

FREEDOM TO SPEAK?

One of the most basic rights provided in any truly democratic society is the right to hold and express any idea or opinion. Recently, there has been discussion in Canada about restricting this right in certain cases. Although the case for such restriction has as its basis high ideals, I consider it dangerous to restrict any right more than is absolutely necessary. For the restriction of any right involves two questions: who decides?; and where does it all end?

The recent discussions have involved the right of ultra right wing organizations (the Ku Klux Klan as an obvious and recent example) to exist. Because of the racism which forms the basis of the philosophies of these organizations, many people have argued that they should be outlawed. Let me say at the outset that I too find the philosophies of these groups absolutely repugnant, but I would argue strongly against making the groups illegal. The right of free speech should include not only the right of individuals to hold and express ideas the majority considers incorrect

or idiotic, but also the right of the individual to express ideas the majority finds absolutely horrendous.

Note that the right to express ideas and to advocate changes in the social structure is quite distinct from any right to act as if those changes had already occurred. Therefore while any group should be able to preach the repeal of all anti-discrimination laws they must follow those laws. Also existing laws against harassment, obscenity, slander and libel must be followed. Any person who breaks or advocates the breaking of these laws is of course acting illegally and should be dealt with by due process of law. Any group which advocates illegal action should be outlawed. But no group should be outlawed merely because some of its members may act illegally or advocate illegal action.

Who is to decide whether an idea or philosophy is too repugnant to be expressed? Do we impose a tyranny of the majority and say to some person, "You have no right to express your ideas until you gather x number of followers who agree with you"? Also

if we ban a group for espousing some political ideal (fascism), does that not open the door to widespread political repression? The ruling political party might eliminate opposition by labeling opponents fascist, racist or communist or merely by labeling their philosophies "repugnant".

The philosophies of the ultra right wing are sick. Members of such organisations as the Ku Klux Klan deserve our utmost contempt. Illegal actions by members of such societies should be punished to the full extent of the law. But let us not allow ourselves to be forced into destroying our own basic rights (and theirs) in an effort to combat these societies. Restricted freedom of speech can all too easily become no freedom of speech.



William
Hughes

Volume 24, Number 3
Sept. 26, 1980

math NEWS

MATHSOCUS EXECUTIMAE DOMESTICUS

- and how YOU can be one!!

Hey! Are you a politician? An egotist? Out for a good time? Have you paid your society fees? (i.e. You haven't asked for a refund of the same.) Then you are eligible to be.... (drum roll)(trumpet blast) a Mathematics Society Executive Council member! Wait, I know what you're thinking: Who ME?? Well get this: this is my first year, first article for mathNEWS, and I have attended a total of approximately one mathSOC meeting. And yet I am your new Executive Council Director of Internal Affairs. Convinced? Worried about the future of Internal Affairs? Who cares? All that matters is that you get involved, learn something, and have fun doing it, (and believe me, IT IS FUN!).

The following positions on the Executive Council are now available:

Administrator
Education Director
Mathletics Director
Social Director

O.K., I've got it: You are worried because you have "bad luck" in elections. **HAVE NO FEAR!!** All of these positions are filled by appointment! That means that if you are interested in joining the team, you merely come to the mathSOC office at MC3038 and tell our illustrious President that you have been bitten by the Executive bug. (If he is not in you can leave a message in his mailbox.) What's that?... You don't know what the "phi" a social director does? Hey, that's cool! (Who does?) Just come to the hallway bulletin board outside mathSOC, and there: (Lo and behold - not like the pi buttons) a list of the functions of all of the above positions! It sounds so simple! It is! So come on 'round! It doesn't hurt to enquire.

Your new Infernal Affairs Director,
Andrew P. Welch
(Partial Fraction # 9)

CSC TSS Tutorials

The Computer Science Club is preparing a tutorial introduction to TSS (i.e. the Honeywell), intended primarily for those students who need to learn it in order to do their assignments.

There will be a talk lasting between one and two hours, which will probably be offered 3 times during the week of September 29. Watch for posters announcing the time and place.

The talk will briefly introduce the sign-on and sign-off prodding, terminal operation, and the useful commands that a beginning user needs. There will also be (relatively) experienced TSS users on hand to answer any questions you may have.

CAREERS DAY!

WEDNESDAY, OCTOBER 1, 1980
 MATHEMATICS & COMPUTER BUILDING (M&C)
 UNIVERSITY OF WATERLOO

What is it?

It's an opportunity to learn about careers. Employers from different organizations are invited to speak on their careers. They will provide realistic information on the various career possibilities, types of entry level positions available to new graduates and the opportunity for advancement.

Who is it for?

Anyone that is interested in finding out more about the careers outlined below.

Where is it being held?

The sessions will be held in the M&C building in the rooms assigned below.

Sponsored by the Faculty of Mathematics and the Department of Co-ordination and Placement.

10:30 A.M.

M&C 1052 J. Lawrence
 University of Waterloo
Pure Math

M&C 2065 R. Burns
 University of Waterloo
Operations Research

M&C 2066 D.J. Davies
 Toronto-Dominion Bank
Banking

11:30 A.M.

M&C 2065 Ed Baumgart
 Eastwood Collegiate
High School Teaching

M&C 2066 J.M. Smyth
 I.P. Sharp Ltd.
Computer Science

M&C 1050 P. Fallon
 Canadian Imperial Bank
 of Commerce
Statistics

1:30 P.M.

M&C 1050 R. Stampleford
 Mutual Life Assurance Co.
 of Canada
Insurance/Actuarial Science

M&C 2065 A. Armstrong
 Auditor General of Canada
 R.J. McMane
 Peat Marwick Mitchell & Co.
Chartered Accounting

M&C 2066 J.M. Smyth
 I.P. Sharp Ltd.
Computer Science

2:30 P.M.

M&C 1052 G.J. Lastman
 University of Waterloo
Applied Math

M&C 2065 R.F. Bryers
 Society of Management
 Accountants of Ontario
Management Accounting (R.I.A)

M&C 2066 R. Sadler
 I.B.M. Canada Ltd.
Marketing



The Harmfulness of GOTOs

This is an extract from a letter in the July/August issue of the SIG-PLAN Notices:

Actually, language designers have been aware of the harmfulness of "go to" since approximately 4004 B.C.

6 And the Lord said: Behold, they are one people, and they all have one language; and this is only the beginning of what they will do; and nothing that they propose to do will now be impossible for them.

7 Go to, let us confuse their language, that they may not understand one another's speech.
 (Genesis ch. xi)

msbrader

Faculty of Mathematics Dean's Honour List

In recognition of outstanding academic achievement throughout their undergraduate careers, the following students will "GRADUATE ON THE DEAN'S HONOUR LIST" at Fall Convocation, October 24, 1980 and have their names displayed in gold on the walls of the Faculty Colloquium Room (MC.5158).

Thomas H. Brandt (Computer Science)
 Gerald F. Schnurr (Actuarial Science and Statistics)

In recognition of outstanding academic achievement during the Spring term, the following students have made the DEAN'S HONOUR LIST (Spring/80).

Peter J. BUMBULIS
 William R. BROWN
 Richard CLEVE
 Mark N. CULP
 Benjamin M. EDELSON
 Philip D. ELLIOTT
 Pamela F. GALLOWAY
 Neil L. HAYNES
 Ralph D. HILL
 Philomena M. HUGHES
 Mark D. INGRAM

Allan H. KIELSTRA
 Paul J. LATIMER
 Jack L. LeCLAIR
 Dorothy G. LOCKER
 Steven MANNIK
 Lynn S. MARSHALL
 Stephen R. MAULSBY
 Steven G. McDOWELL
 Mark S. MUNDAY
 William J. NELSON

John A. PLAICE
 Fred W. PRIES
 Mark W. RANDELL
 David M. SCHMIDT
 Gerald F. SCHNURR
 Michael J. STEPHENSON
 Rose A. C. SUTTON
 Richard TERMEER
 Terry I. VINSENTIN
 Puiwing WONG

An Analysis of Da Vinci's Thoughts on Urban Planning

It was once said by da Vinci :

*"Construct your buildings as tall
as your streets are wide."*

Now of course da Vinci said this in Italian, being born and raised in Italy, but we may assume, for the purpose of this article, that his wise statement has lost nothing in the translation and that the meaning remains roughly the same, also realizing, probably more importantly, that da Vinci made that statement Gd knows how long ago, we must then stipulate that we are examining his advice with respect to modern day life and only then can we say that from the point of view of architectural collapse, building buildings as high as the streets are wide would rule out large scale collapse under the domino theory, assuming once again that the building, when it fell, swung on the axis created by the intersection of the front wall of that said building and the street or sidewalk between the two (if such a sidewalk exists); but what other than an earthquake would cause such architectural failure, and that being the case, would not the building across the street from the first, assuming that there is such a building, also suffer the effects of that same earthquake and, it being built in the same region, assuming that the city did not place the boundary line on or next to the street upon which the two buildings were listed as existing on in the phone book, would it not be constructed according to the same earthquake stress test resultive material, and this being the case, assuming that the time/direction factors of the tremor are minimal, would not the first building and the second building fall at approximately the same time, creating a bridge over the street, unless of course they both fell in the same direction (North/South that is (or East/West)(or a combination of the two) seeing as an Up/Down frame of directional reference, owing to the Earth's gravity, would be the same in both cases anyway) and so if they fell in diametrically non-opposing directions, we have thereby created the chance of a similar case arising on the street parallel to the street where the first two buildings were located, remembering now that if the building is tall it probably employs many peo-

ple and, our society being what it is, without delving too much into the ethics of today's society or lack of the same (ethics that is), those people will drive to work, therefore the taller the building, the more people employed, the more cars, and consequently the higher the demand for street space as wide as the building is tall, or maybe not THAT wide, I mean come on, da Vinci's buildings (not those necessarily belonging to him, but in his time) were not very bloody tall!
In Calculus terms, his statement is intuitively obvious.
Next week : "Construct your buildings where no earthquakes are."

Prof. PF9

ATTENTION ALL MATHIES THE MAGNIFICENT MATHO!!

It was just an average day in the mathSOC office at MC3038: the Honeybun was down and there was a broomball/soccer game going on in the North-West corner. To any newcomer, the entire room seemed forboding and unapproachable. However, in another corner of the office, sitting on the red and blue bench, unnoticed by the third years and second years and council members and mathSOC regulars and mathSOC irregulars, was a rather meek-looking, bespectacled student. To any one who cared, and few did, his name was Klark Cent and he was majoring in Combinatorics and Optimization with a Statistics minor. SUDDENLY..... nothing happened. But it happened suddenly! (Around mathSOC, if nothing happens, one assumes that something has gone right meaning that something is very wrong). Then the phone rang. Everyone breathed a sigh of relief. The phone was answered by Roise Rane, a quiet secretary type who once worked for the Daily Bugle under an assumed name with a not so assuming nature. Then, as she listened in the receiver, her face began to twist in sheer terror. Had everyone sighed too soon?

Slowly her hand, now quite pale, lowered the receiver to its cradle in an upside-down position (known as the Moosed position).

"Security has spotted an unidentifiable mass headed this way!!", she cried. "And it looks vaguely.....intellectual!!!" Immediately, everyone was in action. The old boys knew exactly what this meant....the Artsies had come up with another scheme to annihilate Math life as we know it. Soon tape drives were whirring and the main computer centre was sealed off with food for 5 days by titanium alloys. The mass had to be stopped!

The first line of defence was, by now just a formality, consisting of punch tape and Diophantine equations. As expected, they were of little use. The Comp. Sci. Club now fixed the mass' range at 598 metres. The secondary defence was pi and e to the nth power. The programmers leaned back in their chairs, confident that it would only take the first 54 decimal places to knock out the approaching mass of destruction. But then their faces went blank. That mass was converting all their digits into pseudo-code and turning pi into T.S.E liot. The Comp. Sci. Club now fixed its range at 276 metres and closing. Data was again fed into the IBM. The result: use the imaginary bomb with a GO TO guidance system. At this, all the mathies looked at one another... wasn't the GO TO statement banned by the Archimedes Convention? And besides, no-one had ever used the "root -3" bomb and its effects were not known. Well, the decision came down from the top. Use whatever we have, just stop that mass! The Comp. Sci. Club now fixed its range at 108 metres.

Then, still un-noticed throughout the affair, the figure of Klark Cent was seen to rise, go to a terminal booth and close the door. But no-one was watching. All eyes were fixed on the read out of the radar. The imaginary number bomb has wiped out....the Campus Centre. The mass' damage: 0.00003 %!!

Can the mass be stopped?

Is this the end of Math!?

Who is Klark Cent and will he save the day?

Will the Campus Center be restored?

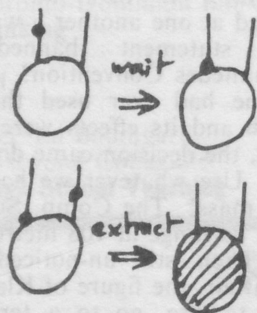
Find out in the next issue of mathNEWS!!!!

Andrew Welch (PF9)

Coloured Data Graphs

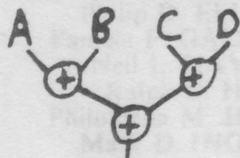
On Wednesday, September 17th, DCS hosted a seminar given by Dr. John Gurd of the University of Manchester, England. Dr. Gurd is a member of the famed Manchester Project, which was commissioned because large users (usually the manufacturers themselves) are beginning to encounter large barriers in the areas of reliability, provability, maintainability, portability, security and speed. At Manchester, much work has been done towards increasing speed. A new piece of hardware was created by the members of the project, and it was to be programmed using graphical techniques. Dr. Gurd discussed the various programming options open to the Manchester group.

To explain his ideas, Dr. Gurd introduced the topic of directed graphs in which nodes represent functions and arcs represent data paths between functions. Elementary nodes have one or two input arcs and one or two output arcs. Data values are carried along the arcs unidirectionally from tail to head in tokens. As these tokens arrive at the head of their arcs, they must be matched with their partner tokens before the destination node fires and calculates the result, placing appropriate tokens on the tails of the output arcs. When a node fires, the incoming tokens are removed. Pictorially, an extract-wait match looks like this:



If a second token comes along the same arc, then a matching clash occurs. Graphs which avoid such clashes are termed safe.

Data-flow graphs have certain properties which make them readily available for increased speed: explicit parallelism and minimal regularity. For example, to add A, B, C and D, we normally add B to A, then add C and finally add D. However, with a graph, we see that it is possible to process different instructions concurrently, which means we can do such things as add arrays in logarithmic rather than linear time.



The first option that the Manchester people had was to use a conventional language, which is defined by the fact that it has a single locus of control and fixed variable storage. It turns out that these languages are not very good programming vehicles. With a conventional language, intermediary variables must be introduced or the final variables must be reassigned through the program. With the data graphs, one can see that reassignments and intermediate variables are unnecessary.

Though conventional languages are not the ideal programming vehicles, it is still possible to translate a program written in one into a data graph. Simple statements and jumps in program control are quite simple, but conditionals and recursions would seem to be the demise of graphs. Not so. Conditionals are evaluated by a Boolean expression above the destination node which makes the decision. This node then receives the True or False from that expression and then passes the output token to its True or its False arc. For recursion, rather than create a stack, the code of the recursive function is used by many concurrent callers, but the tokens are all coloured. A destination node can not fire until tokens of the same colour are matched. The recolouring means that the graph is safe. The machine must now be able to do run-time arc generation, but that is how it was created.

The next option that the Manchester people had was to use a single assignment language. A single assignment language is one in which a variable can be assigned a value but once. Assignments can be made by using a combination of the five basic types of definition: simple expression, simple expression with a where clause to evaluate a reoccurring sub-expression only once, and conditional, iterative and recursive expressions. One great advantage of single assignment variables is that all reassignments have been eliminated. This fact gives them a decided edge over conventional languages in terms of translating them to data graphs. This type of language was the type originally selected for programming the new piece of software.

Though single assignment languages were originally selected as the programming vehicles, the Manchester people are still thinking about using applicative languages such as Lisp, Prolog and Lucid. The advantages of these languages is that they are well suited to function applications, to infinite and incomplete objects and to higher order functions. With these languages, expression code can be produced by the data, making the machine fully data-driven.

John
Plaice



FEEDBACK

Dear mathNEWS:


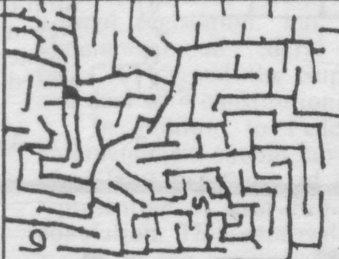
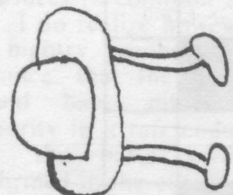

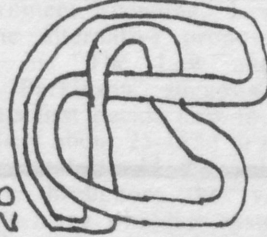
I am concerned about a quantity versus quality tradeoff which seems to be infecting mathNEWS this term. Understandably, a large influx of talent from our frosh sector widens the horizon of possibilities, but wouldn't it be far better to direct this vigour into a more concise, quality product? A majority of the articles included in last week's issue contained information or ideas meriting publication. However, the same content could quite effectively have been conveyed in an issue of half the size (with corresponding savings in cost!).

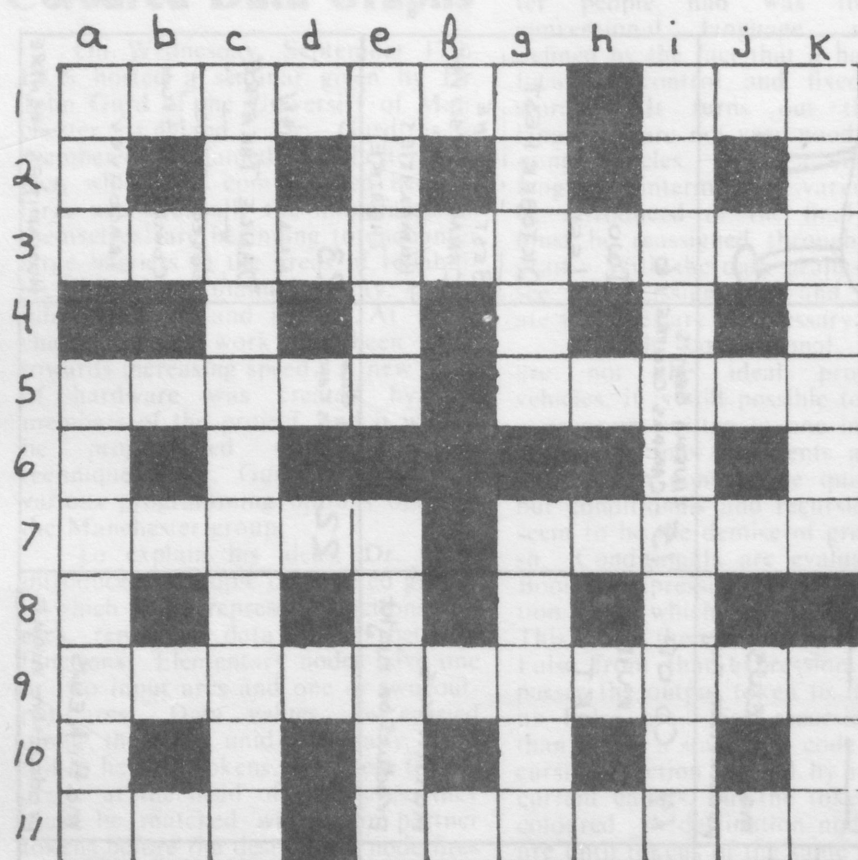
Can no one match the literary skills of past heroes Kelly and Ragde? Has no one the discretion to be tastefully concise?

I think the opportunity is here -- and I look forward to some interesting results.

Ben Lutek
4A STAT

P.S. My poetic interests compel me to condemn an abomination entitled "The Alcohol Song" which marred the face of your recent issue. The content of this "poem" is questionable, the meter is non-existent, and the rhyming is an insult to literacy! My limericks may not be worthy of front page exposure, but at least they meet respectable standards of form and content.

FRIDAY	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
26 CO-ED SLOW PITCH LAST DAY FOR SOCIETY REFUNDS	27 FED FLICKS APOCALYPSE NOW TENNIS SINGLES FED FLICKS RUNS 3 DAYS	28 WATCH FOR LATE JOB POSTINGS.	29 MEETING: ULTIMATE FRISBEE!! THIS IS THE GAME OF THE CENTURY!!	30 WOMEN'S VOLLEYBALL math NEWS production nite!	1 CINEMA GRATIS - CAMPUS CENTRE CAREERS DAY	2 
3	4 FED FLIX "CRUISING" FED FLICKS RUNS 3 DAYS	5 TENNIS SINGLES	6 	7 CHINESE MAGIC CIRCUS - 8:00 PM (HUMANITIES) math NEWS production night	8 CINEMA GRATIS - CAMPUS CENTRE	9 
10 OKTOBERFEST STARTS	11  FED FLICKS RUNS 3 DAYS	12	13 THANKSGIVING HOLIDAY HURRAY!	14 CO-OP INTERVIEWS START math NEWS production night	15 CINEMA GRATIS - CAMPUS CENTRE	16 TWO DAYS LEFT OF OKTOBERFEST BEST OF THE CANNES FESTIVAL - HUMANITIES THEATRE
17 FED FLICKS	18 OKTOBERFEST ENDS. SOB! Runs 3 DAYS	19 FED FLIX: MONTY PYTHON'S LIFE OF BRIAN	20 	21 math NEWS production night	22 CINEMA GRATIS - CAMPUS CENTRE	23 ANNA WYMAN DANCE THEATRE Noted dance company from Vancouver HUMANITIES THEATRE



CHALLENGE GRIDWORD

by PF7

ACROSS

- 1a. Trains agencies (7)
 1i. Initially, I certified cold water.(3)
 3a. Simple - like dessert? (2,4,2,3)
 5a. Pertaining to sound in the headset on all stereos. (5)
 5g. Her name is in the call or name books. (5)
 7a. Southeastern drink: it gets taken into the body. (5)
 7g. A note on a musical instrument leads to another. (5)
 9a. Include procreation, perhaps. (11)
 11a. Take the wiping cloth back for the fish. (3)
 11c. He's in the running. (7)

DOWN

- a1. Are up to a time period.... (3)
 a5. ...trying a new setting. (7)
 c1. Martian shopkeeper? (11)
 e1. Nosy? (5)
 e7. I am, strangely enough, a girl. (5)
 g1. Stop the choir. (5)
 g7. New additions to the university. (5)
 i1. Insistent permutation? (11)
 k1. Mixed-up valet goes between points to lift something up. (7)
 k9. It looks up and down. (3)

uw arts centre NEWS

UW ARTS CENTRE NEWS

**THE BEST OF THE
CANNES FESTIVAL
Cinema and TV Commercials**
Adfilms Limited (Canada, 1979)

TV and cinema commercials judged "best" from over two thousand entries from around the world at the June 1979 Advertising Film Festival at Cannes, France have been put together into an entertaining and fascinating colour film. The film incorporates works of art, subtle humour and brilliant techniques. The grand prize winner in the TV category was produced by a Toronto group for a beer from Oregon. This is the first time Canada has won the grand prize.

**Short Subject:
THIS IS A RECORDED MESSAGE**
(NFB, 1973, colour)

This film, with its shock effect, invites reflection on the broader social implications of hucksterism in all its guises.

Complete show starts at 8 p.m., Thursday, October 16, in the Humanities Theatre.

CHINESE MAGIC CIRCUS OF TAIWAN TO APPEAR AT HUMANITIES THEATRE, UW

THE CHINESE MAGIC CIRCUS OF TAIWAN will appear for one night only on the Humanities Theatre stage, Tuesday, October 7 at 8 p.m. as part of the UW Arts Centre's professional entertainment season.

The Company is a specially put-together troupe of sixteen performers and offers more than a glimpse into the fascinating Orient. It consists of acrobatics and the magic of the East, plus comedy, balancing feats and traditional dances.

Interaction

When its golden, you go for it. As in beer, so in articles, and in constitutions. Since the editors have decided to go for another issue of this paper, **mathNEWS**, I have decided to go for another article while there are still issues being produced. As you know from past experience this may not last for long. Hopefully it will, even if it cuts into the pubs budget, because we don't need more pubs like the last one.

Another person who should go for it is our Prime Minister, Pierre Trudeau. Canada has gone long enough without its own constitution, and it is high time that our constitution be patriated from Britain. Since 1931 Canada has had the legal ability to petition the British Parliament (through the Statute of Westminster) to bring home the constitution, but has not acted because it could not get the unanimous agreement of the provincial premiers. However I believe that the premiers have had their chance, if the federal government was to wait much longer for a unanimous agreement from this mainly parochial group of leaders, any momentum that there now is for constitutional reform would vanish, as would the federal government's credibility with the public.

From my comments so far you can see that I favour unilateral action by the federal government. However I would hope that the action wouldn't be totally unilateral. I think that a nation-wide referendum should be held to ratify the federal government's actions before the British government would be approached. The referendum should require more than just a simple majority and should have approval in at least two thirds of the provinces.

What should this new constitution include? Generally the division of powers between the federal and provincial governments should be similar to those outlined in the BNA Act and its amendments, however I would like to see the following additions. First of all there should be a Bill of Rights included in the constitution. As a minimum it should deal with our basic civil rights like the freedoms of speech, assembly, religion, thought, etc. There are those who say that even if we have such a bill of rights, we are not guaranteed that our rights won't be trampled upon. While I agree such a bill of rights won't be an iron-clad guarantee, I believe we are better off when our rights are clearly spelled out in the constitution, than when they are not (witness the War Measures Act that still exists, but would be illegal with such a bill of rights). I would also like to see the right of citizens to services in one of the official languages ensured, and also the cultural rights of minorities and rights of our native

peoples protected by the constitution. Additionally I would like to see the free flow of labour and goods between provinces (a common market) protected. I do realize however, that because of bigotry, economic greed, or ignorance, that the federal government would have difficulty winning a majority in a referendum if more than just the basic civil rights were enshrined in the constitution.

Every constitution needs an amending formula which makes it possible to amend, but not too easy to amend. I would say that amendments should be passed by both the House of Commons and a reformed Senate. This new Senate would not all be appointed by "the man himself". Half the reps would be provincial appointees. They would be appointed on the basis of each party's popular vote in the most recent federal and provincial elections (to ensure support for Liberals in the West, P.C.s in Quebec, N.D.P.s in the Atlantic region) and each province would have almost the same number of reps (perhaps a few extra for Ontario and Quebec because of their disproportionately large populations). This new Senate would not deal with normal legislation, but would ratify appointments to federal commissions (ie. CRTC) and the Supreme Court, and deal with constitutional matters.

In addition to Federal approval an amendment should have the support of at least two-thirds of the provinces representing at least two-thirds of the population. This approval could be by a vote of the provincial legislature or by referendum. Provincial legislatures should be allowed to initiate amendments, and 5% of the voters (either provincially or nationally) should be allowed to petition for referendums on constitutional issues.

While I doubt that the eventual constitution will look like my proposals, I do hope Canada gets a new constitution soon. I wish our federal government luck in its quest and I think Pierre may be able to pull it off. If we don't go for it now, we may never get it.

J.J.Long

Participatory Democracy

A reply to Monologue

Mr. Templeton in last week's Monologue suggested a system in which taxpayers would direct at least a portion of their taxes to certain sectors of government. He appeared to believe that such a system would lead to a better form of government. I should question this opinion strongly as I believe such a system would preclude the operation of any efficient government.

The system suffers from most of the drawbacks associated with any scheme of participatory democracy. It is ridiculously cumbersome in that it would require a vote for any major change in the government budget. It suffers from the fact that almost all of the voters (i.e. the majority that makes the decisions) would be basing their decisions on woefully inadequate information. Worst of all this system would exasperate democracy's worst problem: the tendency toward shortsightedness. As bad as this problem is (no government looks farther forward than the next election) it would be much worse under Mr. Templeton's scheme in that I doubt that the majority would look farther forward than their next pay check.

As an alternative way of controlling government spending, I should suggest the alternative proposed by Parkinson in "The Law and the Profits". Parkinson suggests that governments first decide how much of the GNP (say about 25-35%) to spend. The government would then allocate this money throughout the various departments using whatever system of priorities the government decide upon. The departments would then allocate this money as they see fit. This suggested system would eliminate the horribly wasteful process in which departments decide how much money they want to spend and then turn to the government which provides it through taxation or by production of fiat (paper) money. Such a system may do little toward making government spending more representative, but it would go far toward making it more rational.

William Hughes

Answers to last week's "FIND THE MATHEMATICIANS":

1. INTEGER, CALCULUS, MATH, EUCLID, ASYMPTOTE.

Bonus: ARCHIMEDES.

2. ALGEBRA, PROBABILITY, RIGHT, GRAPH, OCTAGONS.

Bonus: PYTHAGORAS.

3. SLOPE, ANGLE, TANGENT, ONE, HEXAGON, RADIUS.

Bonus: ERATOSTHENES.

Watsfic Announcement

The next meeting of this prestigious club will be held next Thursday, October 2, in room MC 3009 at 7:30 pm. As usual, new members (and old!) are welcome! There will be, get this, FREE coffee and donuts afterwards! We will be picking movies for this term's movie nights, so be there!

Masthead - well it's only 1:45am and this is all that is left to do. something went wrong tonight!! I might actually be awake for algebra this morning... this typewrite is dying on me....oh well it couldn't all go right...*sigh*... (thanks for the input, Ashok. Other helping hands tonight where (not in any order) Sean Richardson (aspiring young writer who won't make it till next week), our NEWEST froshette Debbie Adair (cldr, friendly face), feeling free to speak Will Hughes (Spartan demo.), the instant ash-ed Ashok (who ops, va got in twice), James Puttick, for whom we couldn't find enough things to keep him busy, Steward remains the mystery man, David Till and MAB (for articles to come soon), John Pl-ice (for everything you can think of), Andrew Malton (help along the way), Andrew Welsh, creator of Matho the Mathie, msbrader, for knowledge of where not to go, jllong, coming to the rescue, the infamous PF7 and PF9, Verna for faculty notes, Guy Middleton & Brad Templeton for spirit and (?) enthusiasm, Greg bezoff (Watsfic, I think), and various unnamed heroes at large....thnx to the pig for f0-0d, and to the Ph o^o for behaving resonisively, geez^o, now i get to work on my currizulum vitae (résumé, for all you dummies out there) (yes i know it was due last monday), thats why i really have to get it done... why doesn't anyone tell me about these things???? We don't make the news, we just print it.....that's not news, but that too is reality.... oh yes, on behalf of us here at the mathnews prod. office, "GET Well fast WROSS" we can't handle this effieciency alone. I really have to use this typewriter, now...bye Joanne

A Typical Day

7:30 Alarm goes off.

7:30:02 Burst of adrenalin sends our hero flying into the air with the force of a Saturn V rocket. After making contact with the ceiling and plummeting back to earth, he shuts the infernal thing off.

7:32 He sits in a stupor, waiting until his pulse rate is only a few times that of normal before making the big effort to get up.

7:35 On the fourth attempt, he gets up.

8:00 Clothes himself in typical student dress. (For the student, the "Uniform" consists of the following: one (1) University of Waterloo T-shirt; one (1) pair of jeans; one (1) pair of socks, one blue and one brown; and one (1) pair of utterly decrepit jogging shoes.)

8:05 Sits down to a nutritious breakfast of a donut, washed down with plenty of invigorating coffee.

8:13 Calmly, he finishes his breakfast...
Calmly, he looks at the clock...
Calmly, he grabs his books and runs like crazy...

8:29:45 Exhausted, our hero takes up his usual seat in his Algebra class. With his mind too messed up to even consider the possibility of thought, he is left with no alternative open to him but to take notes mindlessly, hoping that at some time (hopefully, before the next assignment/text/exam) his brain will be able to absorb what seems to him now to be nothing but gibberish.

9:20 After 50 minutes of alternately scribbling incoherently and furtively checking the clock, our hero is allowed to escape. He heads out in double-quick time to the C&D lounge, only to find himself in queue position 33. After ten minutes of waiting, his quest is fulfilled and the cup of coffee is now clutched firmly and proudly in his right hand. Unfortunately, all the tables are occupied...

10:25 The coffee-cup is now empty - two-thirds of the contents having been received by a grateful stomach, while the other one-third has been scattered over the immediate vicinity of his seat by his shaky hand. But there's no time left for him to dwell on the past; shuddering, he realizes that now, it's time for him to head off to Stats.

11:35 Lunchtime. The brain has by now revived itself somewhat; he is now able to perceive reality and utter coherent sentences. After enduring another C&D lineup, our hero settles down to another nutritious repast of C&D kaiser, complete with the inevitable coffee. With food in his system and a half-hour to kill, he spots a pin-ball machine sitting there (lonely!) in the corner of the room, just waiting for someone to pop in a quarter so that it can perform its function in life.

12:15 Frustrated by his lack of coordination (and fifty cents poorer), our hero sets off on his long journey to his elective class. On the way, he encounters many friends and acquaintances; he is unable, however, to muster up much in the way of conversation; he just mutters a few hellos and speeds along.

1:30 It's now time for Calculus. Now that he is fully awake and his brain is in high gear (thoughts flashing through at the speed of light), he finds it difficult to concentrate. He fidgets in his seat, and his pen scurries across the pages of his notebook as he impatiently waits for the end of his last lecture.

3:00 Back home again - however, all is not peaches and cream by any means, as there is still a flood of work to do. Fighting off his feelings of revulsion, he takes pen in hand and starts on his assignments.

3:01 The feelings of revulsion overcome his momentary diligence, and he decides to chuck it all for another day and go for a beer (or two...)

And there we shall leave our poor wretch.

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ISSN 0705-0410

A weekly (sometimes biweekly) publication of the University of Waterloo Mathematics Society. It is funded by, but independent of, Mathsec and is the only weekly newspaper on campus with an all volunteer staff. Editorial content is the responsibility of staff and editors. Mathsec, MC 3038, University of Waterloo, Waterloo, Ontario, N2L 3G1.