Rector attacks education policy

Strike Success

Wednesday's day of action staged by The Association of **Universities Teachers (AUT)** and the National and Local **Government Officers** Association (NALGO) has been described by Union officials as 'very successful'. Nationally, fourty-four universities were affected and public meetings were held in town centres throughout the country. At Imperial College many students staved away from lectures in a gesture of support for the strike, which also had support from IC Union, and the Rector Professor Eric Ash.

The strike's aim, as explained in the FELIX strike Special was to outline the AUT's concern over spending cuts, and NAIGO claim for higher wages.

Janice Lewis, the branch secretary of NALGO was 'pleased' with the strike's progress which achieved 'valuable national publicity'. Many students did not cross the picket lines and a number of delivery vans were turned away. In the Physics department only 75 (out of 200) turned up for morning lectures.



The Rector, Professor Eric Ash, speaks to representatives of AUT, NALGO, ASTMS and ICU.

Professor Ash, speaking at the picket line said that it was essential that Britain should have more Science teachers of a higher calibre. He felt low pay levels in the UK were encouraging lecturers to work abroad, and that there is a need to use the media to change government policy. Keith Joseph was, he said, well intentioned but ill-informed. Mr Ash suggested that a 24 hour work-in should be staged, by

students. Amongst other things this would comprise early morning discussion groups, a midnight meal, and a lecture presented by Mr Ash on the last fifty years of University education.

Colin Dixon an AUT Committee member told FELIX that further action was likely in the form of a one or two and a half day regional strike. He went on to express his thanks to IC Union for lending its support.

Science SOS

A motion condemning the governments policy on science funding was lodged by four MPs on Tuesday in support of the Save British Science campaign. The campaign, which is supported by the Rector Eric Ash, and the former Rector Lord Flowers aims to inform the public and politicians of the damage caused by reduced spending on Science. Since it invitation eight weeks ago SBS has attracted 1500 members including Vice Chancellors, Fellows of the Royal Society and eight Nobel Laureates.

Professor Ash explained the effects cuts were having at Imperial College. He told FELIX that the cutbacks of 15% by the Universities Grants Council have 'made it difficult for Imperial College to keep up with competition overseas He also pointed out that the lack of money available in the UK for

research has lead to a 'brain drain', and added that Imperial was experiencing greater difficulty in filling vacant chairs and academic posts as a result.

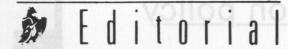
During his visit to the picket lines on Wednesday the Rector announced his intention to donate a days wages to SBS.

A founding member of the SBS campaign Professor Denis Noble who held the chair of Physiology at Oxford told FELIX of his concern that 'during the past 5 years the gap between the UK's research spending and that of its competitors has increasd by 30%'. He went on to say Britain benefits would if more of the money currently being spent on defence research was allocated to civil research and pointed out the findings of the Education Arts Science Committee in 1985 which stated that Civil spin offs from military research were

infrequent. He added 'Britain is the only Western Nation to spend more than 50% of its research funds on defence.

Shortage of funds at IC have also led to the abandoning of important research work. The College was unable to gain a £130,000 grant from the Science and Engineering Research Council for research into a branch of atomic physics which has previously provided the basis for advances in Microelectronic and lasers. The grant was required for specialist equipment, including a 'super magnet' for an experiment involving passing a new type of laser through a cloud of atoms. The work is now to be taken up by a German research laboratory

Present forecasts predict that by 1990 Japan will have ten times as many scientists as Britian, and that West Germany will have four times the number. It is hoped by the SBS campaign that, by bringing the problem into the public light, they can force the Government to take action.



AUT Strike

The AUT Strike on Wednesday appears to have been an enormous success. It gained a large amount of coverage in the national press. Professor Ash is right when he says that the general public must be aware of the problems facing universities. This means that today's protest must be followed by strikes, lobbies and sit ins. The government must be made to see that it needs to invest in education. IC Union. traditionally an apathetic union, needs to be part of

these protests. If IC students protest the government may take notice. There is going to be an election in next three years and many universities are in marginal seats. Universities have influence. We must show the government that we're prepared to use that influence against them if they don't start investing in education.

Nicaraguan Coffee Student union services are mean't to be services run by students for students. This means that if students feel strongly about issues

like South Africa and Nicaragua they should be able to change their suppliers. It may not make commercial sense but if you want a commercial meal you go to MacDonalds and buy a burger. Dave Kingston should not have opposed the motion on coffee at Tuesday's UGM on commercial grounds. As a sabbatical you're meant to work for students which means you should listen to their wishes

Christmas Tree
We discovered this week
that our Christmas tree was
taken by the cleaners who
decided that it was time to
clear up the office after
Christmas. We would like
to appologise to Beit

Security who apparently got in trouble after last terms news story.

Credits

Thanks to Bill Goodwin for taking over as News Editor at short notice, J Martin Taylor and Sunny Bains, Mark Hunter, Rosemary Hosking, Dave Jones, Richard Smith, Kamala Sen, Jane Speigel, Rob Dwyer-Jones, Chris Stapleton, Aaron Kotcheff, Andy Vickers, Sarah Kirk, John Burgess, Mark Cottle, Chris Edwards and everyone I've forgotten. A special thanks to Jelly and Tony Spencer and everyone else who collated late last week and to Dave Kingston for helping us out with the printing. There's a staff meeting this Friday.

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Union Bar

Now Opens at 5.30pm on Wednesdays

Happy hours Tuesday and Thursday evenings between 6 and 8pm. Beer 50p/pint

Applications are invited for

WARDEN Willis Jackson

Applications from IC Union
Office on a Standard
Application Form. Job
Description will also be
available. Forms to be
returned to Carl Burgess,
President ICU, no later than
5.30pm, Fri 28th Feb

The Post is only available for couples



Dave Parry Replies

Dear Mr Beck, Thank you for your letter concerning the rents for single rooms in Hamlet Gardens. The reasons for the revised bills are twofold:

(a) Head Tenancy flats are rented on a 38 week basis and the bills for the year are usually divided into Autumn Term and Christmas Vacation, Easter Term and Easter Vacation and Autumn Term gas and electricity, and Summer Term and Easter gas and electricity.

At the beginning of term I made the mistake of allocating Hamlet Gardens on an 11 week basis, ie to the end of the Autumn Term. Thus at a later date (end of November) I ammended the Autumn Term bills to include the Christmas Vacation.

(b) Some flats contain single rooms. Hamlet Gardens is allocated in two

blocks (Flats 9-140 and Flats 201-220). At the beginning of term (when allocating rooms) I was only aware of 4 of these. During the first couple of weeks some people came in and told me they were in singles and I altered their bills. During the term various attempts were made to discover who else had single rooms. Thus when December came along I felt that these bills needed sorting out before the end of term. Thus I selected people at random and sent them new bills along with the covering

When your groups signed up for the flat you entered into a contract to pay a certain amount of rent per week. When the flat occupants received their bills it would have been obvious to make sure that the weekly bill was correct. Also, the people in double rooms surely would have raised questions as to why they were paying the same as those in single rooms.

I apologise for the seeming lack of communication and apparent interest from myself (charges which I heartily deny) and the trouble which has been caused by the re-issuing of bills. Steps have now been taken to improve the checking of dates of stay and rents charged. Yours sincerely. Dave Parry Student Services Finance Assistant

<u>le Iters</u>

Imperial Animals?

Sir,
I write regarding the opinion column on Hon Porn night. While I am relieved by Dave Pearce's assurance that he does not maltreat women, I do not think his arguments stand up in any context wider than the RSM Union office,

for the following reasons:—
Firstly, if the audience merely enjoy the thrill of 'watching something socially taboo', why does that something always have to be pornography? There are many other social taboos, as I am sure members of RSM can testify.

Secondly, although I agree that sex is natural, I do feel that sex between a pig and a (human) woman must be an exception to the rule. This, I am assured is part of the 'entertainment' available.

Thirdly London caters adequately for people wishing to watch strippers and pornography, so there is no need for Hon Porninight to be held even once a year at Imperial College.

To sum up my objections to Hon Porn night, not only is it degrading to both performers and audience, but it is also unecessary. As a man at Imperial College, I don't want to be branded an animal, an imbecile or a sexist, so although I can appreciate RSM's desire to be autonomous, they should also realise the responsibilities they have as part of Imperial College, and Imperial College Union. Responsibilities which cannot be lifted merely by mobilising the now-infamous RSM Block-Yours Pete Wilson Computing 2

Morally Degrading

Dear Sir,
The shallow and often nonsensical commentary from
Dave Pearce of RSMU
'justifying' the RSMU
'Rugby' Club's Hon Porn
Night is a fair indictment of
the event in itself. May we
try to offer what we believe

to be reasonable and intelligent argument against such events.

Firstly tradition is no justification for continuing to behave in a particular way. It is undoubtedly true that pornographic events, whilst in themselves bringing excitement and 'thrills' to certain sections of the population, are morally degrading.

Mr Pearce's contention that the audience do not watch pornographic events for sexual pleasure is, quite frankly, naive. We find it surprising that, as an intelligent person (with A levels as well), he regards it simply as some highspirited bovish naughtiness. His remarks on sexism, particularly about the lingerie industry in this country, show a degree of misunderstanding and insensitivity that is disturbing.

"Do the audience come away feeling that women are for sex only?', he asks himself. The content and direction of pornographic films clearly present this to be a primary, if not sole role of women in society. This can be the only view be it conscious or subconsious, one leaves with after watching such a film, and one, in our view, which is as degrading to men as it is to women.

To present what was ntended by God (as Mr Pearce tentatively argues and that we would maintain) to be a natural act between a man and woman in a commited relationship (ie Marriage), as a public performance and further, the portrayal of unatural sex acts (whether 'just acted' or real) is a betrayal of our self-respect and perversion of human dignity.

It is sad that relatively intelligent and sensible people should find their excitement and thrills in sexual fantasies or in getting paralytically drunk, or whatever, reflecting, surely, their low level of expectancy of a fulfilled and productive life. As Christians we believe that Jesus Christ came to offer the world life-a life of fulness and purpose, Jesus said, 'I have come that they may have life, and have it to the full' (John 10 v11); and he laid down his own life that we might enjoy this life now. Yours faithfully

Steven Burgess Civ Eng 3

Gaynor Whyles Life Sci 3

Sarah Kirk Bio Chem 2

Nick Gardner Civ Eng 2

Minor Thinking

Wi i wont to go to an on porns nite by M C P Minor (aged 10 3/4)

it is illeagle in this cuntry to rape wimmin an so peeple like me hav to go to strip shows to werk off our frustrashun. Evry wun hoo sez this is sexist must be a lezbian (but may i say i dont hold anything against the beoutiful Greek island of Lesbos cos of this)

i wood like to thank all those peeple wot have promoted theez events in the past espesially WIST, and thank them for making me think wot a change this makes from wanking in my room. Finily i wont to say rsm is a largely male institution many of whose graduates depend on South Afrika for jobs so weev got better things to think about than ic wimmin.

Coach Savings

Dear Editor, I would like to bring to the attention of club and society officials, who are responsible for coach bookings, that Capital Coaches Limited hire charges for trips to destinations outside London are comparatively expensive.

Officials can easily save not only IC Union, but also their members, a significant sum of money by hiring from another company.

Yours faithfully
Douglas Kelly
ACC Transport Officer.

Porn not a'Preece'iated

Dear Sir,
Last week we had an
explanation and
justification of the Royal
School of Mines Hon Porn
night from the President
himself.

Mr Pearce believes that Hon Porn is sexist, but only because it appeals mainly to men, in the same way that wearing bras appeals to women. This is ridiculous, Hon Porns is sexist because it degrades and humiliates men and women portraying them as objects to be used and abused. Not so, says RSM,



in his second point, we are told that the event is not degrading because the audience do not watch it for sexual pleasure and because sex is a natural act. Of course sex is a natural act, but not that which is portrayed in Hon Porn night. Hard-core pornography of the worst kind normally shown including several acts between women and animals, gang rapes, and scenes linking sexual acts with extreme violence.

I find it hard to understand why RSMU has to place such importance on this event which has been so harmful to our College and our reputation as students here, and shows any attempt to criticise Hon Porn is seen as a direct assault on the RSMU itself as if it were the central event in the union's

I also wonder why Mr Pearce wants to flaunt before the College the fact that they've held Hon Porn night without anyone knowing about it. It is then, the thrill of doing something socially taboo, as he mentions in his article and then telling everyone how wicked you've been. I'm sorry, but that approach is more reminescent of school children having a secret smoke behind the bike sheds, than a mature attitude to running a students' union. I hope that Mr Pearce will continue to be open minded in the future so that we can have sensible discussions on this subject that are not limited by the assumption that 'the show must go on'. Yours faithfully Roger Preece

Ashamed of IC

Dear Sir,
I found David Pearce's
article on Hon Porn night
(FELIX 725) very
patronising and, I think,
deliberately naive. Mr
Pearce infers that
manufacture of bras and
Hon Porn night are 'sexist'
in the same way, which
leads me to believe that he
totally misunderstands the
issues. Manufacture of bras
is not degrading to men.

The event, by its very nature, subjugates women, and so to suggest that to watch women as objects, much like animals in a zoo, is consistent with treating women as equal **human** beings is double think of the greatest proportions.

However, most offensive of all, I thought, is the way that Mr Pearce raises the 'moral' question, suggesting, by implications, that people opposed to Hon Porn night are some sort of self-righteous purists, who are against this 'natural act'. Indeed if Mr Pearce thinks that Hon Porn night has any connection with a natural act then I wonder at what stage he dropped Biology at school?

As a male student at IC I am ashamed to be associated with people who exploit such false reasoning to support their actions. Yours faithfully Mark Harman Comp 2



ANNOUNCEMENT

- •Silwood Park XI Football team starved of decent opposition. Will play at Hyde Park or Silwood. Any team interested contact N Bainbridge through internal mail: Reactor Centre, Silwood or internal telephone Silwood 284
- ●The Fourth Day of the Week Music to gel your hair to on 999/301 MW 6-8pm every Saturday. Listen to it.
- •Skydive IC para club is about to run a beginners course. Contact A. Macleod EE3 for details.
- ●Barn Dance Visit the Guilds Office for your ticket only £2.00.
- Get physical! Dance the night away at the Valentines Barn Dance, 14 February.
- Princess IDA by Gilbert and Sullivan. Presented by Opsoc 18-22 February in the Union Concert Hall.
- ◆Tuesday 6.00pm SCR Beit Wine tasting are out, once more, to tantalise those taste buds, this week with white wines from Bordeaux. These include Entre deux Mers—Crisp and dry, Graves—rich and full bodied and Sauternes—luscious, buxom and the Queen's favourite (also Robin's!). Only at £3 for members and £4 nonmembers.
- ●Do you like watching films?
 Become STOIC's film reviewer and watch press showings free. If you are interested come and see us Wed afternoons in the TV Studio down the walkway or our Union Rm in Union Buildling.
- •Jazz club new year hop Wed 27 Jan 7.30pm. Free booze and Disco and College Bands, Duo, the Beat Bandits and the Charlie Brown Trio. £2.50 Tickets from John Noble Chem Eng 2.
- ●The De La Beche Club presents an international symposium 21 February 1986, in the Great Hall, Imperial College. Admission by ticket only Price £1. Contact Chas Goldring Geo

ACCOMMODATION

- •Single room immediately available in flat in Streatham. Rent £130 per month. No rent to pay until 14th February. Contact Rufus Short, Elec Eng UG Pigeon holes.
- •Luxury flat to let twin bedroom, lounge, kitchen, bathroom, store-room. £70pw for entire premises or 235pw shared ono. Contact J Bruce Physics 3 or 240 9096 before 7pm or 242 4398 thereafter.
- •Single room, luxurious flat for six, 20 mins from College, High Street Kensington £37pw inc HW/CH Phone 6038104 eve.
- •Male postgraduate required to share 2 person flat in Lexham Gardens, 10 mins walk from College, own TV, use of phone. Available from mid Feb rent £30pw. Contact Richard Homan Chem Eng Pig Holes or 01 373 8399 (even).

FOR SALE

- •Graphic Equaliser Black Sansui SE 300, 7 bands per channel. Unwanted Christmas present, can demonstrated, £55 contact David Campden 01 736 5631 or via Mech Eng Letter Rack.
- eHifi one year old Phillips 25wpc
 Amp, Phillips Dolby B/C tape Deck
 (with AP885) Sharp Tuner, ADC
 Turntable, KEF Speakers. Prices
 Negotiable for total or separates.
 Contact P Mantovani EE 2.
- ●Two Tickets for AC/DC Friday 17th Jan. £8.00 each. Contact Tony Blackler Internal 4517.
- ●Honda 400N Engine plus carbs, exhaust and ignition system £150. With front end and brakes £180. Can be tried before sale. Newish shocks (Girling) for 250/400 Yamaha £15. New tank (boxed) for Honda CG125 £30. Contact G. Purdom Chem Eng III.

WANTED

●Car Share going London—Durham (will drop off eg Sheffield). Share petrol costs. Mark Hardman Work 01 278 2491 ext 243, Home 0442 53174.

PERSONAL

New Wardens of Southwell Beware.
 The gang of four are out to get you.
 Only skydivers know why the birds

- •As Shakespeare once wrote: 'Out Vile Jelly'
- •Free Sox.Join Oddsoc or find out how. Choice of plain or kinky, and glow in the dark.
- •Watch out for wilf. He's a real mean
- •SOS is Scandal on Steve not on? Watch this space.
- •Wanted one female to share room in Tizard Apply RM 527.
- ●Puffter? Not according to 416. ●Subtlety Award 1986—Mark Dixon
- Chem 3

 ■VAMPIR Removals-Thanks for the chocolates. Happy Christmas to you
- all Mo.

 •Mark-Please don't forget the Buddha-or the Thai Whiskey!
- F-K Blackmail calendars-place your orders now.
- ●Found in Bot Zoo Common room. Light grey/mauve jacket (anorak) unclaimed since October. Contact Nick Gardner Ext 9430 or Civ Eng 2
- •Superman calling WOBBLYBITS: What are you?
- •YOGGI BEAR calling BOOBOO:
 You eat more than the average bear!!
- •Watch out, the playing cards are after you.
- •Ever had the \$\$\$T scared out of you by a pilot's bad landing? Why not let IC Para club help you leave before it's too late. A Macleod (EE) for details.
- •Don't miss Tizard Hall's re-run of 'The Water Babies' starring Tim and Babs.
- •Valentines day Barn Dance is coming your way soon. Will you be mine?
- •Even 7 pairs of Bristol's couldn't put IC water polo team off.
- Masseur required for treatment of sporting injury—see D Wilson Computing 3.
- •What does chain, lock and Wetsuit arm have in common! Ask D Wilson Doc 3.

- •'To dip or not to dip-but whats the question Harry Hamlet Palmer.
- •Add inches!! to your private parts!!
 with ICC. 'Its brill', says Miss
 Satisfied Member, 'Mine swelled and
 swelled and my bra just kept coming
 off'
- •'Well mines still small' Aunty advises 'get a hair cut'.
- ●One hundred and one uses of a dead Chilli. Contact M Prickson, Chem 3.
- •Prickson—beware the knackercracker; SAE is not amused.
- •JJ run, run, shit, shit, sloppy sloppy.
- •MM keep your door locked.
- •I want my E2 man—unrequieted lover wait until you're pissed then you'll be mine.
- •ICMC Expedition meeting.
 'Finsbury Park-or Stans if it's wet 86'
 Members wanted-must climb Mod
 S&B and YHA accepted.
- •S&B Expedition meeting we're still Arguing 83, 84, 85, 86..Brownies accepted.
- •Harley: You've had my black tights for over two months—please, please can I have them back, lots of love K.
- •Massage Parlour opening on 61 landing topless masseurs £10 per half hour. Please phone for an appointment.

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Electric Cell Going Underground

After 20 years of campaigning the Elec Eng department is to get a common room. Students agreed to give up some locker space so that the ground floor locker room could be carpeted and furnished. No date has been fixed yet for an official opening but this is expected to occur after the installation of a coffee machine, in early February.

Guilds President Roger Preece, himself an electrical engineer, said that, until now, there has been no real meeting point for students in the department, apart from '3 chairs in the foyer'. Head of Elec Eng Professor Mayne said the room was a welcome addition

Mr Preece hopes this will be an incentive to other departments to provide a meeting place for students.

Important Engagement

Union Receptionist Kathy Tait and Rag Chairman John Ingham were engaged whilst spending a month's holiday in the Bahamas. They have no immediate plans, but expect to marry when John, at present in the third year of his Chemical Engineering course, gains his degree.

Proposals have been put forward by College to move the FELIX Office from its present position, at the entrance to Beit Quad, to the kitchen area behind the Union Lounge. The extra space generated will, if the proposals are implemented, be used for offices and seminar rooms by the College. FELIX Editor Hugh Southey and Union President Carl Burgess will be discussing the proposals with College Secretary John Smith today

Data Bank

Midland Bank will be donating computers to the Computing Department for use by undergraduates. It

has been reported that the bank feels that the government is underinvesting enough in universities.

Nicaragua Appeal

The Socialist Society collected £10.76 for the World University Service at Tuesday's Union General Meeting. The WUS will use the money for the purchase of a truck which will be filled with educational materials, including typewriters, duplicators and microscopes, for universities in Nigaragua. Socsoc will be leaving a collection tin in the Union Office for any further donations.

The voltage difference is 2V and thus the effective resistance is hohm, and that's the answer.

Revolution

Last week we asked you to see how many words you could form from the letters of the word 'Revolution'. We used as our definition of a valid word anything that appears in the Shorter Oxford English Dictionary. This produced a plethora of strange words which we have never heard of but, sure enough, were in the dictionary. We also had several people who had used computer dictionaries to find their words. We are glad to say that none of these entries won or even counted in the top few!

The entrant with the most words claimed to have found 314. We had to disqualify some of these as they were not words but letters, prefixes, suffixes or abbreviations (eg. e, v, IOU,

Of the 250 we checked, some were very weird. Examples include: vlei South, African word for a hollow in which rain collects; levin — (flash of) lightening; heroli essential oil from flowers of bitter orange used in perfumery.

Congratulations to Sally McLean - please come to collect your £5 prize from the FELIX Office after Monday lunchtime. Congratulations also to Hugh Stiles for winning £5 for the cryptic crossword.

Judging by the number of entries we've had I'm sure you're all just dying to know the soultion to 'Electric Nightmare' Admittedly it was a difficult problem, but I was disappointed that nobody even attempted a solution. Oh well, we saved ourselves five pounds anyway! The full solution is given below.

Doors And Devils

Most people know the old problem where you're trying to escape from Hell, you come to two doors, you know that one leads to freedom, and that one leads to a fiery pit. Outside the doors are two devils, one who always lies and one who always tells the truth, but you don't know which is which. By asking one question only to one of the devils, you have to find the correct door to go through. The correct question to ask of either devil is: 'If I asked the other devil which was the correct door to go through, what would he say?' No matter which devil you ask, it will indicate the wrong door. Think about it!

Now consider a slightly harder problem. Firstly there is only one devil who not only might be a truth teller or liar, but may sometimes lie and sometimes tell the truth. Secondly there are more

than 2 doors, 4 say, and only one leads to escape...

You may only ask one question and the devil can indicate one door only. Also the whole question must apply to the devil (ie you cannot ask questions of the type 'If you are a liar answer this way, but if you are a truth teller answer this way.')

What is the question? The best entry submitted by 1:00pm Tuesday 28th will receive a £5 prize.

Electric nightmare-Solution The problem, if you remember, was to find the effective resistance across one resistor of an infinite, square, grid of one-ohm resistors. The key to the problem is that Ohm's law, V=IR, is linear (ie V is proportional to I). Thus if Va =IaR, and Vb=IbR then (Va +V6)=(I2+I6)R, obvious, hey? Any two solutions can be added together to form a third solution (this is known as 'linear superposition' in the technical lingo, and can be applied to any linear equation). This means that for a fixed resistor network, if applying a certain voltage produces a distribution of currents, and applying a different voltage at a different place produces a second distribution of currents. then applying both voltages at the same time produces

a distribution of current that is just the addition of the two previous current distributions. (The two solutions are 'superposed'). We've now essentially solved the problem.

Consider applying a voltage of +1V at any point on the grid. Because the grid is exactly symmetric any current that flows must have the same value in all 4 directions (there can be no prefered direction) Call this current I.

$$\underbrace{\prod_{\mathbf{I}}^{\mathbf{I}} \mathbf{I}}_{\mathbf{I}} \mathbf{I} \mathbf{\Omega}$$

Now take the adjacent point and consider exactly the opposite situation ie apply -1V and a current of -I will flow.

These are the two solutions that we 'superpose' together. When we do this we get the solution for a 2V voltage difference applied across the one resistor.

$$\begin{array}{c|c}
I & 2I & I \\
\hline
I & 1v & 1\Omega
\end{array}$$

The currents in the resistor add to give 21. Looking at the resistor alone we have 2V across a one-ohm resisitor which implies I=1A. Now looking at the whole grid, the total current flowing into and out of the grid is 4I=4A

3 POW the

Whenever you criticise the superheroes who make up the **FELIX** staff, you should keep in mind that you are privileged to receive **free** one of the best student magazines on the market. I now feel able to make this claim as I have had a look at some of the so-called 'competition'.

Queen Mary College Student Union have an organ called Cub. Last term they wasted a third of a page ranting about the loss of their wretched mascot Mary which was stolen by Imperial's own Royal College of Science (it makes you proud, doesn't it!). They begged for information leading to the abduction of either the RCSU mascot Theta or the ICU mascot Mike, but since Theta and Mike are both still safe and sound, we can see that their campaign has been marvellously unsucessful. Mind you, what can you expect from QMC!!

You might think that the Royal College of Art would be able to produce a well designed, well laid out, and artistic publication, even if on a shoestring budget. Dodo Express, the new RCA SU magazine not only dispels the myth that artists have any imagination or style, but also has the dubious distinction of making Guildsheet look like the Financial Times. The lousy illustrations, boring layout, and infantile material suggest to me that the Dodo Express staff spend too much time painting nude models, and really need to get their teeth into a good problem sheet. Of course the magazine was printed on trendy recycled paper, and I suppose that's what

University College is the biggest college in London University. I find it strange then, that **Pi** is so badly produced. In a feature they did on student magazines, they claimed that they were the only student newspaper in London that came out

every week - this, as every FELIX reader knows, is an untruth, a lie, and could almost be described as libellous. They also said that they were one of the few student magazines to be produced internally and proceeded to use this as an excuse for the fact that PI is so unattractive to look at. FELIX is internally produced, and it looks good, and our news is up to date. In their 'feature', PI played the dirty trick of using our masthead in their article without actually saying anything about our paper, thus tarring us with the same brush as the other papers without slagging us off overtly (because they know that PI wouldn't have a leg to stand on if they tried to slag us off). To be blunt, PI, though it has alot of good points, has a very unprofessional look about it: the layout is childish and

London Sudent, the newspaper of the University of London Union is the only publication besides FELIX which ICU gives out. Fortunately, I cannot find it in my heart to say anything nasty about this newspaper. It is too boring for words. What can be more boring, for instance, than having Tony Spencer, ICU's Rag Mag editor, on the front cover! Hopefully, London Student will disappear into oblivion, thus saving the editors the embarassment of being associated with the least read and least interesting newspaper in London.

National Student, on the other hand, is a great laugh. (It belongs to the National Union of Students to which, as you may know, we have refused to pay lots of money to join.) While trying to imitate posy magazines like The Face it succeeds only in looking like a poor relative, a mere shadow of the real thing. IC students are actually expected to pay for the opportunity to fill in a questionnaire with questions along the lines of 'what do you think is the Most Fab Thing or Person in the whole world'. I would suggest that this publication be avoided — if you want to buy a posy magazine buy **The Face**, **Cosmopolitan**, or **Avant Garde**... at least they have their **own** style (so I'm told).

Of all the student papers I looked at, the Birmingham Sun was the most fascinating. In three subsequent issues they had three different editors: a racist Bangladeshi; a lefty lesbian (she appointed one person for news and features together, but two women's editors); and the mysterious Colin Reed who didn't even manage to produce a full issue. Their styles differed as much as their staff did (you can see from the credits who was who's friend) and the sheer bitchiness which must have riddled their office must have been a joy to behold... the knives were certainly being sharpened at Aston.

Anyway, back to IC goings on next week... if you produce the goods. I want lots of backbiting, bitching, and general nastiness. Please.

Well, lots of love kids... and remember: **FELIX** is too good to risk.

it: the layout is childish and slipshod and it's use of the English language is not impressive (considering that they have an English department). Pi has great potential, but only if the staff stop being so bloody complacent!

NATION THE BIR MING AM SUN POLITIES.

THE BIR MING AM SUN FELIX

FELIX

FELIX

Computers That Can Taste And Smell

Science Editor, Debbie Wilkes looks at the research into giving computers the power to detect chemicals.

Electrochemical sensors look set to revolutionize many aspects of industry. medicine, and agriculture. The sensors now being developed have the ability to detect a specific chemical species in a mixture, and to measure its concentrations in real time and real space and will give many different scientists a more precise insight into the systems they work with. Here at Imperial College a great deal of research is being directed to the development of new electrochemical sensors. In

the Chemistry Department, Professor John Albery's group are working on a number of new sensors that are designed to meet specific needs in medicine, agriculture, industry and even the police force. While in the Biotechnology Centre Dr Tony Cass's group specialises in biosensors, which make use of the catalytic activity and specificity of enzymes.

Electrochemical sensors are so valuable because they provide the most direct method of transducing the



Professor Albery's Research Group

concentration of a species into an electrical signal. Their action is really made of two parts: the selective recognition of the species, and the production of a signal related to that concentration.

Specific recognition is by no means easy to achieve, and various methods can be used depending on the target species. The most widespread technique involves selective binding of the species. However, this requires a good chemical fit between the

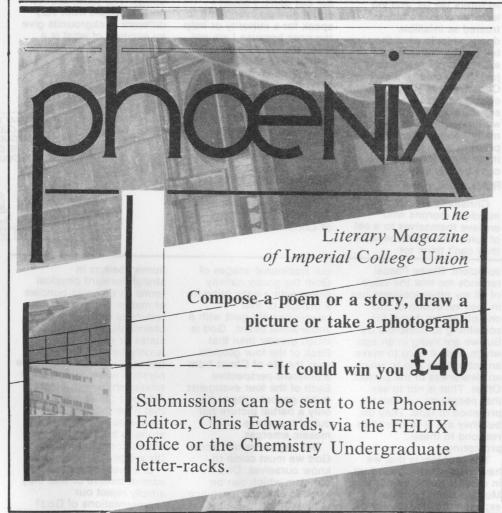
target species and receptor. While this can be achieved for some ions, when more complex shapes of target molecule are involved, then there are significant difficulties with design and production of receptor structures of the right type. However, by making use of naturally occurring specific recognition, in particular enzymes, scientists have been able to develop highly selective new sensors. These sensors, formed from the coupling of natural molecular recognition with artificial transduction, are called biosensors and are proving particularly potent when applied to biotechnological processes, clinical medicine and agriculture.

An important aspect of the use of electrochemical sensors is that they allow detection of a species without the need for separation, so making continuous monitoring possible. Clinically the fact that they can be used for rapid in vivo analysis is a major step forward. They are also robust, easy for untrained staff to use, and an economically viable alternative to existing analytical methods, which often involve lengthy laboratory analysis.

Hydroponics is a technique which is being increasingly used to grow a wide variety of crops. For example, glass house crops such as tomatoes and lettuce can be grown using the nutrient film technique. By making use of electrochemical sensors, Professor John Albery and Dr Barry Haggett have been able to develop an automatic nutrient film analyser.

With the nutrient film technique the soil is

Continued on page 10



2 Oh Christ!

'Christians need God because of insecurity', 'irrational superstitions', hypocrites', 'they believe in a God of vengence', 'Can't think for themselves'. These are some of the many criticisms of christians. They are true, one or other of these accusations applies to different Christians, but not just Christians, but everybody. Most people don't act in the way they say and a lot of people don't think for themselves. It is well known that many people follow the crowd. Sometimes, with christianity it is easy to fall in to the trap of just following what vicar says but this is because christians are human and suffer from the same faults as other people.



'No Tommy, it is NOT an early form of pocket calculator...'

Christianity is...

Philosophy

'Eli, Eli, Leme

Christianity is fundamentally based on just one commandment which is expressed in two 1) Love God 2) Love your neighbour This is the basis for all

the Christian church's teaching. Admittedly, often the wrong impression is given, it is easy to think that God is a ruthless taskmaster ready to zap his followers. There are many philosophical arguments about the existence of a loving God, but these are only aids to belief-belief comes from experience. I believe the 49 bus goes to Shepherds Bush Green-because I've tried it. Few people stay within Christianity unless at somes point they experience something which makes them stay throughout doubt. It would be easy to shrug this off by, 'I've never experienced God-so I needn't bother'. However, that isn't fair-You will never know where the 49 bus goes

unless you try it. Christian doctrines are no more incredible than some of the things the lecturers tell us, and yet lecture notes are often treated as infallible documents. Is what they tell us in lectures a true expression of reality or is it just their personal view? Christianity is sometimes considered to be as superstitious waffle-considering so many peoples (past and present) have followed these crazy motions they

can't be that silly. Rules, rules, rules!

Christians are not mindless morons who enslave themselves to a set of rules and codes because they can't think for

themselves. One of the promises that Jesus made to his disciples is that he came to set people free. Lack of rules is not freedom-that's anarchy, and who is free when fear reigns. Do not murder, rape(etc) are all rules but without them our society would crumble. I am not saving laws are necessary to ensure peace. I am not being forced to keep any religious rules-there is no watchful eye ready to zap me if I decide to rob a bank or jump into bed with a girl/bloke at every

opportunity. I observe rules because there are some actions that I believe are not for my own health of soul and happiness. I freely decide to obey or not to obey-well not quite freely. I still do things that I wish I didn't, usually because I felt like it. But to say 'I just felt like it' is really a copout. What I mean is; a part of my sub-conscious still dictates what I do. I am not fully free to do what I choose.

Most people admire Bishop Tutu, Rev Martin Luther King and Mother Therese because of what they have done-things which most people could do. but don't. I doubt I could give up everything to speak for a minority or help the poor because I am not 'free'. Christianity has helped me and many others to be freer, to do what ever I choose. That is part of what Jesus meant when he said that he had come to set man free.

Admittedly part of Christians' bad reputation is due to that some wellmeaning church men have formalised precisely what is the best way to act, cutting out human individuality. This is a fault of theirs, not of Christianity.

What's your God?

Everyone has a mixture of many subconscious and conscious goals. Everyone has a set of rules by which they act-if they didn't they would never do anything. These guidelines will depend on what a persons goals are. Effectively, everyone has their own religion and worships various gods such as; money, a good job, recognition....The question is; what's yours!

Overview of feature

These five articles say little about the multitude of doctrines and theology connected with Christianity. Nothing in these articles would convert anyone-that is not the purpose. This feature is an attempt to answer 'What makes a Christian tick'. The commandment to love God implies relationship, possible because (webelieve) this transcendant being became someone like

If you ask several people what a certain person they all know is like, between them they could give you a fairly complete picture of that person. If you ask just one, the picture will be dodgy. The same applies here, 4 people from very different backgrounds give an account of what is a Christian. This way there is a reasonable answer. Mark Alderton Elec Eng 3



human beings in straightforward physical

But before we can know

God we must come to know ourselves. One criticism which can be levelled at modern science is that it tries to explain

terms as complex bundles of matter. But we are not reducible to electrons. chemicals, psychological states or social roles. That is only half the story because we are also unique persons who grow through relationships with others. Adelbert Stifler suggested that if we thought of every person as a precious gem stone to be treasured we would come to respect their dianity.

cannot believe or that they simply reject our representations of God?

To Be A Christian...

The world is incredibly

confusing. So many ideas, political, humanitarian, scientific or religious are bandied around, each offering some sort of ideal for life that it can be very difficult to figure out which, if any of them, should get our attention. Add to this confusion the pressures of academic work, social activity, then, (later on in life, making a career and supporting a family and you might think it quite a reasonable to say 'I haven't got time for God'. Apart from that many people say that they are not the 'religious sort', (If such a person exists I which very much doubt) probably meaning that their conception of the average church-goer is so unattractive as to be a deterrent to any further investigation of the

relevance and truth of God. The 'I haven't got time for God' syndrome is a disease. If Jesus really was the Son of God; if he really does make claims on our lives that need to be answered, then it is infinitely more important to take the trouble to seriously investigate christianity, than to go'to two parties this week rather than one. As for the 'religious sort', does Jesus fit the bill? Was he wet.



Many of our ideas about God are fuzzy to so we cannot afford to sit back on our laurels. In order to acquire a better understanding of the mysteries of life we need to find them, to abstract ourselves from the demands of daily life and develop an inner quiet. That alone is a step forward. On the other hand, anger is a very good response. As in personal relations, anger is that other face of love and where it exists there is hope of eventual reconcilation. It is indifference which closes the mind.

God speaks to us in different ways. Personally, I feel closest to him when I am enjoying the arts; reading a beautiful poem, gazing at an enchanting painting or listening to music.. It is then that I experience moments of coherence, fleeting but very real and full of joy. It is the split second before such a moment that is captured by Michelangelo's finger of God about to anihilate a listless Adam. Many people tend to be suspicious of any kind of religious experience, dismissing it as mere auto-suggestion. But He could deny that we are all made to long for

Faith is ...

God

115

Knowing

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blowit

influenced, in need of a

crutch, one for religious

When I was sixteen, I

rejected what I had been

taught at school, and by

my parents about God.

my belief, and with no

foundation it crumbled

to look for reasons to

under testing. So I started

believe. As I looked I met

people who had done the

had changed on finding

God. While I searched for

me, until after a period of

time I knew that I believed

that Jesus was the Son of

God and had really come

teaching and commit my

life to Him I did not have

proof in the mathematical

evidence to take a step of

reasonable evidence. A first

time jet passenger may be

incredibly uncertain before

evidence that the plane is

However, after a successful

first flight, he probably has

more faith in planes and

may be willing to go on a

slightly longer journey. All

way every day.

of us exercise faith in some

sense, rather sufficient

faith. Faith is not much

more than acting on

flying despite ample

very unlikely to crash.

to help all of us. So I

decided to follow his

God, Jesus reached out for

same thing and whose lives

found I had no evidence for

when

effeminate, easily

niceties?

several things. First of all I know God loves me personally despite my apparent insignificance and because of his infinite power and perfect nature. I experience that love every day in an inner peace in my heart and through answered prayer. Before coming to university I spent eight months working outside of Europe in a small town, in the middle of what seemed like no-where. Everything went wrong that could have, yet, somehow, because God answered my prayers, I survived and eventually overcame the problems. Secondly . it means that because Jesus Christ died somehow taking on himself all the punishment for all the sins I have ever committed or will commit, that I will be with him after death. Thirdly it means that through the Holy Spirit I'm not on my own trying to do what is right, but He gives me insight into what is good and what is not, and

My faith in God means

DUNCE

BLEW

CORNER

power to do what is right. Through God there is purpose, peace, hope and eternal life. I believe that he gives a freedom and joy in life that can come from no other source.

Andrew Pettman Chem Eng 4

something or some one capable of answering our inner needs. C S Lewis perceived the value of this craving when he said, 'Our best havings are wantings. Somewhere deep within our hearts lies a very personal search for God which keeps breaking through. Susan Connolly

A Liberal View

The distinguishing feature of liberal theology is it's reliance on the power of reason. I believe that all opinions are worth talking out, even those of Don Cupitt, who might believe in God but might not. Reason ought to rapidly sort out the good ideas from the bad ones.

Just because liberals rely on reason does not mean they are rationalists. After all, logic is the most sterile of the sciences. All it can do is to show that a set of propositions (if they are expressed clearly) do not contradict. The World's real problems involve finding where to start.

This is why Jesus never wrote any books and never founded any schools of thought. He did not select his followers by quizzing them on their ideas about God, religion, morality or economics he simply said: 'Follow me'.

He had his priorities right. He thought that doctrines were less important than people so he broke the religious rules when they hurt people. He thought that things were less important than people, so he showed people that they could live happier lives if they gave up their hold on their posessions. He believed in Love and he was prepared to die rather than express hate.

Today, we have to look seriously at the example of Jesus (the doctrines about him too often diract us from following him). Would our world be better if we cared more about starving people than about defending ourselves with weapons we dare not use? Would we not be a happier people if we cared more about living and less about collecting the gadgets that characterise Western consumer societies? Would we not be a happier society if we treated people as more important than bureaucratic rules? These are the sort of questions we have to ask if we are to follow Jesus now.

We look to his example, that tell us where to start. We must try to follow him before it becomes worthwhile arguing about theology. Christianity has to be tried to be believed, it does not have to be believed to be tried.

Steve Black Chem PG

my God, why hast thou forsaken me?) These words of the dying Christ are a potent expression of

sabachlthani?' (My God,

human fear and anguish in the face of death. At the low points in our own lives we feel lonely, 'dépaysé', incomplete and long for reconciliation with another totally sympathetic person. we want our lives to make sense, to be an expression

of something transcendent

and not merely self-

sufficient. Blaise Pascal reminds me that the value of all my other longings lies in their reflection of this one obsessive desire for something to complete us. But we are living in an age which finds it hard to make an act of faith and to reach an awareness of the perfect Other. That is not to say that people do not feel the presence of God. They do, but they are ill-prepared to respond to these promptings.

The problem is that we have been dressing God up in clothes which do not fit. Modern scepticism has exposed the inadequacy of

our traditional images of God: the gooey nativity scene with a baby lying in a manger or that benevolent old gent with a snow-white beard.. God is much greater than that Each of the four gospels sees the life of Christ from a different perspective. Each of the four evangelist (bible gospel writers) has only a partial picture but out of the whole a rich mosaic emerges.

Is it that some people

FELIX FELIX Friday 17 January Friday 17 January

Computers That Can Taste And Smell

Continued from page 7 replaced by a continuously flowing solution which contains the necessary nutrients. This technique has many advantages over more conventional methods of crop growth, in particular, as crop yields can be increased by as much as tenfold, more efficient use of glasshouses is possible. It also allows for better control of plant growth, less trouble from pests, and a quicker turn round between crops. However, it is important that pH is controlled, that the nutrient solution is replenished with iron, potassium, and nitrate ions as they are used up by the plants, and that the build up of undesirable ions such as chloride and sodium is monitored the design of the automatic nutrient film analyser is based on ion selective electrodes. These use a carrier, impregnated in a membrane, to bind the target ion in the right sized cavity and transport it across the membrane. For example, in the case of potassium ions a naturally occuring compound valinomycin is used. The potential which is established across the membrane provides a direct measure of the concentration. In the new system a microcomputer is used to calibrate the electrodes, control the sensors, sample the nutrient, and analyse the data. An important aspect of the system is that it can be used and maintained by non-specialised staff. At present it is in use at the National Institute of Agricultural Engineering and has successfully monitored tomato crops throughout two growing seasons.

An electrochemical sensor designed to measure expired carbon dioxide has been developed by Professor Albery Humphrey Drummond, and Bill Young in collabration with Dr Han of the Radcliffe Infirmary, Oxford. This sensor was produced to monitor patients in intensive care, and for use in the operating theatre. It makes use of a teflon membrane, which allows oxygen and carbon dioxide to pass through, to separate the expired air from the thin layer of solution in which the electrochemistry takes place. Because carbon

dioxide is electrochemically stable to even large voltages (2-3v), the action of the sensor depends on reduction of oxygen to generate the highly reactive superoxide ion, which then reacts with the carbon dioxide. The concentration of carbon dioxide is then calculated from the difference between the amount of superoxide generated and the amount recovered. This can all be achieved so rapidly that it is possible to display a breath by breath analysis of expired carbon dioxide.

By coupling enzymes with electrodes a very sophisticated and selective recognition can be achieved. Professor Albery and Dr Cass are working on a number of important new biosensors which take advantage of the catalytic activity and specificity of enzymes.

An important breakthrough has been the the development of a biosensor to detect alcohol. The sensor, which has

The result is a sensor where the current is directly proportional to the concentration of the alcolol.

There is also a glucose biosensor, which has been developed by Professor Albery, Dr Cass and Derek Craston, that is of similar design to the alcohol sensor. However, it is based on the oxidation/reduction of FADH/FAD. Recent tests of this sensor, carried out by Dr Fillenz at Oxford, have shown that it can be used to measure blood glucose levels in vivo. So it should prove extremely valuable in treatment of diabetes, as well as for fermentation control, and tests on meat freshness.

The 'electrochemical canary', which is a biosensor designed to detect toxic gases such as hydrogen sulphide and hydrogen cyanide, is another project that Dr Cass and Professor Albery are collaborating on, along with S Shiu. This sensor

enzyme at present used in the sensors comes from beef heart, and is the one that is actually affected if the toxic gases enter the body. However, the sensor might be required to remain inactive for long periods of time before it is needed, and the long term stability of this particular enzyme is proving to be a problem. So the team are looking for other more stable naturally occurring enzymes, or at the possibility of genetic manipulation.

Dr Cass's group have also developed a paracetamol biosensor which is in the process of going into commercial production. This is an extremely valuable sensor as it can be used by hospital staff to rapidly assess the extent of an overdose, so helping to save lives. At present, the group are also working on sensors to measure the extent of water pollution by

insecticides.

Electrochemical sensors have an important role to play in the future of science. But the development of new sensors requires collaboration between scientists of different disciplines including electrical engineers, chemists, biochemists, and biotechnologists. So it was with this in mind that the Science and Engineering Research Council recently launched a special initiative to support and encourage this type of interdisciplinary work in universities and polytechnics. It is hoped that ultimately the development of new sensors could lead to the establishment of a new high technology industry in the United Kingdom.



been developed by Professor Albery, Dr Cass and K Sim, should find application in process control of fermentation, for customs and excise to test alcohol content of spirits. and in the production of a more efficent breathalyser for police use. But its major importance lies in the fact that this action is based on the oxidation of NADH to NAD as there are over 250 enzymes that use the cofactor NAD/NADH. This opens up the possiblity of constructing enzymes electrodes of this type with a wide range of applications

The alcohol biosensor takes advantage of the catalytic activity of the enzyme. A piece of dialysis membrane, which allows the substrate (in this case alcohol) to pass through, is used to trap the enzyme in a solution layer next to the electrode. The enzyme then acts as a catalyst for the reaction between NAD and the substrate, producing NADH.

The electrode is made of a strongly conducting organic salt specially chosen by the term, which absorbs the enyzme on its surface, but more importantly facilitates the oxidation of NADH to NAD. should prove to be extremely valuable for use on oil rigs, as well as for general environmental monitoring. At low concentration levels hydrogen sulphide gas is easily detectable because of its pungent odour, but at higher levels it cannot be detected by smell. This is particularly a problem for the oil industry, as oil often contains pockets of other gases, and in the past accidents have led to deaths from hydrogen sulphide poisoning. The

Security Division—Traffic Wardens
Since the College re-opened in Jan '86 it
has become increasingly obvious that
many of the students (especially
'Freshers' are flagrantly disobeying the
strict parking rules and regulations laid
down by the security office. Should you
have a car but no recognised Blue permit
(the Kensington or Chelsea Permit does
not apply to the College.) you are strictly
not allowed to park within the College
Campus

Should you persist in this selfish action or ignorant attitude your wheels could be clamped. A fine would then be imposed for taking same off.

B 0 0 K

DAVIDLODGE I can't imagine the boring, stoop-shouldered, dandruff-ridden Imperial lecturers even thinking about something as interesting as central heating. Hence it comes as a bit of a shock to read a book where some academics think about such youthful activities as sex, and put thought into action.

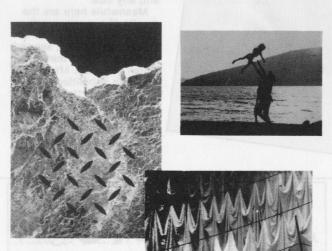
Two professors, one English and the other American, swop jobs for six months, and have all sorts of merry capers. Zapp, the wised-up American, comes over with a planeload of pregnant women on their way to an abortion clinic and ends up being attacked by a former head of department who's escaped from a local lunatic asylum. Philip, the quiet retiring Englishman, gets arrested for stealing bricks and has a Black Panther in his office. Add to this a Lotus sports car, student activism, a drug crazed orgy and a radical phone-in radio programme and the ingredients are mixed for a feast of hilarity

It may sound a bit incestuous for a Professor of modern English Literature to write a book about another two professors of English Literature, but the technique pays off to give a brilliant book, which is one of the few I'd ever have treated myself to. Published by Penguin, price £1.95.

R V

Masquerading as a cassette pretending to be a set of pictures, the Meridians package has long puzzled pundits. Presented in a plastic wallet is a thinly disguised C60 music tape, along with 30-plus pages of propaganda and artwork from some of Britain's leading designers (below). The entire oeuvre is distributed by Rough Trade, perhaps a final gesture before all their artists defect to Virgin.







Love and Kisses.

 Kiss Of The Spider Woman (or Kiss to its friends) is Hector Babenco's (Pixote) new film of love and death in a political prison, based on the novel by Manuel Puig. Happily hetero William Hurt plays Molina, an American queen jailed for a civil crime, but sharing his cell with Valentin, (Raul Julia), a political prisoner under interrogation by the Brazilian authorities. Molina's romantic stories gradually undermine his masculinity and poigniantly underline his impotence in captivity, but his love of the renegade lies side-by-side with his intentions: to inform on Valentin and secure his parole.

Unfortunately, cross and double-cross mar the spotless sheen of this

romantic movie. Puig's characters demonstrate the futility of male aggression with enchantment, and Molina's violent death is as much an uncomfortable plot shaper as it is a betrayal of the sincerity of the film. Close your eyes for that bit. A real swoonie. •The Scala, (Kings Cross tube), London's dingy, downbeat, non-smoking, (oh, the agony!) fleapit has two all-nighters for the weekend owls. On Friday, The Mix shows Grease, Yellow Submarine and Stop Making Sense strung together by D.J.'s Hidi and Polly. Wipe the sleep from your eyes, take a deep breath and take the plunge again for The Gay Movie Marathon, (Lonesome Cowboys, Fireworks, Querelle, Scorpio Rising,

Thundercrack, Un Chant D'Amour and Taxi Zum Klo). Both events start at 11.30, price £3.50 plus 30p membership.

•Every choice we make is important, we make the world what it is by our courage and cowardice, by our caring, by our greed and our apathy. So speaks Monika, part of Siren Theatre's acclaimed re-run of Pulp, a feminist play par excellence played by the renowned lesbian acting collective. Based on the original film of the 50's of the same name, it brought thunderous applause to the Drill Hall in 1985 and promises a high level of audience participation. Get involved: £2.50 for students at the Drill Hall, 16 Chenies St, WC1.



Photosoc Competition

Maybe it's because there wasn't enough publicity that the response to our magnificent photosoc FELIX Competition was so bad. Don't laugh, but we only got three entries. Pathetic isn't It? But not to worry! If you are an undiscovered photographic genius (and I know there are hundreds of you out there) then all is not lost, because we are going to have ANOTHER COMPETITION, this time with a small PRIZE. All you need to do is submit a portfolio of up to four black and white or colour prints (not slides) to the FELIX office before the end of term. The pictures can be of any subject whatsoever and any size.

Meanwhile here are the results of our very small Christmas competition.

First: Ping Chuang, second: Hugh Rubin and third: Julian Shulman. Mr Shulman submitted a very interesting portfolio consisting of some views of a suburban housing estate, a rainbow, a cat walking on a garden fence and a small dog in an armchair. Hugh Rubin's portfolio was

extremely good. It consisted of a series of B&W prints of superb quality and excellently composed. Four of these were particularly impressive. It is unfortunate that you cannot see them, because they really are very good. It seems to be the (almost) unanimous opinion of the FELIX staff, however that Ping Chuang's portfolio was the best, although personally I prefer Mr Rubin's pictures. The photograph reproduced here is actually about 12 inches by 16 inches and mounted in glass. It is a monochrome print which has been hand coloured, and it must be said that the FELIX printing does not do full justice to it. So if you are wondering why this particular picture was chosen, you must bear in mind that it looks much more impressive in real life.

Well, that's all folks!
Remember that we want
lots and lots and lots of
entries for the new
competition, so get your
shutter fingers working
over-time and let's see what
you can do.

Howard Rudd

SPORTS

There is not much sport this week due to bad weather and all matches on Saturday and Wednesday at Harlington being cancelled due to waterlogged pitches. However, the Evelyn Gardens football championships was decided.

Bernard Sunley House maintained their 100% record to win the Evelyn Gardens Houses Championship. The traditional crunch match between the two all-male houses in Evelyn Gardens, Bernard Sunley and Holbein, settled the 85/86 championship.

After a fairly even first ten minutes Bernard Sunley tripped up when Scott Gordon picked up the ball in the box and slipped it under the keeper to go one up. Almost immediately from the restart a long ball from just inside the half was misjudged by the BSH keeper and bounced over his head and into the back of the net.

After another ten minutes BSH winger Byron Wood picked up the ball, passed a couple of backs and squared it to a waiting Steve James who calmly placed the ball out of the keeper's reach 2-1.

With Bernard Sunley now dominating the game the next goal was a surprisingly long time coming, but once again Steve James managed to out-fox the keeper and find the net.

About five minutes before half-time Byron Wood broke through on the right wing and planted one in the top left of the net. BSH then had to absorb some pressure with Rob James, Laurence Covill and Andy Watson making a solid barrier, with help from a still drunk Marcus Shepherd.

Immediately after halftime Steve Wilkinson picked the ball up at the top of the box and blasted one past the keeper to find the goal. Byron Wood got the fifth taking it round the keeper on the edge of the box, then beating two defenders standing on the line.

With Andy Watson jinking and jiving on the right and Rob James stopping anyone and anything on the left BSH were coping well at the back. Laurence (Fog-horn) Covill took all the high balls and could have swallowed the ball if he had opened his mouth a little wider.

Byron Wood completed his hat-trick to make BSH 6-2 up. Holbein then put the Bernard Sunley goal under pressure with some good runs by Andy Keelin and Scott Gordon. The BSH keeper redeemed himself in part with a couple of saves and some rapid hoofing by Malcolm Jones, Lal Covill and Marcus Shepherd, who was sobering up by now but was not keen on heading, saw BSH through to the final whistle.

Sailing

Last Saturday the Imperial College Sailing team set off for the first match of the term against Bristol University.

The first race sailed looked as if it was going to be a very close finish, with some very good sailing coming from both teams, until the last lap when two members of the opposition decided to show us the best way to sink a firefly. Fortunately the boat was dragged to the shore and emptied before it sank completely.

After lunch the resumption of racing was delayed due to a squall passing over, during which various members of both teams set about demonstrating their capsizing skills. Not satisfied with this someone tried sailing away from the jetty leaving half a tiller extension behind and almost collided with other boats tied up there.

By the end of the squall there were 4 boats, 6 helms and 5 crews still ready to sail. Racing was then resumed, involving some very competitive sailing with all previous duckings forgotten.

Wind Band

From this term onwards, the IC Wind Band will be known as the IC Concert Band. This new title is an indication of the move to improve the image of the band, in order to increase the membership and the support.

More challenging pieces of a greater variety than before will be played, details to be announced later at the first rehearsal.

These will inevitably require more practice, so just one concert near the end of each term is likely. In the Winter and Spring terms, this will be indoors! Only the traditional Summer concert will be on the Queen's Lawn.

A committee will be formed in order to organise the concerts, choose the pieces to be played and perhaps arrange some social events.

It is hoped that these proposals will stir all you Brass, Woodwind and Percussion players out there into action. As before, players of all standards are welcome and no auditions are required. The first of the regular Monday evening rehearsals this term is on 20 January from 5.45pm to 7.15pm in the Great Hall.

SF

The sun, just past zenith, beat down upon the blazing sands. He controlled the vehicle with a deft touch, foot against the floor, pondering upon his journey's end.

It was Thor's day, and a bad day for travelling. The god of all electric storms frowned upon internal combustion engines, they reduced the impact of his speciality.

Even so Maximilian had to arrive at 'The Building' and soon. Even now the denizens of 'Psiphi' would be gathering, and Maximian was to address them, to brief them on the daring escape that was to take place on Sunday.

On the horizon, he spotted a dark speck. Undoubtedly this was the remains of the ancient computer centre. The 'Byte' building.

Suddenly, from the right he saw a flash of light. Another car! For a moment panic filled him, but then, as it drew nearer, he recognised it. It would be a duel to the death, but the puny Huellzok charabanc was no match for his Laslar Lyricon custom job.

The cars closed relentlessly, a shot ripped in to the engine couling. Max lifted a grenade in his right hand and waited. As the cars closed he caught a view of the driver.

'Stomm! It's Rex Petes, the man who drunk the blood of Satamus!'

He threw the grenade, in his minds eye, the parabolic arc, and the Huellzok converged at 1-10 and...

A deafening explosion filled the air.

Max covered the remaining mile in short minutes and steered through the arch.

He ran up the flights of stairs and in to the green

'Hi Cosmic!' Cosmic just smiled, took the blaster from behind his back and lased Max in the chest.

'Don't worry Max. It's not so much an after life, more sort of an après vie!'

Picocon 15 Feb Films, Games, Videos, Plays, Guest of Honour and much more.

Ind Soc

Well Happy New Year and welcome back to Industry Year. We start the term with a Cheese and Wine party this lunchtime with John Garnett, Director of the Industrial Society. For those of you who refuse to read posters it's at 12.40pm in the Union Upper Dining Hall. Everyone is welcome: it's free on production of your membership card. If you missed the last one don't miss this!!

This is followed next Wednesday 22 by a Business Game organised by Shell. Anyone interested should contact Hubert O'Hara, Physics 3, with a £3 returnable deposit. This event includes a free buffet.

Other events this month include trips to, British Steel on the 22 and Rolls Royce Cars on the 29 January. Also on the 28 Schisitzer will be coming to the College for a speaker meeting. For more information read your newsletter—See you there!!

Model Aircraft

'Hallo and welcome to today's edition of Blockbusters. Today we have Jim from London going for the gold run-take your place on the hotspot, please!' 'TASB Please Bob' 'When and where do ICMAC meet?' 'Thursdays Above Southside Bar' 'Correct' 'HPT please Bob' 'At what time do ICMA meet? 'Half Past Twelve' 'Correct' 'N Please Bob' 'Are ICMAC meeting this Weekend?' 'Yes? 'No' 'Pass-ICMAC please Bob' 'Imperial College's most prestigious Club' 'Imperial College Mooney Appreciation Circle' 'No' 'I can make Aircraft Crash?'

Barn Dancing Soc

'Near enough-and, yes we

have-Blockbusters!'

The Imperial College Barn Dancing society doesn't exist! (groan..) Barn Dancing, though, lives and thrives at Imperial Coleges (hooray...) WHAT IS BARN DANCING?

As a recent convert to the activity I can understand the apprehensions and misconceptions that lie in the minds of Imperial College students. Fundamentally and essentially Barn Dancing is a simple and fun activity No experience or talent is required, just a candid and light-hearted approach to entertainment. A band plays cheerful, bouncy music and the caller skilfully manipulates the atmosphere to create a lively, intimate community.

You've witnessed the Guilds carnival, you've heard the Boomalaka resound in unlikely places, but now for something completely different...'The Valentine's Barn Dance'. Escape from the stifling city hassle to the candid and lighthearted spirit of the country. Don't be one of life's spectators join in and make fun on Friday, 14th February at the Holland Club 'Barn'. The tickets are obtainable from the Guilds Union Office at a bargain price of £2.00. BE THERE OR BE SQUARE!

Guilds

A big thank you to everyone who helped with the centenary cocktail party at the end of last term. It was a tremendous success due to Frank Millar's organisation and all the hosts' hard work on the night. Letters of thanks have been pouring into the office from many of the guests, and can be read by anyone who is interested.

There are still tickets available for the Dinner and Dance on the 31 January which will be superb, over 200 people have already signed up, so come and join in the celebration.

The other major event this term is the Valentine Barn Dance which will this year be on, guess what, the 14th of February.

A live five piece band will be leading the evening giving full instructions. Guests from local women's hostels and nursing colleges will ensure an even blend of the sexes. Tickets on sale soon.

This Tuesday 21 is the General Committee at 6.00pm for 6.15pm for all Dep Reps, Soc Reps. Society Chairman and other important people in the union.

Applications are closing today for **SUBWARDEN**

Holbein House Contact the Warden



1230h

Union Upper Lounge Orienteering Club. Meeting to organise travel arrangements for the weekend.

1245h

Southside Upper Lounge Yacht Club Meeting to organise racing crew and discuss weekend trips for this term.

Volleyball Court Basketball shooting practice. For all players; to teach beginners how to shoot and help more experienced players improve their shooting.

1300h

Union Building **Islamic Society** congregational prayer.

Beit Gym Keep Fit Please bring suitable clothing and jogging

1830h

Volleyball Court Badminton Club. Everyone welcome.

1900h

Arts and Science Lodge Dinner BAB (Bring a Boaz). Contact B Ward.

2030h

Southside Bar Southside Bar Disco

Saturday

1000h

Concert Hall Opsoc setbuilding. Anyone who is interested in staging show welcome, members especially

1300h

9 Princes Gardens Islamic Society prayers.

1400h

Concert Hall Opsoc rehearsal

Sunday

1000h

Sherfield Consort Gallery Chaplaincy communion service

1030h

Concert Hall Opsoc setbuilding. Anyone who is interested in staging show welcome, members especially.

1130h

More House, 53 Cromwell Road Catholic Soc Mass All

welcome for reflection and worship.

1300h

Senior Common Room Wargames Meeting. 10-15% discount available on games. Membership £1.50.

9 Princes Gardens Islamic Society prayers

1630h

Union Gym Wu Shu Kwan Kick the boring Sunday habit, literally! Learn to look after yourself and enjoy fitness with IC Kung Fu Club

1800h

More House, 53 Cromwell

Mass and talk. 'ATD: 4th World', a talk and video by Ailish Scott volunteer worker with ATD

Monday

1230h

Southside Upper Lounge Hang-gliding meeting

Southside Upper Lounge Waterski Club. Come along and sign up for Wednesday and Saturday trips.

9 Princes Gardens Islamic Society prayers

Keep Fit Please bring suitable clothing and jogging

1730h

Volleyball Court Basketball training for first and second team members.

1745h

Wind Band rehearsal

1800h

Southside Gym Keep Fit Please bring suitable clothing and jogging

1930h

Physics LT1 'Wells Centenary Lecture' Dr Michael Draper speaks to Wellsoc on 'Wells and Huxley' at the Royal College of Science.

2000h

Junior Common Room **Beginners Dancing Class**

Tuesdav

1230h

Jazz Room Jazz Club General Meeting All welcome-especially

Chem 231 Catholic Society Mass, lunch and people. Quiet after quantum theory, transistors etc. Everyone welcome.

Union Upper Lounge Audio Society buy your discount records, order today, collect Thursday.

Southside Upper Lounge Scout and Guide lunchtime

1245h

JCR Chinese Chess. Come and play Wei-Qi and Xiang-Qi, also known as 'Goh' in Japanese and 'Baduk' in Korean. All welcome.

1300h

TV Lounges STOIC special feature broadcast

Southside Lounge Boardsailing Club. Regular meeting to organise Wed afternoon trips. Membership

Southside Lounge QT stunt coordination meeting

9 Princes Gardens Islamic Society prayers

1315h

Read Theatre, Sherfield **Humanties Lecture:** 'Neurotic Illness and their Treatment-Modern Developments' by Prof Hans Eysenck of Department of Psychology, The Institute of Psychiatry

1730h

Brown Committee Room **Amnesty International** Meeting

1800h

TV Lounges STOIC for the latest College and City news

Bot Zoo Common Room **Christian Union Meeting**

Southside Gym Imperial Workout wear something comfortable and any type of training shoe. A towel/exercise mat is also

1830h

Union Gym Judo training. An informal session

1900h

301m/999KHz IC Radio Roundtable. Hugh Stiles and the 'wonderful' Quentin Fontana look at the weeks news release.

1930h

Volleyball Court Basketball beginners training.

Room 2E. ULU **ULU Gay and Lesbian** meeting

2115h

Weeks Hall ICCAG Soup Run, tea, soup and meeting London's down and outs.

Wednesdav

1230h

Life Sci G1L Cathsoc lunch group.

Keep Fit Circuits. Free to members of IC Keep Fit Club. Membership £1

1300h

Above Southside Shop Micro Club. All members have all access to our computers and word processing facilities. Membership £2.

Southside Gym Keep Fit Please bring suitable clothing and jogging shoes.

SCR

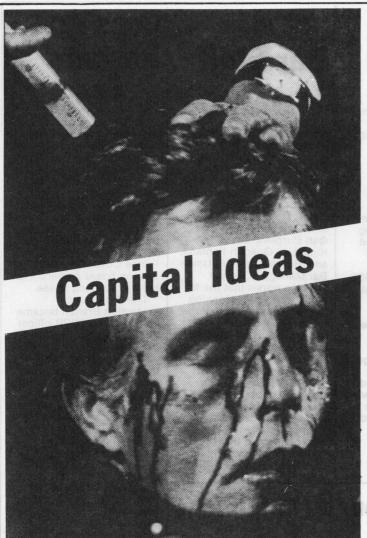
Wargames meeting 9 Princes Gardens Islamic Society prayers

Lower Union Lounge Caving Club meeting

1315h

Brown Commitee Room Rubber/Duplicate Bridge

9 Prince's Gardens (basement) Islamic teachings course series D: Muslim Beliefs.





It is my deep suspicion that when the bomb finally drops and leaves a population of cockroaches with a lifetime supply of medium rare human that somewhere among the ruins there will still be a computer sending out unwanted mail shots. Picture the scene as two yuppie cockroaches sit breakfasting on fillet of chartered accountant and opening endless offers for the WHICH 'Guide to Back Pain, and how to inflict it'. Sick? Well in an infinite universe anything is possible, even a planet where people indulge in S&M pornography while 70 governments indulge in institutionalised torture. Maybe you need a sick mind to survive in a sick world. Students in particularly, seem to stretch the limits of human sensibility in search of diversion and entertainment. So this week it seemed a neat idea to check out some of the good honest gore on offer.

As Albanian mountain cyclist Eugene Zhog once said 'A puncture can really fuck up your day'. Well its punctures of a different kind (ie. in the head) that have the same effect for various randoms in the film Re-Animator which opens on Jan 17th at the Odeon Kensington among other places. This is going to be a cult film. Its based on an H.P.Lovecraft book and oozes zombies, mad scientists and death (temporary

If cult/gore films are what you crave, the place to remember is the Scala cinema near Kings Cross. They have regular re-runs of all sorts of cult and 'art' (ho! ho! we know what they mean) films, and also Saturday all-night screenings of multiple bills which are extremely good value. They ran showings of The Evil Dead as part of a campaign against its banning on video last year.

For all you telly fetishists the controversial bit of the BBC2 thriller Dead Head is screened next Wednesday. Meanwhile if you want something which will really freak you out, the documentary Silent Twins (BBC2, Sunday 10.10-11.40) is an eerie story about two twins now in Broadmoor psychiatric prison. This unfortunately clashes with Spitting Images and so will probably be missed by most people. Looking around at what we watch for entertainment leads one to reflect that IC Rag Mags are pretty tame stuff-not so much evil as boring

1400h

Mech Eng Foyer
Make Kids Toys for handicapped children

1800h

Union Dining Hall
Guilds Gen Com All Dep Reps, Society Chairman, Soc Reps and other people to attend

1900h

Jazz Club New Year Hop Free booze once in, live College bands, disco, 50p discount from Union Refectory. £2.50 in advance, £3.00 on the door

Junior Common Room **Advanced Dancing Class**

Great Hall IC Orchestra Rehearsal

2000h

Junior Common Room Medals Dancing Class

Thursday

1230h

Huxley 413 Methsoc A discussion on 'The Church and Vocation' Union Upper Lounge

Audio Society collect today records ordered on Tuesday.

Mines B303 Scout and Guide slideshow.

1245h

Chinese Chess. Come and play Wei-Qi and Xiang-Qi, also known as 'Goh' in Japanese and 'Baduk' in Korean. All welcome.

JCR Sherfield North American Stall Information on BUNAC work and play in US this summer.

Southside Lounge Riding Club meeting

1300h

Union SCR SCAB meeting: SCAB estimates-all Chairman and Treasurers please attend.

TV Lounges
STOIC Watch NEWSBREAK for the latest College and City news

Southside Upper Lounge Balloon Club meeting.

9 Princes Gardens Islamic Society prayers Green Committee Room-Top floor of Union building SFSoc Library meeting. Access to the SFSoc library

of over 1000 titles, plus discussion and organisation of future events.

1330h

Music Room, 53 Prince's Gate Concert Judith Hall and Timothy Walker playing works by Ibert, Giuliani, Villa Lobos and Walker. 9 Prince's Gardens **Quranic Recitation**

1730h

Aero 254 Gliding Club Meeting. Arranging lifts to Lasham, videos & films.

1745h

Mech Eng 342 Imperial College Choir. Rehearsal.

1800h

SCR Beit

White Bordeaux Tasting.
White deux Mers, Graves etc
and those special Sauternes he Queen's favourite! All at the underbelievable price of only £3.00 members, £4.00 nonmembers

TV Lounges STOIC special feature programme

Southside Gym Imperial Workout wear something comfortable and any type of training shoe. A towel/exercise mat is also useful.

1830h

Union Gym Judo Coaching Session. Instruction from BJA resident and quest instructors. All welcome, especially beginners. 60p mat fee.

1900h

JCR **Dancing** Club Intermediate

1930h

Music Room, 53 Princes Gate Opsoc rehearsal

2000h

Dancing Club Beginners

Fowler Foul-Up

A report in last Wednesday's GUARDIAN reveals that a Government 'cover up' has resulted in thousands of misinformed students claiming benefits to which they were not entitled.

The mistake occurred when Social Services Secretary Mr Norman Fowler released premature information to the press on half of the Department of Health and Social Security, announcing changes which would have allowed students under covenant to claim supplementary benefit during the summer vacation. In fact, these new regulations were withdrawn in late November, a few days before they were due to be passed by parliament. Mr Fowler chose not to issue another statement... announcing the postponement, informing only his staff of the change, via an internal circular. This in effect, misled Students into believing that they could receive this benefit on top of their parents' convenant payments.

When questioned by FELIX, a Senior DHSS Official denied the GUARDIAN's allegation that the withdrawal came about because of drafting errors of the type that led to last year's 'Board and lodgings' court case, in which another set of DHSS regulations were deemed illegal by the Commons Statutory Instruments Committee. Although these latest rules still await confirmation to become part of the benefit changes reported in last week's issue, the official assured FELIX that all students who mistakenly claimed have actually been reimbursed by special payment. He could, however, find 'no apparent reason' for Mr Fowler's action.

Bar Staff

A proposal which aims to encourage tie club members to work in the Union bar on weekdays was given unanimous support at Mondays Internal Services Committee. Those present at the meeting included Carl Burgess, Dave Kingston, Quentin Fontana, and Moore Lyttle the Union Bar Manager. Quentin Fontana hopes that the tie clubs will take to drinking in the bar as a result of the move. He denied the suggestion that ordinary students wishing to work in the bar would be placed at a disadvantage.

Pete Wilson IC Union Welfare Officer is worried that there would be fewer bar sessions available for 'ordinary students', and is also concerned that the bar will become inevitably tie

club orientated.'

Cops And Robbers

In an operation involving half a dozen vehicles at 1.30 on Wednesday afternoon local police and units from the Diplomatic Protection Branch (DPBS) gave chase to two burglary suspects driving a builders van. The suspects were also pursued by a member of the public in a BMW 316 who had interrupted their attempt to commit a burglary in Paddington. The BMW paused on Prince Consort Road to take on board a police man before resuming chase.

The Diplomatic Protection Branch became involved when DPB officer Police Constable Fuller, on duty outside the Iraqi embassy, sighted the burglar's van speeding down Queen's Gate on the wrong side of the road.

The chase ended when the men abandoned their vehicle in Palace Gate. During the chase the Diplomatic Protection Branch and local police discovered that their radio equipment would not let them communicate directly and were forced to relay all messages via two policemen standing in the street, one equipped with a DPB issue radio and another with the normal variety.

NUS Slam DHSS Cuts

Students will lose up to £1100 through being unable to claim supplementary and housing benefit over the summer holidays, claims NUS vice president Vicki Phillips. One result of this is that many students may have to give up their courses.

The Government explanation for the cuts is the high administration costs of running the benefits. According to the Government for supplementary benefits of £4 million, administration cost were £2 million, and for housing benefits of £5 million, £3 million were spent on administration. The NUS vice President is encouraging students to write letters of protest to MPs.

Friday 24th January has been designated a local day of protest organised by the NUS, which also plans a mass lobby of MPs on February 12th.

•24th January, 12.30pm Mech Eng foyer:IC Union leaflet protest at Harrods Be there or be square!

Going Through The Motions

The AUT Strike, academic affairs and Nicaraguan coffee were discussed at a lively Union General Meeting (UGM) on Tuesday. The venue was, unusually, Civ Eng 201 after it was discovered on Monday that the Great Hall had not been booked.

The meeting voted overwhelmingly to support the AUT strike and requested students not to attend lectures on Wednesday morning. Full details appeared in a special strike issue of FELIX on Wednesday.

Earlier in the meeting, President Carl Burgess was repeatedly questioned about the proposed move of the FELIX Office to the kitchen behind the Lounge. He made it clear that he was sympathetic to the latest in a long line of John Smith imspired schemes to take over Union Controlled areas.

Several changes to the Union By-Laws were approved. Three related to the creation of a post of Women's Officer and setting up a Bar Committee to oversee the managing of the newly Union-controlled Bar.

Following the AUT Debate the second part of Taylor's academic affairs motion was passed. This means that the Union has comprehensive polices on the issue that affect it's members everyday life.

The meeting then moved on to discuss whether the Union Snack Bar should serve Nicaraguan coffee. Proposer Pete Hobbis said that the money raised by the sale of the coffee would go to help pay for education, which was badly affected by the civil war and the US embargo on trade. The coffee was only a little more expensive than that the Snack Bar currently used, amounting to only one penny per cup. Deputy President Dave Kingston opposed the motion, saying that decisions affecting the management of Union Trading activities should not be made by UGMs, even if the intention was to support a good cause. The motion was then amended to from a request to sell the coffee, but Mr Kingston was still opposed to it. However, on the vote the motion received a substantial majority

QT Stunt

Four students yesterday went into the Union Snack bar and ate a slap-up meal at a candlelit table served by a waiter. The diners, believed to be members of QT, commented on the high quality of service 'Chez Norman'.

Services Blunder

Students living in head tenancies will not receive the bill for gas and electricity used in the first term until the end of January. This is because of a fault in the software of the Student Services computer. Finance Assistant Dave Parry recomended students to put at least £30 aside to cover the bill.