, let's do the Word-of-the-Week. This one could be used as a nickname (or formal title) for those fools who publish N-gin-ooze. The word is **wedge** and it means: anything in the shape of an isosceles triangle, as in a wedge of pie. However, a wedge of wood can be used as a tool, and wedges are, in fact, the simplest tools in existence. So are N-jineers.

Our album review this week is about Ambrosia's latest effort (not really an effort, more like a sick joke). The people who brought us *Nice, Nice, Very Nice* sound like they could have written *Sometimes I Feel So Uninspired*. We don't like to be overly critical, but even for free we wouldn't buy this one.

Now, we would like to talk about Exit signs. What do we think of them? Not a lot, really. There are usually so many of them that they could strangle us, but sometimes they're so poorly placed that we can see the door before the sign, which doesn't do a whole lot of good, does it? Why worry about them? Well, why not? After all, if the Exit signs don't bother you, something else will.

If you think that we're a paranoid schizophrenic, you're right.

Say hello to us sometime at the C&D. We're the ones talking to the Coffee Mate.

$ STEVE $

The Story of the ✗Tool

You've probably wondered about pictures of a long *flaccid* wrench like object that desecrates some of the lower elevations near the southeast corner of campus. These pictures represent the *rigid* Tool mascot of Engsoc. Being the first (but not best) society, the infant Engsoc needed something to coddle (as a baby needs a rattle) and so received the tool from the U.S.-based *Ridgid* Tool Company in the early sixties. Since that time, the five-foot tool (a copy of those used on oil rigs) has become a source of amazement and fantasizing for the N-gin-earring students on campus. Needing something to accommodate for their lack of female company, they have used the tool to represent the best of what they don't have. It is listed at the top of their hierarchy, but it is not even mentioned in the **mathNEWS** handbook. They even have black-sheeted KKK's guard it, expecting people (non-N-gin-earring) want to steal it, but why steal what you already have?
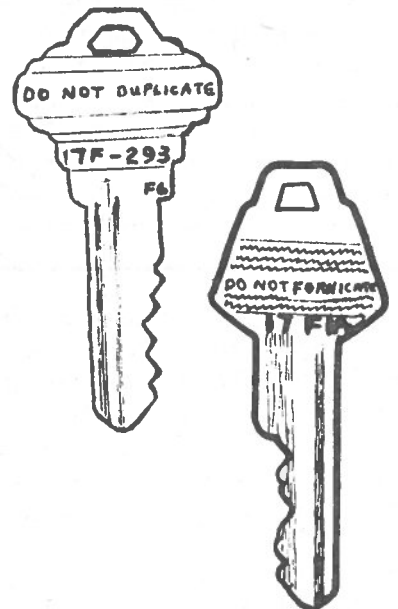
Mathsoc Presents

Frosh Wine & Cheese
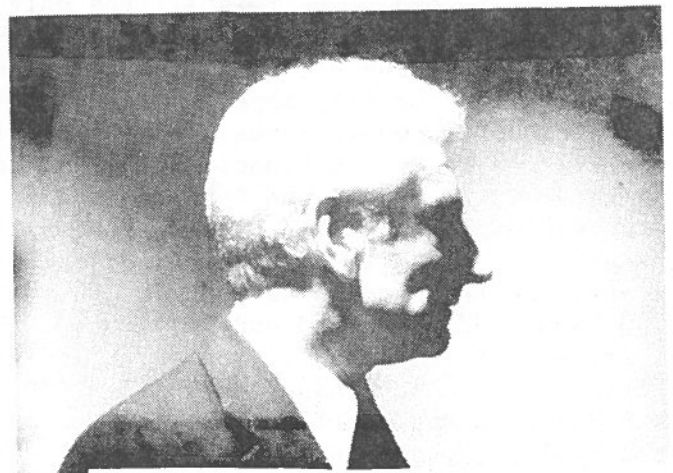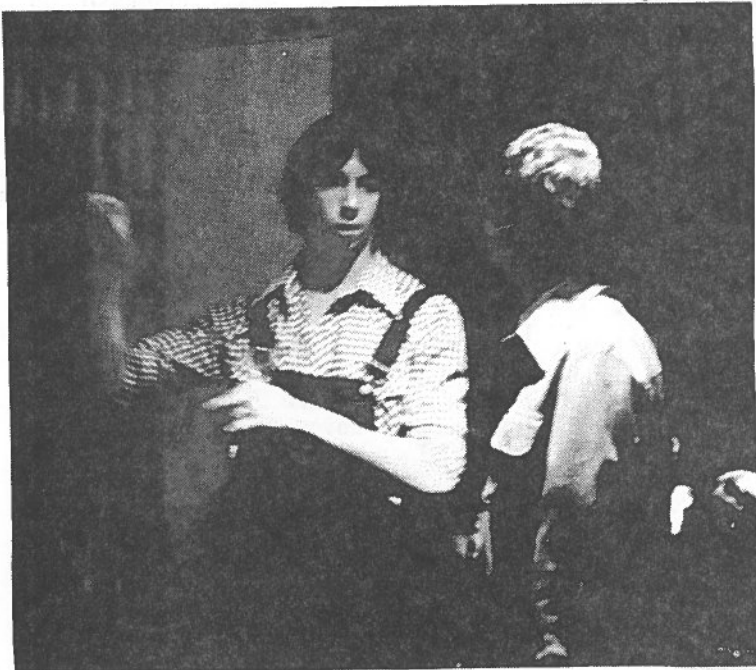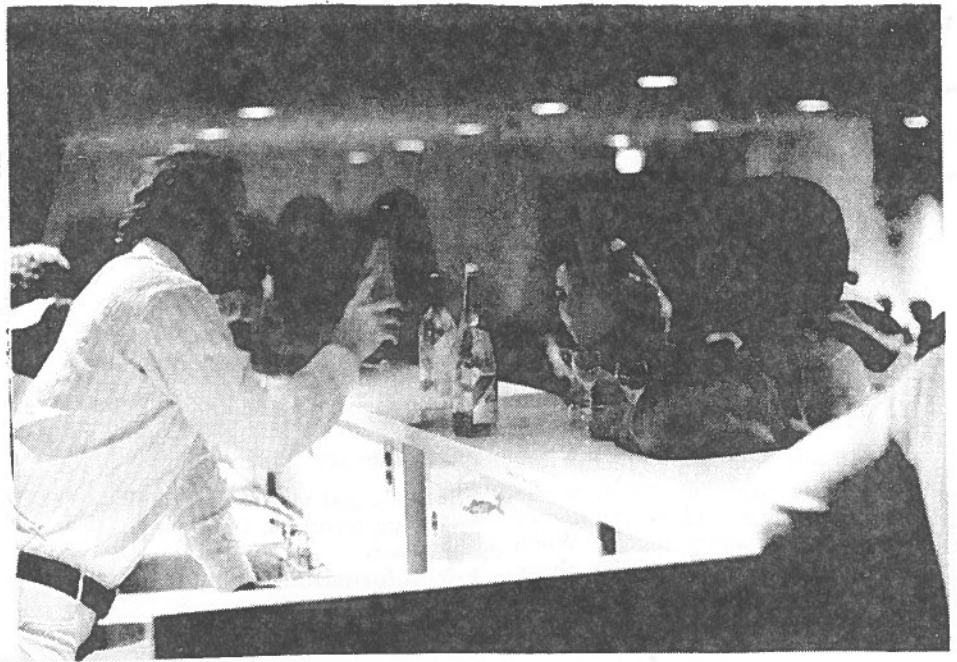
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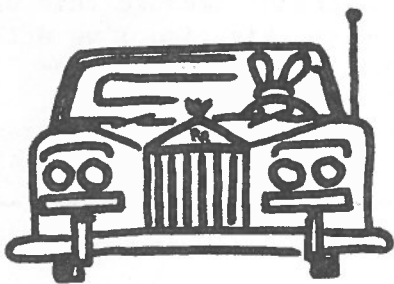
Fotos Courtesy of Rabid Rabbit Studios
A division of Hedgehog International

DO NOT DUPLICATE

17F-293

F6

DO NOT FORNICATE

$\{ \text{∂} \in \mathbb{R}^2 \}$ 9

FEED BACK

$STEVE$ Attacked

Dear **mathNEWS**,

Re: *If you do anything stupid, expect to see your name and a full description of your lack of mental ability in print.* When can we expect publication of the above with regard to our dear friend $STEVE$?

Gillian

Received on TSS:

393 st tues sept 28th 19:30

For quick and easy scatter plots on a CRT or typing terminal, try typing
st/scat
For information about other similar programs, type
explain st

Movie Review

I was privileged last week to view Marv Newland's classic film *Bambi Meets Godzilla*. Do not be misled by the failure of this film to win any major awards—*Citizen Kane* started out that way, too.

From start to finish, this film held the entire audience enthralled. Despite its unusual length, no viewer seemed even remotely bored at any time.

It is perhaps regrettable that the film was done in black and white, but, when an epic film is made on a tight budget, frills have to be removed.

The music, consisting mainly of Rossini's "William Tell Overture", blended in very well with the plot—truly a masterpiece of scoring to rival even *A Clockwork Orange*.

One warning, though. This film does have rather a heavy emphasis on violence—it is not for the squeamish, and be sure that youngsters under 18 do not see it unaccompanied. (That warning was sponsored by Judy Lamarsh).

Miscellanea

It is interesting to note that the Faculty Council has a slot for "Reports from students" and that this was not put to use by anyone, maybe because the general student body did not know of it. Consider this notification.

In 1976 the Faculty of Mathematics is the largest, in terms of full-time undergraduate students, in this university, with 2530 compared to 2356 for the next largest. Also to be noted is the average Grade 13 mark for the freshmen—81%.

And here it is 7:30 last Wednesday morning and the hundredth mathNEWS goes to bed... we're still the only weekly all-volunteer newspaper on campus, still financed by but independent of Mathsoc. When issue #1, or rather the first issue (nobody thought of numbering it), appeared, it contained the masthead you see below: the whole issue was in type like that, because then there was no Photon Econosetter---in fact there wasn't even any Roff, they used the Runo command in the Honeywell Edit subsystem (the what?). That issue was 10 pages, too---but the way it was set up it contained rather fewer words than this one. The lead story was SUPPOSE THEY GAVE A WINTER WEEKEND AND NO SNOW CAME (They did and it didn't). Observe that none of that issue's staff appear in tonight's indictment, which is alphabetical... GRAHAM S ASHBY & ROBERT L BIDDLE for Rabid Rabbit, MARK S BRADER & MADDOG DILLON the editors on Tuesday & Monday respectively (Tuesday includes Wednesday---actually I've been the only one here since about 5:30), PERRY DOMZELLA who had better go nameless, GARY DRYDEN or reasonable facsimile, OWEN C LEIBMAN victorious, J J LONG at last, RANDY MORRISON while I wasn't looking, GARY PRUDENCE while I was, PETER RAYNHAM in absentia and UNIX, ERIC correctly SIEGERMAN, ANNE SMITH alias last week's pseudo editor and this week's password razamataz, and finally the ANTONIO VASELINO & DOUG. Why don't we phototypeset the masthead? Because this way we can adjust the size & shape to fill that last space properly. Although this time I've actually varied that pattern--I moved the Feedback heading up to make more room! Monday production meetings are dead as of now. Next meeting is Tuesday October 5 at 7 pm in MC 3011, branching out into the Honeywell rooms as usual. Anyone who wants to write an article before then can get the password from an editor! Should I mention the black rule in Africa? No.

MATHNEWS -financed by but independent of Mathsoc
cranking out the first edition while caffienated to our eyeballs we're still wondering if we should mention the end of the war... never again such an opportunity... And hans, where art thou with our pictures?.. Sweating our 8:30am deadline we triumphantly were: lynn 'hunnie' solvason, bruce 'titles' batchelor, dennis mullin, john 'article-a-minute' peebles, randall 'edit' mcdougall, hans 'glossies' rempel, jeff the mouth braybrook and steve 'stay awake' treadwell..... special note to earl bowman: drop in again next week for another drink.... and yes virginia, this is a weekly... why don't YOU drop in and volunteer sometime??????