



Bottle match ban threat

Camborne School of Mines will not be invited back to Imperial College for the annual 'Bottle Match' unless their behaviour improves. Monday's meeting of ICU Council decided that Camborne should be sent a warning, after players and supporters disrupted the Union Bar and Southside Bar and were believed to have vandalised toilets in the Sherfield Building on Saturday night.

Camborne students have a history of abusive behaviour and petty vandalism during their biannual trips to IC to play rugby, football, hockey and squash against the RSM. Two years ago, after the sporting fixtures had to be cancelled, Camborne caused several hundred pounds worth of damage in the RSM building and in Southside. This year fire hoses were let off in the Union bar and in Southside, which had to be closed at 9.10pm. Later in the evening Camborne students tried to get into the Valentines Party in the Main Dining Hall (Sherfield). Unidentified intruders gained access to toilets on the 4th and 5th floors where ballcocks were removed, causing flooding.

Union DP Jackie Peirce proposed to Council as part of her report, that Camborne students be banned from the Union building and from all the College bars. She also recommended that Cardiff School of Mines, who have caused similar disruption in the

past, be included in this ban. She added that the cleaners had complained about the state of the Union building on Monday morning.

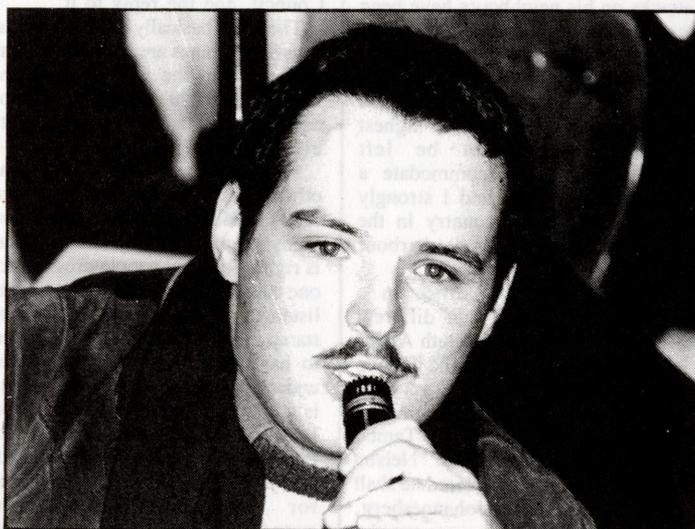
RSMU President Rob Perry stressed that the Camborne fixture was one of the oldest varsity fixtures, and that the rowdy behaviour had not been excessive. ICU Hon Sec Dave Colley said that the fixture had brought more IC students into the Union bar, rather than driving them away. Mineral Resources Engineering Dep Rep Paddy Coleman suggested that to ban Camborne from College bars would be premature and that ICU should work harder at policing visiting students during the fixture. ICU President Christine Taig thought that IC should make it a priority to see that no IC students were discouraged from using the Union facilities.

Mr Perry proposed that Ms Peirce's report be amended to read that the "Camborne and Cardiff Schools of

Mines be informed of the feelings of ICU and how their behaviour at future visits will effect subsequent fixtures. A further ammendment, prepared by Gareth Fish, added that "failure to improve behaviour at the next visit will result in a withdrawal of reciprocal agreements." This ammendment was accepted by Mr Perry and the proposal was passed.

Ms Peirce raised the issue again at

the Union General Meeting on Tuesday. After further discussion, UGM Chairman Hugh Southey suspended standing orders, thereby preventing a quorum call, and took an "opinion vote" from the meeting. On the question of whether Camborne should be banned from IC Union and all College bars, the 'informal meeting' voted 58 for a ban, with 37 against.



Perry Como to visit IC—see page 24

No rent this Week

Residents of Weeks Hall voted to go on an indefinite rent strike at a meeting on Wednesday, in an attempt to encourage College to repair major defects in the Hall's heating and water system. The Hall has been plagued by problems with the heating, resulting in many rooms being unbearably cold during poor weather conditions, while others were too hot—this being caused by defective heating valves. The common room had also become very cold, with residents taking blankets down with them to watch the television.

The water system has also proved unreliable during the freezing weather

earlier this term, with water only being available between 2am and 9am. Fire hoses had been used against regulations, in attempts to flush toilets. A break tank and pump which had been promised last year, but still had not been installed, would have averted this situation.

Students voted 44-0 in favour of a rent strike, with one abstention, on a motion to have the heating and water system repaired, and to receive a rent readjustment for services not provided and inconvenience caused. The conditions for the strike were that all rents due would be paid into a student union holding account, and

that permission to pay College could only come from a similarly convened residents' meeting.

Residents approached IC Union Hon Sec Dave Colley yesterday in order to set up the union holding account. He is currently looking into setting up a suitable account for the rent money, which could amount to £20 000. The precedent for this arrangement took place when residents in College accommodation went on a rent strike in Spring 1974.

Other complaints brought up at the meeting were that petitions raised both this year and last year had been ignored by College. The latest still

had not received any comment from College Secretary John Smith. It was also pointed out that first years had not been informed of the steep price rise until after they had been offered accommodation in Weeks.

Commenting on the move by Weeks Hall residents, Student Accommodation Officer, Lesley Gillingham said that she thought a rent strike would be unproductive, and that College would react unfavourably to such a move. The strike is not scheduled to begin until next week after a meeting to discuss progress on Wednesday 26th February at 6pm.

Criminal Botha

Dear Dave,

I write in response to Mike's letter (FELIX 763) concerning his support of Mr. Goosen and his South African government's incursions into neighbouring states. I am sure there are many more people who are just as ignorant about the situation in Southern Africa as Mike is.

To me, the application of the phrase "supporting terrorism," in his letter when referring to South Africa's neighbouring states was not only improper but misleading as well, and therefore, needs correction here.

Those the South African regime has labelled "terrorists" do not live in neighbouring states nor are they trained there. What these innocent states do harbour are defenceless refugees who have escaped from Botha's "Soweto Jail" in search of freedom. Indeed, all Botha's past attacks on his neighbours have been targeted at refugee camps, maiming every resident—child or aged. Surely, to support a regime which commits such unforgivable acts of aggression would be ignorance of the highest order which cannot be left unchallenged. To accommodate a refugee is no crime and I strongly believe there is no country in the world, today, that does not harbour any.

To have an ANC office in a neighbouring state is not different from having one inside South Africa itself. Winnie Mandela and Bishop Tutu live in South Africa, yet they still openly oppose the racist government just as Oliver Tambo does across the borders. Nelson Mandela has openly declared he shall live nowhere but in Johannesburg, where his home once was, yet the South African government has, before, "offered" him freedom on the condition that he went to live in one of the neighbouring states while negotiations are on. Surely, if they knew his presence in a neighbouring state would be a threat could they have made the offer? Why would Botha rather have Mandela abroad than home? Only part of the answer is these questions are useful to the subject at hand: Botha has always found it easier to pursue and murder black South Africans abroad than at home. In the former case there is a loophole—he claims they are terrorists being harboured by his neighbours and in the majority of these atrocities he has managed to receive a sympathetic ear from his worshippers. In the latter (for which the Sharpsville Massacre is an example) he has received no cover-up, not even from his own henchmen! His choice, therefore remains obvious.

When Germany once dominated Europe with her military supremacy, Europeans reacted and Hitler paid a price for it. Similarly, I believe, people in Southern Africa will react and Botha will do likewise. I hope the ANC will remember to put the world's "No. 1 criminal" (Botha) in a cage in a history museum somewhere in Soweto when it comes to power. I am sure that will attract tourists from all over the world—I will be there!

Y Mponella, Mech. Eng. II.

In God he trusts

Dear Sir,

I recently read a letter in FELIX complaining about the appointment of a gay and lesbian officer to the Union Council, and the reply to it.

The letter basically pointed out that gays and lesbians are just one of many minorities in the College, and the reply insisted that people need to be enlightened to accept homosexuality as normal.

As I read these letters, and many others like them elsewhere, I was really saddened. There seem to be so many people insisting that their way is right. So many people pressing for one cause or another, with no time to listen to anyone else. The desire to stamp their own ethics on society, and to have them accepted. And I can understand that the motive behind this is a concern for the individuality of each person. A concern for the freedom of individuals. And inside every person is a frustrated yearning for freedom—freedom from everything that suppresses them or holds or ties them down. But how much room have people left in all this for God? He's been dismissed almost without exception, without a moment's thought. "Oh, I don't believe in God." And that's it out of the way. But what if he did have something to say? What if, despite however untrendy it might be, God did actually exist? And, not only exist, but actually really care? I read recently an article in 'New Society' on London's down and outs in the cold freeze of last month; it concluded:

"And yet, and yet...disgusting, smelly, noisy, nauseous, drunk and drugged, the rattle-taggle army of Piccadilly ne'er-do-wells, rentboys, dossers, tramps, feckless, homeless and jobless who briefly swamped St. James's Church were all these things, but the scenes on the floor of the church were also weirdly moving. There was something very odd about the contrast between the beauty of the

Wren church and the misshapen human beings who came in from the cold. Something troubling and disturbing for the contemporary atheistic mind. Something you could almost call—the nearest thing to a dirty word in 1987—'holy.'

New Society, 30th Jan. 1987

What if, what if? I wonder how many people really honestly ask that question? How many people, in all the striving for acceptance, striving for identity, for joy, for freedom, how many everyday people, like you and me, ask? What if?

God does care, more than we could ever dream of. Not only does he care, he really hurts when he sees us desperately chasing after vain expressions of love and freedom, and sees us destroying ourselves. When we turn our backs on him, and just dismiss him with that arrogance "Oh, I don't believe," his heart weeps for us. If only we had just the vaguest notion of who God really is, and what he's been through for us in Jesus, it would break every one of us. Just the smallest glimpse of his awesome power, of his purity and holiness. Of the depth, the depth of his love for each one of us as an individual person...if only, we'd cry out to him.

But people are so content just to go on, without ever coming face to face with the possibility that maybe, just maybe, they're wrong. Maybe, just maybe there's a God waiting for each one of us to turn round and find him there. Just waiting for us to reach out and touch him, to cry out to him from the bottom of our hearts. He's so longing for us to. And the irony of it all is that the very love, freedom joy, identity, fulfilment etc. that we're all so busy striving for, is found right there, in Jesus, whom we so casually dismissed in the first place.

And that's what really saddened me when I read those letters. If only...

Rob Brown, Civ. Eng. PG.

The sound of silence

Dear Dave,

We would like to make a protest about the IC Union policy for letting rooms in the Union Building for parties; in particular the City and Guilds Dinner Dance held on the morning of Saturday, February 7th.

At 3 o'clock in the morning we and many other residents of Beit Hall were woken by the start of the party which was destined to continue until 6.00am. Two sets of windows, Beit Hall pillows and a mere 25 feet of

fresh air could not deaden the noise to any great extent!

Parties which end at 1.30 or 2.00 in the morning as Beit residents who do not wish to attend may go out and seek other entertainment or rest assured that the noise will go away sometime. However, at three in the morning no one is in the mood to seek other non-existent diversions and nor is the noise likely to go away at any reasonable hour.

We are not saying that such early morning parties should not be held, merely that they should be put in rooms not less than 100 yards from the nearest sleeping student. Surely in the future efforts can be made to use rooms in the Sheffield Building or even on the left hand side of the Union Building, which has similar rooms to those so close to our own windows; then the noise can only disturb empty offices or the shrubbery in the Life Sci. Building.

Simon Buyers, MRE I.

Neil Bolton, Life Sci. I.

Jon Beadsmoore, Phys. I

and most of Beit Hall, Old Hostel.

Extreme Allen

Dear Sir,

I am writing in reply to Mike Allen's letter in last week's FELIX (No. 763) expressing his view that terrorism should be fought by killing its perpetrators.

I would like to ask Mr Allen just what is his objection to terrorism. It is obviously not that it has a low regard for human life: Mr Allen plainly shares this attitude. Furthermore, his opposition cannot be due to the fact that terrorists are prepared to go to such lengths to achieve their aims, and are therefore 'extremists': Mr Allen is also, by this definition, an extremist.

His only justification for the views expressed in his letter must be a childishly simplistic 'goodies and baddies' philosophy which leads him to believe that any ideology disagreeing with his own should be annihilated. This argument is exactly that used by the terrorists themselves to attempt to justify their actions.

Mr Allen's statement that "if our forces withdrew (from Northern Ireland) this violence would no doubt escalate" is shortsighted in the extreme. Any attempt to "track these murderers down and kill them" as he

continued on page 4.

Dan in the drink

ICU Ents officer Dan Phillips was strongly criticised at the meeting of ICU Council on Monday. Mr Phillips' persistent failure to attend Council was attacked by several members. The accounts of the Ents Committee had not been made available for inspection, causing speculation that a large amount of money had been wasted, particularly on the Christmas carnival.

ICU President Christine Taig defended Ents' performance and pointed out that if they had been making huge losses she would not

have authorised the spending of any more money on entertainments. She warned that Mr Phillips may resign if he were threatened, leaving the Union with no Ents Officer. However, Council voted that if he does not attend the next Council meeting, which is on March 16th, he should be asked to resign anyway.

In reply to this decision, Mr Phillips has issued a letter inviting all Council members to submit questions to him before the 2nd of the month, so that he can collect all relevant information.

Blow job

This year's *Wolf Foundation* Prize in Chemistry has been won jointly by Professor David M Blow, Head of the Biophysics Department of Imperial College, and Professor Sir David C Phillips of Oxford.

They have received the award for their long term work on improved methods of X-ray crystallography in order to determine the exact three-dimensional structure of enzymes.

Prof Phillips solved the first animal enzyme structure in 1965, while Prof Blow determined the structure of a much larger enzyme in 1967.

By a comparison of the various enzymes Professor Blow also demonstrated that the activity of enzymes is shape-dependent.

In 1981 Professor Blow and his collaborators conducted the first experiments in protein engineering, altering the action of enzymes by changing some of their amino acid building blocks.

The Foundation cites this work as the key in "transforming the mysteries of life into the language of physical chemistry."

Double Dutch

The papers for the sabbatical elections were taken down by Dave Colley (Returning Officer), with the arrival of members of the Camborne School of Mines. On their departure, the following day, the papers were put back up. This, however, did not prevent a Dutchman, here for the Hyde Park Relay, standing for Deputy President.

Four people have put their name up so far for the post of President. They are James Beach (Chemistry), Bill Goodwin (Mechanical Engineering), Ian Howgate (Geology) and Guy Perry (Physics). Jasper Gout (Maths in Holland?) and Alan Rose (Doc) have so far signed up for Deputy President; Chas Jackson (Chemical Engineering) for Honorary Secretary; and Chris Edwards (Chemistry) and Judith Hackney (Physics) for the post of FELIX Editor.

...he buys his clothes from Marks & Spencers...

FELIX rang College Assistant Secretary Michael Arthur this week. He knows nothing.

Report out

ICU Academic Affairs Officer, Dave Lowrie's report was rejected at Monday's Council meeting. The report included a controversial table which listed the attendance of Dep Reps at various meetings. Dep Reps and other Council members objected that some relevant meetings had not been included and that not all of the people who should have attended were informed in advance. Their major concern was, however, that membership of such committees is only one part of a Dep Rep's job.

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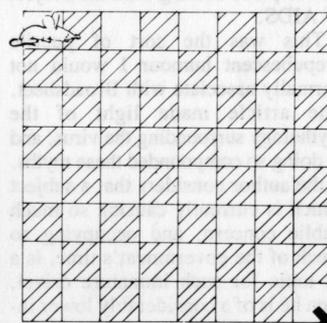
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MEGABRAIN



black squares, since this causes a far worse shock. The door will only open after he has been through every white square. Obviously he can only move diagonally, and, although he can travel through a square more than once, the door will not open if he has travelled through the same corner of a square more than once.

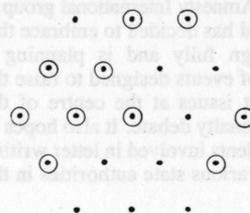
So can you find the route which minimises the number of shocks that Chris'll get and stays on the white squares? Answers by 1.00pm next Wednesday, to me at the FELIX office, please. Keep your comments, criticisms,..etc coming in as well, they're much appreciated.

Another Ratty Problem

Chris the rat is having hassles again. Last term many of you worked out how Chris could escape from the horrific experiment being carried out on him with the least amount of damage. If you remember, Chris was placed on a large chessboard pattern and had to visit every square using the smallest number of turns (since he got an electric shock every time he made one). Well they've done it to him again. The rules this time are slightly different. Chris has been placed on the board in the top left-hand corner and can only escape through a door in the bottom right-hand corner. He still gets a small electric shock every time he makes a turn, but this time, however, he can't step on any of the

Hexagonal Unsymmetry

All the solutions I got to this were correct even though my wording of the problem was slightly inaccurate. Sorry. The correct solution is shown below. The winner was Aldo Tacconelli, Physics 1, well done.



Continued from page 2

suggests would be far more likely to increase the violence inflicted by terrorists in Northern Ireland, and its target would undoubtedly be British soldiers and civilians.

Terrorism must indeed be stamped out but this cannot be done by resorting to the very methods we wish to destroy. It is the philosophies of people such as Mr Allen which ensure the continuing viability of terrorism as a weapon for unscrupulous leaders.

Yours sincerely,
Andrew Partington, Elec. Eng. 1

Imperial Amnesty

Dear FELIX,

On Thursday February 19th Amnesty International began a concerted campaign to focus attention on the use of the death penalty in the United States of America.

In thirty-seven of those states you can be hanged, electrocuted, gassed, poisoned or shot for murder. There is abundant evidence that the death sentence is applied unjustly. Some states permit the execution of children and mentally retarded offenders. Poor people and blacks are far more likely to receive the death penalty for an equivalent offence than are middle-class whites. At least 23 prisoners have been put to death this century for crimes which, it is now known, they did not commit.

At present there are 1788 people on death row in the USA—a record number. And the rate of executions is accelerating. The need for pressure on the American authorities has never been more urgent.

Amnesty International is unconditionally opposed to the death penalty, believing it to be “a cruel, inhuman and degrading punishment.” In Amnesty’s view: “it is not only contradictory, but a threat to humane values, for any society to proclaim that the taking of life is the most intolerable of crimes and, at the same time to countenance any form of execution carried out as an act of retribution in the name of society itself.”

The Amnesty International group at Imperial has decided to embrace this campaign fully and is planning a series of events designed to raise the relevant issues at the centre of the death penalty debate. It also hopes to get students involved in letter writing to the various state authorities in the USA.

No doubt there are many people at Imperial on both sides of this contentious issue. No doubt many people believe that the execution of murderers or rapists is entirely justified and that Amnesty is just being soft. In the next few months IC Amnesty Group hopes that as many students as possible will get involved in this campaign and demonstrate that the abolition of the inhuman rite of execution is a priority for our modern societies.

Anyone who is interested in abolishing the death penalty in the USA should come to IC Amnesty Group meetings on Tuesdays at 5.30pm in the Brown Committee Room, top floor of the Union Building. Alternatively contact: S Boshier (Physics II), O Smart (Physics III), or S Curry (Physics PG, int. 6729).

S Curry

Puerile Humour

Dear Dave,

The publication of last week’s Broadsheet has forced me to write to FELIX to express my disquiet at an item which appeared towards the end of the edition. The item was a spoof advice piece dealing with the subject of AIDS.

This was the sort of puerile prepubescent humour I would not normally associate with Broadsheet. The article made light of the mythology surrounding the virus, and in doing so compounded these myths. If the author considers that a subject which is currently causing so much public concern, and occupying so much of the government’s time, is a fit topic for such immature drivel, then he is of a considerably lower intellect than I already consider him to be.

I have heard comment to the effect that people will realise the vein in which such a piece is written, and are perfectly able to be discriminating in their appreciation of it. If this were the case, then we would not currently be experiencing such a massive problem in educating the public as to the dangers of AIDS.

I would hope that the Broadsheet editor will take greater care in accepting such articles for publication in the future, or can we expect a feature on leprosy next week, followed by one on coronary heart disease, all with a similar total lack of sensitivity and perception?

Dave Burns
Physics 1.

Felix

The Great JCR Dream

ICU Council and Tuesday’s UGM accepted Christine’s recommendation that the Union presses for full control of the JCR bar and financial compensation for the loss of conference income. In the long term, the Union is approving the scheme to “look at the feasibility” of a new JCR—in the same building as the Sports Hall. Though the Exec are confident that College are now far more receptive to their ideas, it would be idiotic to put much faith in the plans for an “all new” JCR. This vague proposal must not be seen as a trade-off for accommodating administration when negotiating the immediate future of the JCR and Sheffield catering. The original plan to swap the JCR and the MDH was supposed to be a firm agreement. College’s chief concern is still meeting the space requirements of an increasing number of refectory users. At the moment a new JCR is about as likely as a straight answer from the College Assistant Secretary.

Camborne

A vote to ban Camborne fixtures entirely would have been premature. Their behaviour is probably no different from any rowdy sports team

on tour. Nevertheless, this is no reason to stand by and accept any act of theft or vandalism, even if, as Security Chief Geoffrey Reeves puts it, we “got off lightly this year.” The traditions of the fixture are irrelevant; its prestige is wearing a bit thin.

Election Publicity

A correction to last week’s editorial and my publicity notice; artwork submitted on Monday February 23rd at 9.30am will be ready for papers down—5.30pm **Wednesday** not Thursday. All other dates and deadlines are as given. If you are standing for a sabbatical post and have not yet seen me about publicity, please do so as soon as possible.

Credits

Many thanks once more to my durable staff; Andy Bannister, Kamala Sen, David Burns, Sundiatu Dixon-Fyle, David Williams, Chris Edwards, Judith Hackney, Steve Kilmurray, Liz Holford, Alex McNeil, Pippa Salmon, Chris Martin, Aaron Kotcheff, David Bottomley, Hamster, Drain, Pete Wilson, Grenville Manuel, Stuart MacFarlane, Bill Goodwin, Neil Motteram, Sean MacRae, Sarah Kirk, Dave Clements, Franics Miers, Jane Spiegel, Al Birch, Chas Jackson, Nigel Whitfield, Sunny Bains, Michael Newman (thanks Mike!), Steve Shackell and Rose Atkins.

The Old Centralians

present a trip to

English Speaking Union

on Thursday February 26th

Music, buffet, Free to OC members
only £1.50 to join

Meet 6.30pm in the Guilds office
or 7.30pm at the club

International Week

a review

How many Imperial College students are aware that this week is International Week? Very few, judging from the disappointingly low attendance at the talks, film, and symposiums organised by the Overseas Student's Committee.

International Week began on Monday with an opening speech by the Rector on "The Significance of the International Community at Imperial College." He stated that he himself was born in Germany, and that one of the remarkable facts about Imperial College and the University of London as a whole was that it comprises a "fairly international community", 20% of all students at IC being foreign. This led to comments on the financial implications of a relatively large overseas student population. The Rector said that the cuts in grants allocated to universities have forced them to accept more overseas students; Imperial College is no exception and fees from overseas students represent 7% of the College income, but the level of foreign

students has not risen significantly since the new legislation was passed. The Rector deplored the fact that high fees were a deterrent to many foreign students.

The cultural contribution made by the international community was seen by the Rector as "an enormous enrichment of the experience of studying at university" for British students. He nevertheless deplored the phenomenon of "people from country X spending all their time with people from country X," clearly a problem at IC.

On the subject of religion, the Rector advocated firstly that scientists become aware that "Newton's laws and Schrödinger's wave equation" are not all there is to knowledge, and confessed "some religious feeling" but no adherence to any particular religion. Secondly he advocated tolerance of other religious beliefs and noted that minor differences between similar religions are often a source of conflict, as is the case in Northern Ireland.

The third main topic was conflict,

the avoidance of which "is a principal concern for mankind." The Rector hoped that students from countries engaged in war "spoke to each other" and noted that feeling about research for defence was a major sore point. On this subject he referred to the Strategic Defence Initiative (SDI), adding that he considered it a "technological nonsense" and giving reasons. He would nevertheless consider accepting a SDI contract at Imperial College if it were on "normal commercial terms" and on a subject that he wished to see researched.

On Tuesday a symposium took place in Chem Eng Lecture Theatre 1 involving representatives of the Commonwealth Office and the Royal Society. The topic was "Sociocultural, scientific and technological cooperation begins here." Although less than twenty people attended, a positive debating atmosphere was created which encouraged questions from the floor.

Important issues were raised, such as the freeflow of scientists between nations, the economic and cultural cooperation which it involved, the role of the UN agencies in the transfer of technology, and problems arising from delicate political situations. A central question from the floor related to the intellectual boycott of South Africa, and whether freeflow of scientists should be extended to such

countries as the USSR, Cuba or Taiwan. The topic of human rights and the intervention of politics in scientific research were also discussed and international scientific cooperation was seen as necessary in the solution of problems posed by, for example, pollution control and AIDS.

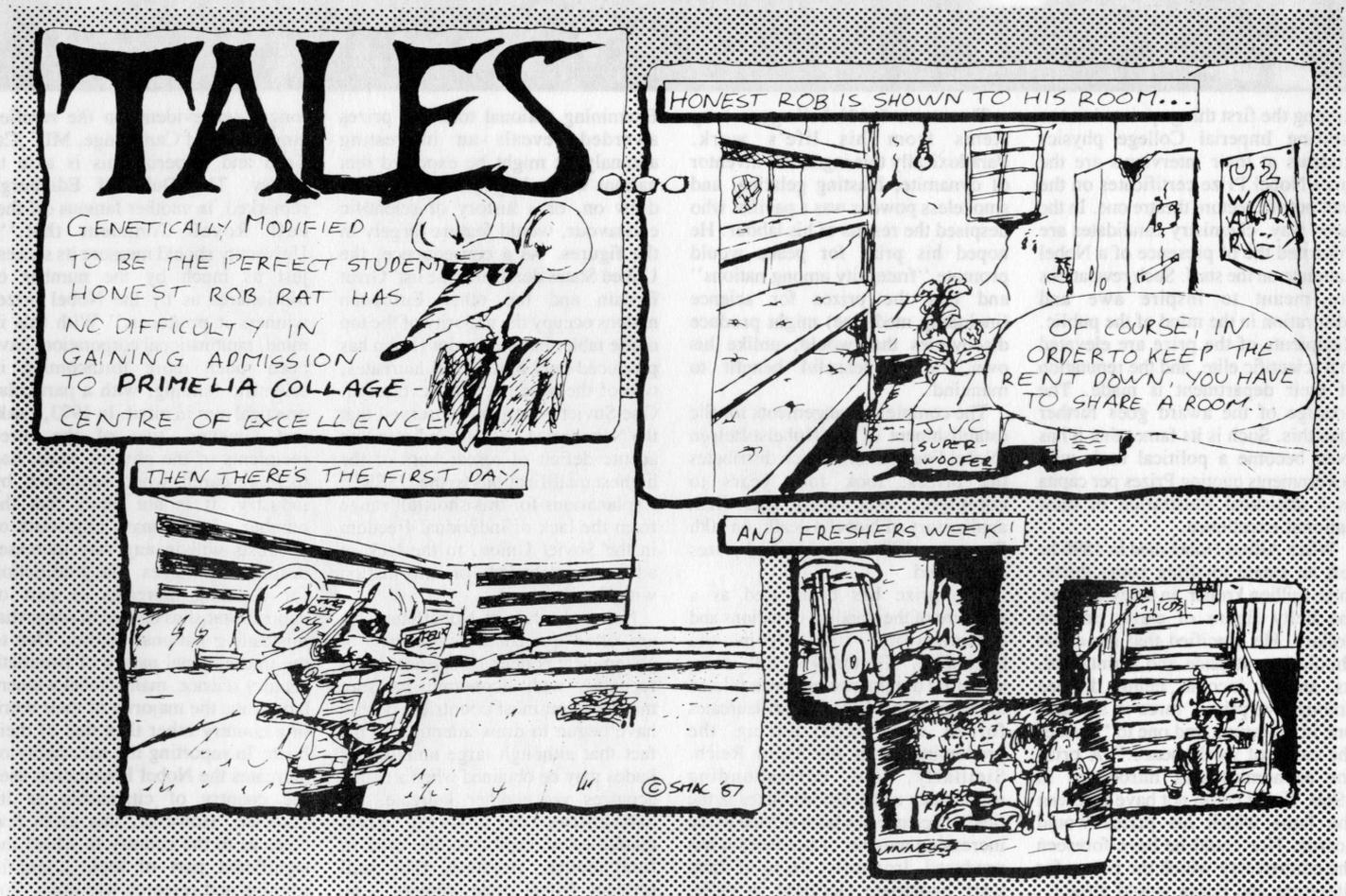
It was concluded that international cooperation should involve both the exchange of individuals and of knowledge, and that this should be done to the benefit of all nations.

Sundiatu Dixon-Fyle

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THE NOBEL PRIZE

Its history, scientific importance and political impact



Among the first things pointed out to aspiring Imperial College physics students at their interviews are the three Nobel Prize certificates on the wall outside lecture theatre one. In the same way, chemistry candidates are informed of the presence of a Nobel Laureate on the staff. Such revelations are meant to inspire awe and admiration in the mind of the public. Recipients of the prize are elevated to a scientific elite, and the reputation of their department is made. The prestige of the award goes further than this. Such is its fame, that it has even become a political tool, with governments quoting Prizes per capita as a statistical illustration of their national excellence.

When Alfred Nobel died in 1896 he left an estate totalling some thirty-three million kroner, in today's terms, the hefty figure of eighty million dollars. He specified that his estate should be put aside and maintained, its annual income being divided among five prizes, three in science, one in literature, and one to "further the cause of world peace." A prize for economics was introduced in 1969. Nobel could not have foreseen the fame which his prizes would accrue. Nor could he have foreseen the controversy which the prizes for literature and peace would attract.

The reason for Nobel's generosity stems from his life's work. Paradoxically this ingenious inventor of dynamite, blasting gelatine, and smokeless powder was a pacifist who despised the results of his labour. He hoped his prize for peace would promote "fraternity among nations" and that the prizes for science (including medicine) might produce discoveries that would, unlike his own, be of peaceful benefit to mankind.

The complex arrangements for the establishment of the Nobelstiftelsen (Nobel Foundation), which distributes the prizes, took four years to complete. Not until the fifth anniversary of Nobel's death, on 10th December 1901, were the first prizes distributed.

The prize has been used as a measure of the standing of nations and organisations right from the beginning. Germany's fall from scientific dominance has been related to the great number of Nobel laureates forced into exile during the predominance of the Third Reich. Similarly, the corresponding ascendancy of the United States in the field of science has been related to the increasing number of laureates it has produced. Ironically, many of them were expatriate Germans in exile.

Examining national totals of prizes awarded reveals an interesting anomaly. It might be expected that nations with a large pool of talent to draw on, or a history of scientific endeavour, would feature largely in the figures. As a consequence, the United States dominates the list. Great Britain and the other European nations occupy the majority of the top of the table, but the Soviet Union has produced only nine Nobel laureates, two of them before the Revolution. One Soviet bureaucrat observed that the Nobel prize statistics indicate "an acute deficit of researchers of the highest qualifications in the USSR". Explanations for this shortfall range from the lack of individual freedom in the Soviet Union, to the lack of adequate exchanges of information with the West.

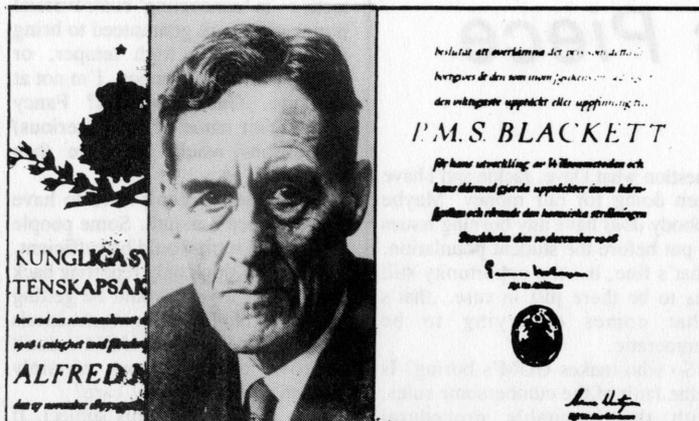
National totals of Nobel laureates are often quoted as vindication of government policies on science. More recently, with economic pressure mounting on most countries, people have begun to draw attention to the fact that although large amounts of kudos may be obtained when a nation acquires yet another laureate, the desirability of devoting great quantities of capital to the type of fundamental research that will produce Nobel prize winners is no

longer self-evident. In the rarefied atmosphere of Cambridge, MIT, Cal Tech and Imperial this is akin to heresy. The Duke of Edinburgh remarked, in another famous off-the-cuff Royal Comment that, "a University should measure its success just as much by the number of millionaires as by the Nobel prize-winners it produces." With this in mind, multinational corporations have been much more forthcoming in scientific funding, with a particular practical aim in mind. In 1973, Esaki and Giaever, two of the three recipients of the physics prize, had their research work supported by industry. It is not likely that the number of millionaire physicists or chemists will in any way increase, despite such moves. The predilection for claiming laureates as part of national statistics has led to somewhat misleading national credits. Due to the international nature of twentieth century science, many Nobel winners have done the majority of their work in a country other than that of their birth. In reporting the nationality of laureates the Nobel Foundation uses the country of citizenship as its criterion. However, this gives few clues as to the country in which the significant part of their scientific training and research was done. For

example, Max Born is officially credited to Great Britain, although he was born in Germany, was educated there, and conducted his prize-winning research in Göttingen, ten years before he emigrated. Similarly, the physicists TD Lee and CN Yang are credited to China, however, both were educated and did their research in the United States. Imperial College's favourite physicist, Erwin Schrödinger, whose centenary will shortly be celebrated here, was forced to flee from Austria to work in Dublin in the prewar years, but was credited to Austria. (Incidentally, Schrödinger's personal life caused raised eyebrows in staunchly Catholic Ireland; he lived happily in a menage à trois).

The Nobel Foundation also allows multiple "claiming" of Nobel Laureates by academic institutions. A laureate may be claimed by the institution at which he did his undergraduate work, by the one at which he obtained his doctoral degree, and some institutions can even claim a laureate if he studied there without actually getting a degree. A postdoctoral year or two will also suffice in most cases. Membership of a faculty, from research assistant to professor, can be recognised as a legitimate connection. The recipient's presence at an institution at the time of the award is another justification for a claim to a laureate. At the end of the laureate's career, he may take a visiting professorship, bringing glory to yet another seat of learning.

As a consequence of all this eagerness to be associated with the scientific greats, situations develop such as that in the United States, where one hundred laureates are claimed by nearly two hundred institutions. One extreme case, that of the biochemist Fritz Lipmann, shows him to be counted amongst the staff of eleven universities, colleges, and institutes. This somewhat farcical situation is recognised as something of an embarrassment, and many institutions qualify their claims at length. However, some compound their embarrassment. The College of the City of New York has given a prize to Arthur Kornberg, its first alumnus to win a Nobel Prize, probably the first time anyone has been awarded a prize for winning a prize. In order to contain this overzealousness, in some areas self-denying rules have come into force to limit the number of laureates claimed. Harvard does not list its alumni laureates, nor does it count those that have briefly meandered through its corridors before obtaining their prizes. The reasoning behind multiple laureate claims can be seen in the example of the Rockefeller Institute. When one of its members suggested that the institute may be coasting, a member of the Board indignantly retorted that "an institute which has had nine scientists win the Nobel Prize in the last five years



doesn't sound to me like an institute that's coasting."

Departments that are not eligible to receive awards sometimes have trouble getting recognition. A scientist at Harvard working in a field not covered by the awards commented that "those branches of science that are not eligible have a hard time to prove that they are, perhaps, just as good or even nearly as good as the departments that have laureates." Sentiments that I am sure will be shared by many people at Imperial, especially the mathematicians.

The preeminence of the Nobel prize is an interesting phenomenon. Many other scientific prizes boast much longer histories. The Copley and Rumford Medals of the Royal Society were established in 1731 and 1800 respectively. The Nobel Prize, with an eighty-six year history, is a comparative newcomer. Nor is the prize money offered for the prize as significant as some. The John and Alice Tyler Ecology Award headed the prize money stakes in 1976, while at that time the Nobel Prize money had reached its peak of \$160,000, often shared between several recipients. Over the years the award has still been sizeable enough to attract considerable attention. It is possibly the truly international flavour of the prize that has maintained its supremacy. Where the prize is unquestionably in a class of its own is in the selection process which ensures that the names on the prize certificates are eventually those which feature most prominently in our

present day text books. The prizes for literature and peace are far more subjective, and have frequently been criticised for political and ideological reasons.

The prestige of the prize, and the publicity which it attracts, have lent legitimacy to many ventures. On both sides of the Iron Curtain Nobel Laureates have spoken out on political matters. In response to Soviet physicist Andrei Sakharov's vehement condemnation of Soviet political repression, all five of the Soviet Union's Nobel Laureates, with thirty five other academics, wrote a letter to Pravda denouncing Sakharov as "an instrument of hostile propaganda against the Soviet Union." Such actions might explain why the Nobel Foundation is less than eager to bestow on Soviet scientists an honour given in the spirit of philanthropy.

Laureates in the United States have also spoken out on political matters. In 1970 forty-four laureates wrote to the president asking him to bring the war in Vietnam to a rapid conclusion. There was some highly favourable public comment on this move, to the effect that it was about time that the scientific community took a stand instead of keeping a decidedly low profile. However, there was some highly unfavourable comment from other laureates, who considered this an entirely irresponsible political act.

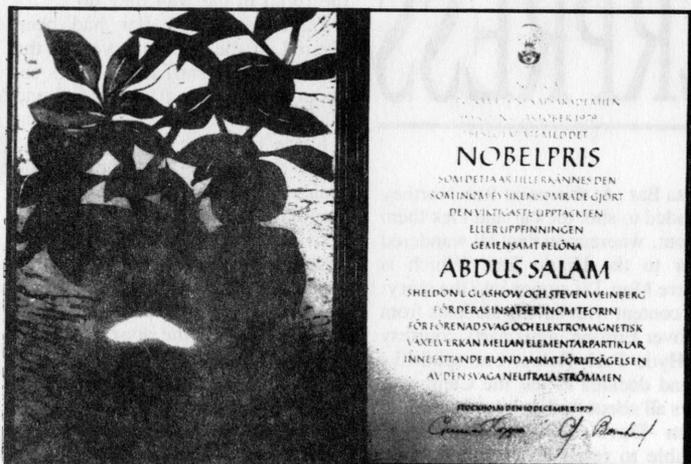
Quite clearly, scientists and others have come to the opinion that the views of laureates on issues outside their sphere of work carry weight not

only in science but in public affairs. This may emanate from the mistaken belief that anyone who can fathom out the most intricate secrets of the universe is amply qualified to make significant statements on the workings of something as simple as the running of the world.

Nobel Prize laureates have become, not surprisingly, a self-perpetuating breed. The laureate "family tree" which was started by Rayleigh for his discovery of argon, is quite impressive. Rayleigh worked with another laureate, JJ Thomson, who in turn spawned a whole host of laureates, including Rutherford, our very own GP Thomson (JJ's son) and Born to name but a few. From Rutherford sprang up no less than eleven other laureates. Among these was another "son of Imperial" PMS Blackett, as well as Chadwick, Bohr and Appleton.

The father-son laureate relationship is not uncommon. Sir William Henry Bragg and Sir William L Bragg were the only father and son team ever to have shared the prize (for their joint work on the diffraction of electrons through crystals). Niels Bohr won the prize for physics in 1922. Fifty three years later, his son Aage Bohr jointly won the physics prize for his work on non-spherical atomic nuclei. Master-student laureate relationships are endless, as previously outlined, but the relationship between Nobel laureates and their apprentices is often stormy, and academic conflict is not unknown. One of the more infamous cases was that of an eventual laureate, Herman Muller, and his laureate master TH Morgan. Muller observed on Morgan, "the great bulk of the facts of real significance subsequent to 1911, and practically all after 1913, were found by younger workers, quite independently of guidance from him in experiments which they had planned on the basis of their own more advanced viewpoints. Their results and interpretations were, however, later accepted by Morgan." This type of situation has since acquired the tag of Morganism.

In the academically competitive world of the laureates such instances are not uncommon, with young up-and-coming minds eager to assert themselves in their own right, and masters sometimes slow to acknowledge their contributions. The path to prizedom is not easy, as Professor Wilkinson illustrates very well. After working in nuclear chemistry at Berkley, he moved to MIT and inorganic chemistry. He was made an assistant professor at Harvard in 1951 where he published his first results showing the novel "sandwich" structure of the compound ferrocene a year later. However, in 1956 Harvard decided, as Prof Wilkinson puts it himself, that Harvard "could do without me," and he was "let go". Our own laureate returned to Blighty and received the prize for chemistry in 1973, for that very work on sandwich compounds.



Christine's Piece

There I was, wondering what to write about in this piece. Still pondering, I headed towards the women's toilets in the Union Building and found inspiration on the wall, for someone had written:

CT: "Why does nobody go to UGM's?"

Student: "Because they're so completely, totally and utterly, very, very, boring!"

Apart from the fact that I thought a toilet wall was a fairly strange place to write a comment like this, it made me think of three questions. Why do we bother with UGM's once a month if everyone (including me) dislikes them? Whose fault is it that they're boring? And what could I do about it?

question what Dave, Jackie and I have been doing for our money. Maybe nobody *does* have any burning issues to put before the student population. That's fine, but the opportunity still has to be there just in case...that's what comes of trying to be democratic.

So who makes UGM's boring? Is it the fault of the cumbersome rules, with the inevitable procedural wrangling? Is it those who make reports, trying to give an account of what they've been doing? Is it those who ask questions they think are important, or those who propose motions? Or is it the people who *don't* turn up and *don't* make things more interesting and relevant by joining in? Probably a combination of all these;



First, UGM's aren't something that the sabbaticals organise for their own gratification; none of us particularly look forward to them. They're supposed to be the opportunity for anyone in the Union to question or criticise their officers on the work they've been doing in an open forum; they're also the chance for all students to contribute to policy or discuss anything *they* see as important with other students.

Maybe nobody *does* want to

but believe me, we do try to keep reports brief and move onto the potentially interesting motions as quickly as possible. Unfortunately just when we reach a point where there might be some lively debate, someone generally calls "quorum"—and the whole thing packs up. So you see, unless plenty of people do go along to UGM's, they'll *never* get more interesting.

So what to do about boring UGM's? Short of resorting to sneaky

tactics—ie 'concocting' controversial issues which are guaranteed to bring people along in high temper, or outright bribery/coersion, I'm not at all sure. Guest speakers? Fancy dress? You name it? Any (serious) suggestions would be more than welcome.

Of course we don't *have* to have UGM's once a month. Some people think one a term would be sufficient. Personally I think only reporting back three times a year would be getting away with murder as far as sabbaticals are concerned—but if UGM's don't improve that'll almost certainly happen. Does anybody care?

One last gripe on this subject. If you really think UGM's are boring, you should try some of the two dozen College committees I sit on on your behalf...but then of course that's what I'm here for...(Only a fool would do this job, Part 7).

At Council last Monday some very serious problems came to light concerning the 100 students at Silwood. It's a great shame that these students are so isolated and so often forgotten. They have no immediate access to services we take for granted like welfare and accommodation advice; they don't even have a

meeting room of their own. When there is a problem at Silwood the repercussions are felt heavily because the student community is small and close knit; and because of the lack of resources to turn to. I only hope we can improve the spread of information about Silwood over the next few weeks—and support the Silwood students in some way when they ask us to do so.

Last Chance

I'll be drawing names out of the hat on February 24th to pick the lucky 2 recipients of a week in Sweden (see last week's FELIX). Any maths, physics or computing students still interested, give me your name VERY SOON.

Finally

I'm sorry that these 'bits' of mine always seem to end up being boring. I usually have wild and wacky ideas about what to write sometime over the weekend; but when it gets round to Wednesday morning and it has to be written NOW, it just doesn't seem to come out like that, Personally I blame it on the education system. Still, it's probably better than thermodynamics.

*Love you all (specially everyone I forget to send Valentines to),
Christine.*

Union Office

Due to staff shortages
the office will not be open to
ANYONE before 11.30pm
from Monday 23rd February

Reliable student required to work as
receptionist/cashier for the Summer
Accommodation Centre scheme for both the
Easter & Summer vacations.

For application form and other details please
contact Christine, room 170, Sheffield building
(on way to Nat West bank).

GUTTERPRESS

To misquote Oscar Wilde, to invite Camborne School of Mines to one event at IC may be accounted a misfortune, to invite them to two smacks of carelessness. It had been the day of the Bottle Match on Saturday where hordes of pissed miners from Cornwall and London descended on Southside and the Union Bar for "a few drinks".

Being curious about the function of fire hoses, the Camborne crew decided to watch its effect on the

Pizza Bar. At this point Rob Northey decided to shut the bar and kick them all out, whereupon they all wandered over to the Union Bar. Which is where Man Tai comes into the story: not content with having students from all over Europe in his party courtesy of Hyde Park Relay, our spud-like friend decides to tell the Camborne boys all about it, despite protestations, from Dave "Gutman" Colley. Unable to resist a party, especially where it involves a bar extension,

they merrily trot down to the Main Dining Hall to try and remove the mirrorball and various other bits of the room in the way they do.

Once the Union Bar had been cleared of the visiting psychos, the assembled bar staff and helpers set about clearing up all the blood and other assorted nasties. At this point a horde of cockroaches decided to make their presence known in the Union Bar. Rob "killer" Perry was singularly unimpressed with all this, and proceeded to set about the assembled insects with a carving knife, screaming "I'll get you! I'll get you!" A few minutes later he stuck his head outside the door and asked if they grew new heads if you cut them in half. Deciding that they might do, he then went on to use a metal ashtray instead.

Council at Silwood Park on Monday seemed to be suffering from

an overdose of Wackosterone, as Pete Wilson continued to berate Chairman Hugh Southey on his rulings, to the extent that when Hugh called for order, Pete decided to challenge him on calling order.

Gutterpress would not be complete without the traditional Joe 90 story. Being a cost-conscious student, Joe finds that the best solution to repairing his Hillman Imp, is not to go to the garage where all he will get is "Ooh, you just can't get the parts these days—it's the gimbals you know. I'll do it for a pony." The Joe 90 solution is to find another car of the same make, open the bonnet and take the relevant part out. Quote of the week: "This is the last day we are selling orchids. You get three and they come in a nice plastic sheath. Sheaths seem to be in thing these days." Resident DJ, Virgin Megastore



Ways of seeing

Brief reflection on test tubes

Take
a piece of fire, a piece of water,
a piece of rabbit or a piece of
tree,
or any piece of human being,
mix it, shake it, stopper it up,
keep it warm, in the dark, in the
light refrigerated,
let it stand still for a while—
yourselves far from still—
but that's the real joke.

After a while
you look—and it's growing,
a little ocean, a little volcano,
a little tree, a little heart, a little
brain,
so little you don't hear it
lamenting
as it wants to get out,
but that's the real joke, not
hearing it.

Then go
and record it, all dashes or
all crosses, some with exclamation
marks,
all noughts and all figures, some
with exclamation-marks,
and that's the real joke, in effect a
test-tube
is a device for changing noughts
into exclamation marks.

That's the real joke
which makes you forget for a
while
that really you yourself are

In the test tube.

Miroslav Holub
(trans. Ewald Osers)

Miroslav Holub is Chief Research Immunologist at the Institute for Clinical and Experimental Medicine in Prague. He is also one of Czechoslovakia's leading poets. This dual role (uncommon in English-speaking culture, but less rare elsewhere) allows him to look closely at questions of subjectivity versus objectivity. In an interview with *Poetry Review* in 1985, he states his aspiration "to bring the hard-centred approach of science into poetic thinking." Similarly, he suggests that "one of the illnesses of modern poetry is too much subjectivity." This position is contentious (many people seem to want a rigid barrier between objective and subjective ideas), but Holub clearly feels that he gains some insight by combining scientific and poetic thought.

Scientific objectivity is a temple many people like to worship at. Miroslav Holub is well qualified to comment on this, and the above poem suggests that he is quite aware of the weaknesses within the foundations. Likewise, much feminist thought has been directed at supposed scientific objectivity: much research is based on implicit sexist assumptions, as perusal of *New Scientist* or many other journals will show. Similarly, science's record on racism and other issues is not without blemish.

Graham

Environment and you

As you may have read in a previous article in FELIX, 21st March 1987 marks the beginning of the EEC designated European Year of the Environment. In response to this large scale international initiative several groups in the College are holding an Environment Week from March 2nd to 6th.

The aim of the week is to promote an awareness of the environment in a college where so much of the teaching and research has direct or indirect implications for the environment.

The events scheduled for the week include:-

- **Monday 2nd**—Kenneth Carlisle MP (Cons) and Chris Smith MP (Lab) talking on the policies of their respective parties in relation to the environment. **Mech. Eng. LT220.**

- **Tuesday 3rd**—Michael Meadowcroft MP (Alliance) on the above subject. **Mech. Eng. LT220.**

- **Wednesday 4th**—Jonathon Porritt, Director, Friends of the Earth. **Elec. Eng. LT408.**

Throughout the week there will be exhibitions and displays in various locations around the College. These will include exhibitions on renewable energy from the Dept. of Energy the

CEGB and Friends of the Earth. There will also be an information stall in the JCR with books, posters etc. for sale. Films and videos on various aspects of the environment will also be shown and there will be exhibits of models of renewable energy technology. Some emphasis will be placed on the research, employment and economic opportunities offered by the more environmentally benign technologies. If you are at all interested in the environment then please attend any or all of the above events.

If you feel that you would like to do something positive for the week and would like to help out with the organisation of the project then please contact Theresa Lisher or Stuart McFarlane via the MSc. pigeonholes at the Centre for Environmental Technology, 48 Prince's Gardens (between Mech. Eng. and Southside) or by leaving a message on 7214 internal, or by attending one of our short meetings to be held at 12.50—1.00pm on Monday 23rd, Tuesday 24th and Friday 26th of February. We particularly need people who are willing to donate an hour or two that week to assist on the stall. What better way to meet people.

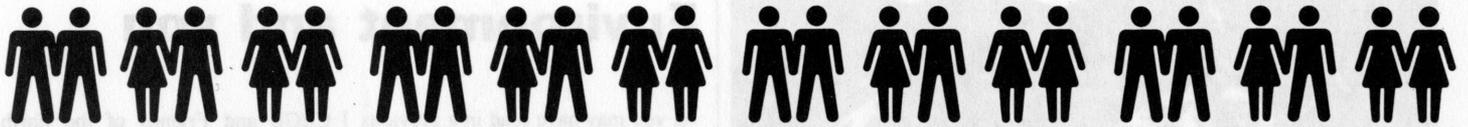
THE BOOZE BROTHERS

THE HOG'S BREATH BEER FESTIVAL

From 12 noon
on Saturday 21st February
for
ONE WEEK

SOUTHSIDE BAR

During the week there will be
about 50 different cask-
conditioned ales on sale on a
rotational basis for you to
sample and enjoy



AIDS: The nightmare

In recent weeks, one subject which appeared to have faded from prominence has been brought to light again by a campaign of posters, leaflets and TV and radio commercials released by the government, and by a renewed burst of speculation on the part of the national press. That subject is AIDS.

AIDS has been variously described as 'The killer disease', 'The Gay plague', or 'the body's reaction to something unnatural'.

Are these fair descriptions?

We have heard that you can catch it by shaking hands, and that because of it, 80% of homosexuals should be gassed. Is this really sensible?

This week, FELIX sets out to examine the disease, and to clarify the facts.

The combination of two such rare problems confined to such a narrow group represented a serious cause for concern. The most plausible explanation seemed to be a total lack of cell-mediated immunity, and a search was begun for verification and a medical cause.

It was popular during that period for certain groups of homosexuals to use drugs to heighten the sexual experience, and it was thought possible that this practise could provide a chemical cause for the condition, although some practitioners favoured the idea of an accumulation of sexually transmitted diseases. This led to the questioning of the sufferers about their recent sexual contacts, during which an astounding fact came to light: A few of them claimed to have had as many as two thousand sexual contacts during their lives, with many listing hundreds. This extraordinary degree of promiscuity meant that if the disease was sexually transmitted, they had been very highly exposed to it. It also made the task of checking on their contacts very protracted.

In 1982, as the number of cases began to increase, reports were being collected regularly by the United States Centre for Disease Control, who noticed that some Haitian men who were not homosexual were developing the condition. At the same time, the first reports of cases occurred in haemophiliacs and women, thus proving beyond doubt that the disease was not confined to homosexual men. All the women who developed AIDS had been in sexual contact, or had shared intravenous injection equipment with infected men, and this, in conjunction with the haemophiliac cases, implied that infection took place by blood transference or sexual contact, in a similar manner to the spread of Hepatitis B.

It was also early in 1982 that the first case of AIDS was recognised in the UK, and by the end of the year the number had risen to three, all of whom could be shown to have had contacts in the United States. This provided compelling evidence that AIDS was an infectious disease, and one with a long incubation period, which had spread first and fastest among very promiscuous homosexual men, but which could be caught by

anyone. This is demonstrated by the situation in some African states, where the disease is distributed evenly between men and women of all sexual orientations. It is thought that the rapid spread in these countries may be due to the high incidence of prostitution.

A concentrated search took place for the cause of the disease, and in 1983 it was traced to a virus which was very similar to a leukaemia-causing virus discovered in 1981. Because of this similarity it was named Human T-Cell Leukaemia Virus 3, or HTLV3. This virus was cultured in the laboratory and used to develop an antibody test which could be applied both to patients blood samples, and to donated blood. This gave effective protection to haemophiliacs, since from October

1985 they, and all other NHS patients received only screened blood. Before this date, blood had been heat-treated to kill viral infections. As a result, patients in the UK now have little or nothing to fear from blood transfusions.

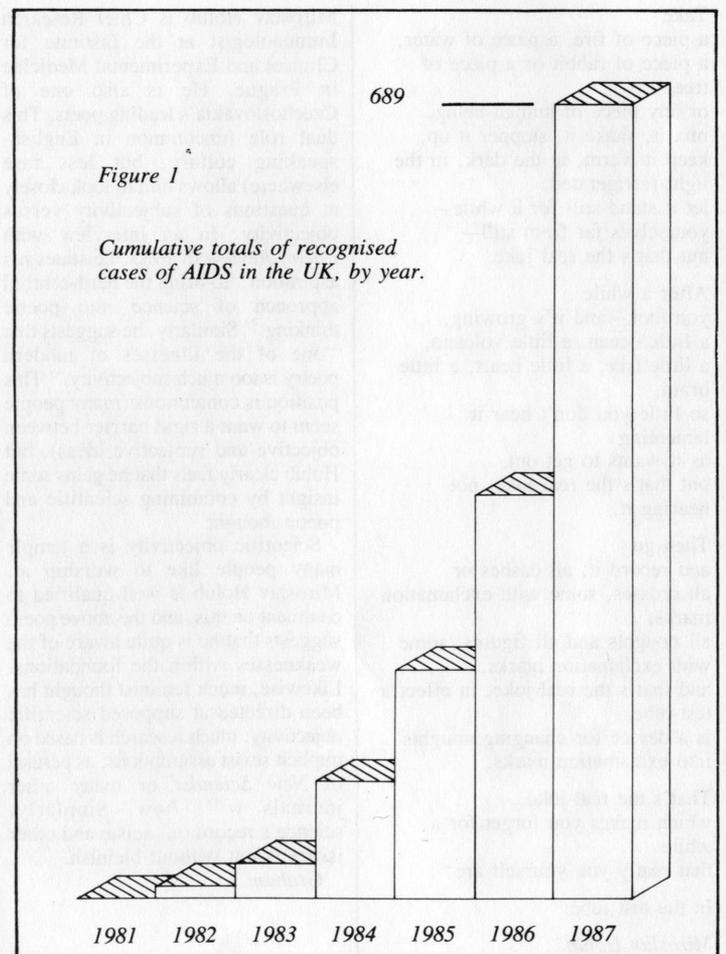
That is how the situation stands at the time of writing. The medical services have been unable to develop either an effective vaccine, or a cure. However, several laboratories are cultivating the virus, now named Human Immunodeficiency Virus or HIV. This allows extracts of HIV to be tested for potential use as a vaccine, and also provides viruses for use in antiviral drug trials.

Earlier this month, the government released the latest figures for the number of people in this country who have developed AIDS. These figures

The history

AIDS in itself causes only a mild condition of lymph gland enlargement, but it destroys the body's ability to protect itself by attacking the human immune system. Sufferers from AIDS are vulnerable to any infection that is going. Although we know little about the origins of the disease, we can say quite a lot about what it has been doing in the last seven years.

In June 1981, five young men in San Francisco were reported to be suffering from a rare condition called Pneumocystis Carinii Pneumonia. All the men admitted to being promiscuous homosexuals, and this confinement to one sexual group, combined with the rarity of the condition, caused some alarm among the American medical community. By July, a total of 26 cases had been recognised, all of them in homosexual men, and some of them dating back to 1978. Many of the men exhibited an even rarer condition called Kaposi's Sarcoma, which causes unsightly swellings on the skin. This is now one of the most publicly recognised symptoms of the disease we have come to know as 'Acquired Immune Deficiency Syndrome', or AIDS.





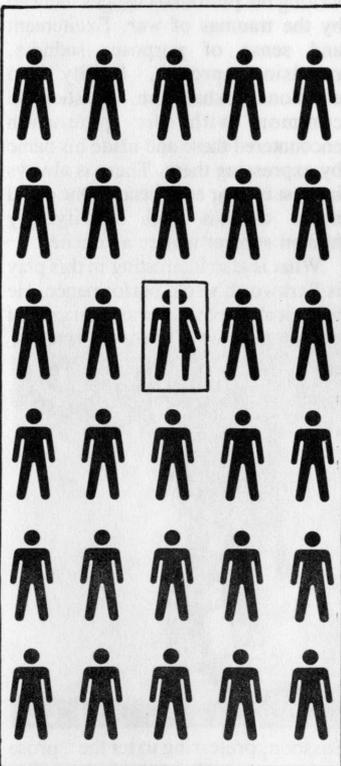
of the 1980's

are shown in diagrams 1 and 2. It is worrying to note that the number of heterosexuals affected has reached 2.8% of the total. The increase in this percentage is currently very slow, and at this level it could be possible to contain the risk of significant spread in this group. However, this will only be achieved if every effort is made to keep the level of public knowledge of the disease at a maximum. To further the truths, and destroy some of the myths of AIDS.

AIDS is transmitted via blood, either through transfusions or on IV needles or surgical equipment. It is also transmitted by sexual contact, that is by contact between the sexual secretions—semen or vaginal fluid—and the membranes of the vagina, mouth or anus.

Does anyone have any questions?

Figure2



The boxed figure represents the proportion of non-homosexual sufferers from AIDS.

The fantasies and the facts | The warning

Q: Who is most at risk?

A: Anyone who is promiscuous, especially homosexual men. Anyone receiving blood transfusions in parts of the world where the donated blood is not screened for the AIDS virus. Anyone receiving injections with an infected needle, and especially drug misusers who share injection equipment.

Q: Can you catch AIDS from oral sex?

A: It is quite possible. The greatest danger is to those who actually swallow semen or vaginal fluid, but the presence of these secretions in the mouth can be hazardous, especially if you have sores or ulcers in the mouth. Even in the absence of these, transmission could happen via membrane penetration. The best bet is to avoid oral sex unless you are sure.

Q: If you have sex, how can you stay safe from AIDS?

A: The fewer people you have sex with, the safer you are. Remember that prostitutes may have taken to the street to finance a drug addiction, which makes them doubly dangerous. Avoid them. Cut out casual relationships and one-night stands. Know your partner! If you must have sex with someone other than your usual partner, use a condom to reduce the risk of infection—it does work. Remember, if you catch AIDS you can pass it on to your usual partner.

Q: Are you less likely to catch AIDS if your partner is more gentle with you?

A: No. This idea arose through the theory that mucosa which had been damaged through excess force would be more permeable, but there are cases on record of women catching AIDS through artificial insemination, which was no doubt a very gentle process.

Q: Can you catch AIDS from non-sexual body contact?

A: No. It is quite alright to shake hands, share cups, utensils, etc.

Q: If you need blood, or dental or medical treatment involving injections, can you catch the AIDS virus?

A: In this country it is almost impossible, but in some parts of the world blood is not checked for infection, and medical or surgical equipment may not be adequately sterilised. Try to avoid treatment involving injections and surgical procedures, and receiving blood from local donors, under these circumstances.

Q: Can you catch AIDS from kissing or heavy petting?

A: No. Although the virus has been isolated in saliva and tears, it is only present in very low concentrations, and does not appear to be infectious from this source. You can kiss and pet as intensely as you like, provided that blood or sexual secretions do not enter your partner's body. Accidental spillages of blood or sexual secretions can safely be washed off normal skin, as soap and water effectively kills or removes the virus.

Q: Can you catch Aids from a toothbrush or razor?

A: Possibly, as these may become bloodstained, and cause small scratches of the face or mouth. You might also easily catch other things, including herpes, so it is best to avoid sharing anyway.

Q: Can you catch AIDS from a toilet seat or a towel?

A: No.

Q: How easy is it to be tested for HIV infection?

A: You can apply in total confidence to any special clinic, either STD - Sexually Transmitted Diseases, or GUM—GenitoUrinary Medicine. You will almost certainly be offered counselling, information and advice before the test is carried out, and again if necessary in a few days when the result is available.

It is likely that you, the reader, fall into a low-risk group. You are probably heterosexual, and you probably don't inject drugs. But just suppose that you caught AIDS - it isn't impossible. Then suppose that you passed it onto someone who was promiscuous. Within a month, they might infect five people...who might infect twenty...who might infect a hundred...and then five hundred...and then two thousand...

In other words, the next time you cry out with passion, you could be sowing the seeds for two thousand cries of misery.

AIDS is a threat to us all, whatever we are. We all have a responsibility to ourselves and to our fellow members of society, to behave sensibly and to heed the warnings given to us.

When writing this article, I tried my best to think of some final, convincing paragraph, some way of expressing my concern and the concern of the people I have spoken to while gathering information. Although, as shown earlier, there are only about seven hundred developed cases of AIDS in this country at the moment, remember that there may be many more people carrying the virus. Nobody was prepared to tell me exactly how many; perhaps nobody really knows. My main source, who has asked to remain anonymous, looked at me hopelessly, and said:

"Everyone seems to expect us to stop this thing by magic. We do have a way of stopping it, without ever producing any drugs. All we have to do is stop passing it on. Somehow I don't expect this to happen."

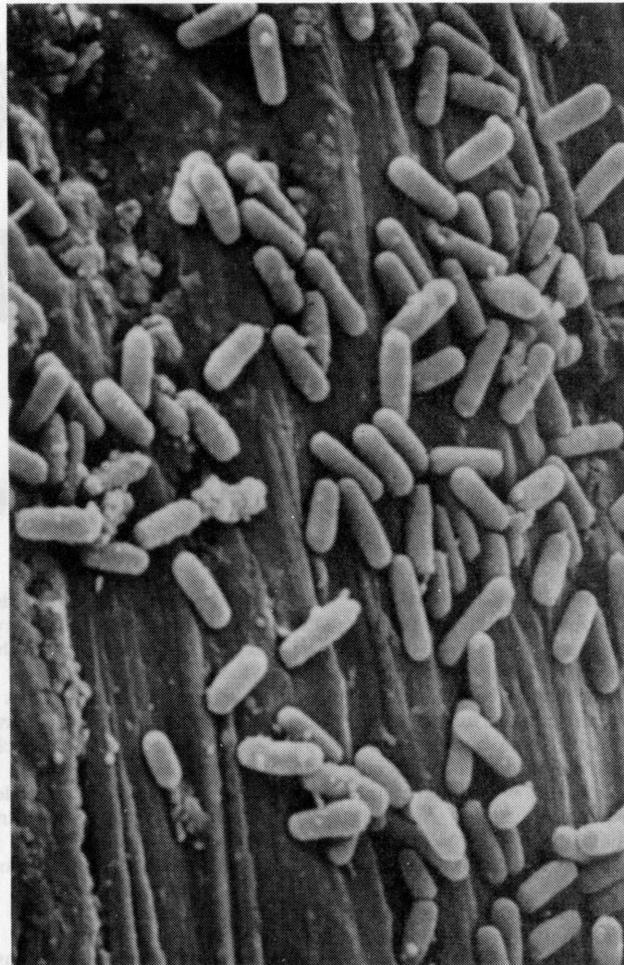
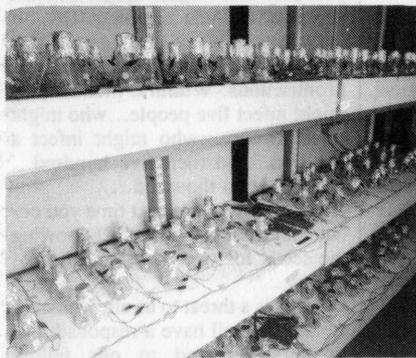
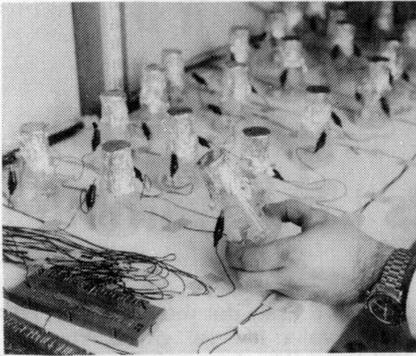
I asked why.

"We have all known since 1961 that smoking causes heart disease, cancer, bronchitis, you name it. Warnings are printed on every packet of cigarettes. How many people have given up smoking? About ten per cent. Which do you think is the greater human urge, to smoke or to make love? Please tell them to be careful."

'Them' means us. All of us.

Culture vulture

Gren Manuel



Although the process by which DNA creates proteins is now largely understood, there is still much to learn about the way that living cells grow. Cells with the *same* genetic information in an organism somehow manage to grow in different ways and at different rates. A better understanding of cell growth would be very useful, as it could lead to faster-growing crops and improved healing of wounds.

Dr Andrew Goldsworthy and his team in the Pure and Applied Biology Department have been working in this area, and have recently received a £47,000 grant from the Agriculture and Food Research Council to continue their work for three years. They have been doing experiments with 'callus' cultures. If a plant is damaged the first cells which grow at the site of the damage are callus cells—these are amorphous and unspecialised. As repair continues the callus becomes differentiated, and vascular tissue and other specialised types of cell appear. In a laboratory a callus will reproduce indefinitely in a nutrient culture.

Callus cultures like these are produced after experiments which alter the genetic information in a cell. After the DNA is modified cells are put into a nutrient solution and they reproduce to form a callus. However the specialisation that takes place in a callus which is part of a plant does

not always occur if the callus is cultured in a laboratory and the roots, leaves and stem of a 'normal' plant are not present the new strain cannot be taken out of the laboratory. Sometimes this differentiation will spontaneously start taking place, and once started the shoots can be transplanted and made to grow into 'proper' plants. However this spontaneous ordering is very hit-and-miss, and in some species does not happen at all.

Dr Goldsworthy and his team discovered that by passing a weak electric current through the callus culture (in the order of micro-amps) they could increase the rate of cell growth by as much as 70% and also greatly increase the incidence of this spontaneous differentiation. This discovery alone could reduce the lab costs of genetic engineering significantly.

It appears that electric fields play a very important part in plant growth and differentiation. By pumping ions (charged particles) across their membranes cells can create and control an electric field across themselves. This can influence the way proteins behave, and affect the organisation and structure of the cell.

A study of the electric fields of algae has shown that under normal circumstances they are aligned in a similar way to the domains in a magnet. In the callus culture the

electric fields of the cells are distributed randomly, similar to the domains in an unmagnetised piece of iron. The co-ordination of the cells' electric fields appears to be an important part of the mechanism which shows cells 'where they are' and 'what they are meant to be'. The current applied by Dr Goldsworthy seems to act as a 'compass', helping the cells align their own electric fields and therefore promoting growth and specialisation.

The £47,000 received by Dr Goldsworthy and his team is to cover basic research for three years into the way that electric fields affect cell growth. There are many possible applications: it is known that passing a small electric current across the site of a bone fracture will promote rapid healing and that skin regeneration after a burn can be accelerated, showing that animal cell growth uses electric fields too. In addition electric currents have been used to allow frogs which have had legs removed to grow them back (frogs, of course, along with the other higher animals do not regenerate lost limbs). There are many possible advances in agriculture, medicine and biology.

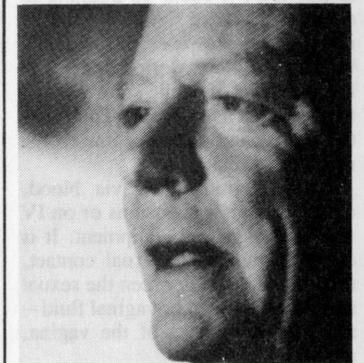
There is more information about electric fields and cell growth in Dr Goldsworthy's article in the *New Scientist* of 2nd January, 1986.

Review: Siegfried Sassoon

Those with an interest in poetry or acting or both should try and catch *Siegfried Sassoon* at the Apollo before its short run ends.

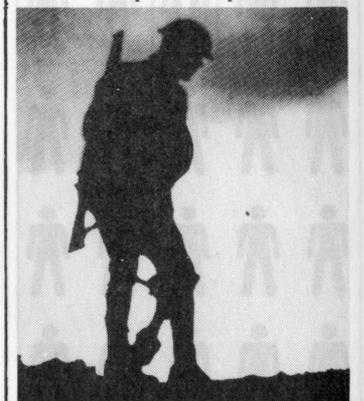
Peter Barkworth plays Sassoon and has, himself, put this one-man-play together, using Sassoon's writings alone. He has restricted his attention to the poet's young life up to the end of the Great War and the texts he has utilised form a remarkably accurate portrait of the soldier poet.

What is most interesting in this play is the poet-making experience. The early part shows us sensitive articulate



but not particularly interesting or unique youth. Then, gradually and finally markedly, we see in Sassoon's writing the profound changes induced by the traumas of war. Excitement and sense of purpose; sadness, revulsion, protest, futility and emotional exhaustion. Sassoon in common with his generation encountered these and made his name by expressing them. There is always interest in their experience. One could never dismiss such horrifyingly human subject matter as cliché.

What is also interesting in this play is Barkworth's solo performance. He has not attempted an impersonation of



Sassoon, preferring to let the "prose and poetry speak for themselves, free from as many additives or artificial colourings as possible." However, he communicates a great enthusiasm and love for Sassoon's work and there is much to enjoy in his small caricatures and delivery of poems. The success of this production is entirely his.



a petty chieftan who made war, not on the Saxons but on fellow Celts. Celts fleeing to Brittany exported the story of the noble king who would rise again from sleep to free them, and the French began to write poems about it all. Geoffrey of Monmouth, a so-called historian, freely improvising where solid facts ran out, put Arthur and his knights into a

up by foster parents, is hailed as King of all the Britains after drawing an enchanted sword out of an anvil—then gets another sword thrown to him by the Lady of the Lake. Being a wise, good and godly man, he drives out the Saxons and sets up the fellowship of the Knights of the Round Table to protect his kingdom, rescue damsels and avenge wrongs; dragon killings

the treachery of Mordred (Arthur's power-crazed nephew) and Quinevere and Launcelot's affair. Arthur, badly wounded, is taken away by four queens in a boat, legend saying that he will rise from sleep one day to free Britain from foes. Whether he will drive out the Vikings first (most of East Scotland, Durham, Yorkshire and East Anglia) or the Saxons (the rest of England) remains to be seen.



Quietly they rode near to look . . .

Violence, Lust, Religion and more Violence

history book and from then on it was no holds barred.

The best publicity agent of all was Sir Thomas Malory, who re-wrote the Arthurian legend whilst stuck in Newgate prison for being on the losing side in the War of the Roses. He added a request for deliverance to his epic, which was printed by Caxton, but nevertheless died in his eleventh year in Newgate.

It is easy for us with our complex 20th century fiction and drama, full of underlying metaphors and rather boring hidden meanings, to patronise medieval literature as simple. However with Arthur even the themes are complex, the language is beautiful and lyrical and the characters have real emotions and desires. Taken at face value, Arthur has all the material for a good story; blood (lots of battles and jousts), sex (various damsels in samite dresses, plus the adultery between Quinevere and Launcelot) and religion (the quest for the Holy Grail).

The basic plot, with variations on the theme, tells how Arthur, brought

Don't we all long for a bit of romance—mystique, love, jealousy, noble courage and adventure? Maybe this is why the legend of King Arthur has exercised a spell over the collective imaginations of western Europe for over one millenia.

Unfortunately debunked by tightly-trousered Michael Wood in his *In Search of... King Arthur* programme, the legend seems to have begun with



. . . and all loved him at once

by appointment and giants a speciality. At the height of the glory of the Holy Isle of Logres (as it was called) the knights set out to find the Grail, the cup used by Christ at the last supper. Many of the knights never returned from this quest and soon after the Kingdom of Logres is broken for ever by the combined effects of

and his Knights of the Round Table, price £2.50. If you're looking for a grown-up tome *The High History of the Holy Grail*, published by James Clark & Co. at £6.95 is available, but be warned, it contains much ancient and ye olde spelling. Thereupon, I lay down my pen and girt my lab coat on me, bearing my readers farewell.



Launcelot knocked them off their horses . . .



. . . like so many nine-pins

Inter - Hall clash



Football Southside Derby Sunday 15th February Selkirk 1, Tizard 4

After a two week break, Selkirk Hall football team took to the turf again last Sunday. This time it was the big one. Would Birmingham's tactics pay off? Would Tonge return successfully from injury? For some of the younger players it was to be their first Southside Derby—the chance of a lifetime. Would they crack under the pressure?

In the other camp, Captain Pete Wallis had taken three weeks to assemble a full strength Tizard side. They were evidently physically and psychologically honed to perfection. The raw meat had been consumed. They were ready and eager.

A near capacity crowd surged forward with excitement as the red shirted players of Selkirk kicked off. The ball was soon worked via Holt and Fasihi to Evenden who put centreforward Tonge on his way. He

dribbled and skillfully created a shooting chance. The blast went uncharacteristically wide—the hamstring had gone again—this was to prove Selkirk's downfall. Back to form striker Persil Charlton entered the game.

Encouraged, Tizard attacked in droves and were soon 2-0 ahead. Led by the skillful Morris and the physical Birmingham, Selkirk fought back with the former slotting home from a goalmouth scramble. Retaliating Tizard broke down the left, rounded the excellent Haines and scored from a rebound off the keeper (3-1).

A rousing team-talk, another substitution (Calowell for Holt) and first class defensive play by all, enabled Selkirk to hold off the strong Tizard attack in the second half, but with their key man on the sidelines, they really had no chance. Morris blotted an otherwise clean second half copybook by scoring a spectacular own goal to give Tizard a flattering 4-1 win.

Selkirk will be entering two teams in the soccer sixes. See you there!

Football IC 1st XI 10, London Hospital 1st XI 3

London Hospital thrashed

IC 1st XI Captain, Alex Lunghi, had a sleepless night wondering what sort of team he could put out against the all conquering London Hospital side; after all, IC were missing 6 first choice players through illness, interviews and assorted Valentine's Day celebrations and LH, the leagues runaway leaders, had only lost one game all season in all competitions and conceded only 16 goals in the league. However, IC were on a high after 4 straight victories against GHXM (7-1 and 2-0), QMC (4-1) and MXUCH (4-1). So 9 IC players, Miner Tim Fisher (who had just finished playing for RSM) and on-loan Paul Bravens were out to give a good performance.

IC started solidly but neither side showed any bite in front of goal. However, after 15 minutes, LH took the lead with a well-taken goal. Bravens equalised for IC with an equally well-taken goal 5 minutes later, and Byron Wood's thunderous left-foot volley put IC into the lead almost immediately. LH equalised

controversially on the half-hour when their winger seemed a mile offside, but the goal stood. Bravens continued the goal spree with a superb half-volley which found the top corner. Skipper Lunghi was well happy at half-time with the score at 3-2.

IC started the second half well and after a few minutes Jim Wilson found the net after he had stayed up for a corner.

LH pulled a goal back minutes later with a scrambled goal and then piled forward looking for the equaliser. The turning point of the game came when LH's "equaliser" was disallowed for a well-spotted offside. IC's midfield quartet of Adams, Cole, Olden and West then literally took over in what turned out to be a (illegible—Typesetter) (3) (including a delicious curling free-kick), Adams, Wood and Bravens completing his hat-trick finished the game off in style for IC in a final score of 10-3.

Team: Allen, Fisher, Ewart, Lunghi (Capt), Wilson, Adams, Cole, Olden, West, Wood, Bravens.

Rowing Saturday February 14th IC at Henley Fours Head

Mixed fortune

Oarsmen from Imperial were covered in glory at Henley Fours Head (not Henley Royal Regatta). It was however, a day of mixed fortune.

Our senior A coxless four impressed spectators by their speed and power. This four may well have stormed in to overall victory, had they not been blocked by a rival crew, which stopped in front of them causing them to halt for several vital seconds. Despite this incident they came second overall and won the senior A pennant.

Both the elite coxed four and senior B coxless four won their respective categories, even though oarsmen in both crews felt that they could have rowed much better. This put three Imperial crews in the top eight out of a field of over 150 boats.

But there was also a touch of disaster for IC. The senior C crew who were impressive throughout the year were forced to row with women's blades. They were also forced to share their boat with the novice women. This reflects the acute shortage of equipment at the boat club.

After a race in which they had to raise too high to compensate for using women's blades, the senior C crew were shattered. But the bitterest blow was to come. When the results were announced they found that they had come second in their division by a mere 2 seconds.

Both the men's and women's novices put up a creditable performance and show promise for the future.



Football
Saturday 14th February
New College 2nds 1,
IC 3rds 5

Thirds' revenge

Saturday's emphatic win at New College brought a third successive win for the in-form IC 3rds. Having beaten second-in-the-table Guys 1sts 2-1, with a gutsy and determined display, and New College 2nds by a similar scoreline, the 3rds travelled to the scene of their recent cup defeat, hoping to achieve their first double.

On a very heavy pitch IC were slow to get into their stride and New College forced the earlier openings but failed to take advantage. We soon took control with slick first-time passing down both flanks. Pressure paid off when Wendel Charles' shot was deflected off a defender to find the back of the net. Moments later, New College's goalkeeper patted out a corner, and Mark Woodgate, lurking on the edge of the box, headed just over. The second goal was vintage football; a precision four-man move down the right found Mark Radley in space. His fierce cross-shot was turned in by the sliding Mike Housby, to make the half-time score



2-0. Not surprisingly New College rallied for an early second-half goal but the aerial domination by Martin Lake, ably supported by the fast covering slide tackles of Mark Woodgate ensured New College didn't trouble keeper Mike Kemp. Both full-backs Russ Dark and Martin Dixon assisted in arguably our best attacking display this season. Mike Plummer's consistent breaks down the left ruthlessly demoralized the New College fullback whose tackles seemed close to desperation as well as somewhat ineffective. A determined Mike Plummer run and cross found Paul Thompson whose fierce six-yard volley whistled past a static New College keeper. Our opponents responded well with a swift counter attack and finely-struck consolation goal. Any 3rds complacency vanished and a lightning move found Mike Housby in space but his clever chip was acrobatically turned over. A fine sole goal by Wendel Charles made it 4-1. Breaking from a corner, Wendel received the ball on the half-way line, powered past two defenders who embarrassingly lacked pace, to delightfully clip the ball over a bewildered New College keeper. Minutes later Mike Housby and Mike Plummer rounded the keeper and side-footed home.

Midfield dynamos Paul Thompson and Kevin Graves battled hard to deny New College space. Indeed, Kevin, so dominant in the Cup game, had no chances, but with everyone else demonstrating lethal finishing, it didn't matter.

A stark contrast to our last visit here; creating fewer chances but every one decisive. A fine display of attacking football, hopefully to continue in subsequent games.

Team: Mike Kemp, Martin Dixon, Mark Woodgate (Capt), Martin Lake, Russ Dark, Paul Thompson, Kevin Graves, Mike Plummer, Mark Redley, Wendel Charles, Mike Housby.

daring but excellent starting tactics in the first and second races, led Imperial to resounding wins. In the third race IC made the mistake of not taking their opposition seriously and were punished by losing the race. The final score, 2-1 gave the match to Imperial.

A more serious challenge was posed by Oxford who even recruited two American sailors in an attempt to strengthen their side. But their unprecedented aggression on the start line, found its match in Apostolos Leouidhopoulos, who hadn't smoked for a week. It was a tough match and the aggression resulted in Richard Jarman needing a physiotherapist after a minor back injury. The match was finally a draw. IC which shows that aggressive opponents get the best out of our team. Future opponents beware!

Team: R Brimlow, Charles, Apostolos Leouidhopoulos, R Jarman, S Page, A Stork, A Burrows, Jenny.

Football—League
11th February
IC II 2, St. Mary's 0

Eventual Success

A beautiful sunny day at Harlington saw another changed IC II's team gain another valuable two points for their promotion bid. However, even the most ardent of their fans were contemplating retiring to the bar by half time, due to the appallingly boring, goalless first half. In fairness the IC defence was excellent, and S Gordon was working hard and effectively in attack. However, the midfield had so far been unimaginative and poor in their passing execution.

The second half started where the first left off, and then after 20 minutes IC woke up. Buckley, Keelin and McDonald started causing problems down the right. Barrow also began to get forward and it was his low curling free kick which led to an innovative dummy by Gordon, leaving Broekhuizen to flick the ball into the net.

Inspired by this, IC kept up the pressure and their control on the game. The two points were safely ensured when D Semeiria headed across the goal and Keelin came flying in at the far post and although his shot was helped into the net by a defender he was dubiously given the credit for the goal.

Team: J Wreford, N McDonald, S Dunthorne, S Laverick, J Holland, M Barrow, A Keelin, K Buckley, D Semeiria, S Gordon, N. Broekhuizen. Man of the match: S Gordon.

Hyde Park Relay

Run in the Park

Those of you who were around the Union last weekend would probably have noticed the 1100 runners or so present at this year's relay. As always, the standard was very high with most of the top student runners present although an unfortunate clash with the women's National meant some of the better women were absent. The men's race was won by Loughborough University in 84min 14sec, ahead of Oxford and West London IHE. Imperial were back in 54th place though half the 6-man team also ran for London University, which finished a creditable 8th despite a weakened team.

Altogether, 117 men's teams completed the course as well as 28 guest teams including Nat West Bank who were first across the line in 84-06. The guest teams also included some well known athletes such as Dave Clarke, who clocked the fastest individual time of 13-17, and Nick Rose. For the official teams, 5 seconds separated the five fastest individuals with S Newport of West London IHE being quickest at 13-32. Ex-IC runner Sam Carey was third fastest in 13-34.

In the women's race, Oxford turned the tables on Loughborough, winning by 20 seconds in 58-42. This followed the disqualification of Leeds who finished 2 seconds ahead of Oxford but had one runner doing two legs. The fastest individual was London's Lisa Webb who covered the 2 mile loop in 11-18.

Many thanks to all those who helped on the day

Sailing
IC vs Bath and Oxford
Saturday 14th and
Sunday 15th February

Double victory

For yet another weekend in a row, IC sailing team had a very successful outing. The challenge this week came from Bath, but on arriving at their home reservoir, we discovered that Oxford had also sent their team to try and break our streak of unbeaten matches.

The first match to be sailed was against Bath and Richard Brimlow's

RESULTS

Wednesday February 11th

Football

IC 2nds 2 St Mary's 0

Saturday February 14th

New College 2nds 1 IC 3rds 5
 IC 1sts 10 London Hospital 3
 RSM 4 Camborne 2

Rugby

RSM 3 Camborne 18

Hockey

RSM 3 Camborne 0

Squash

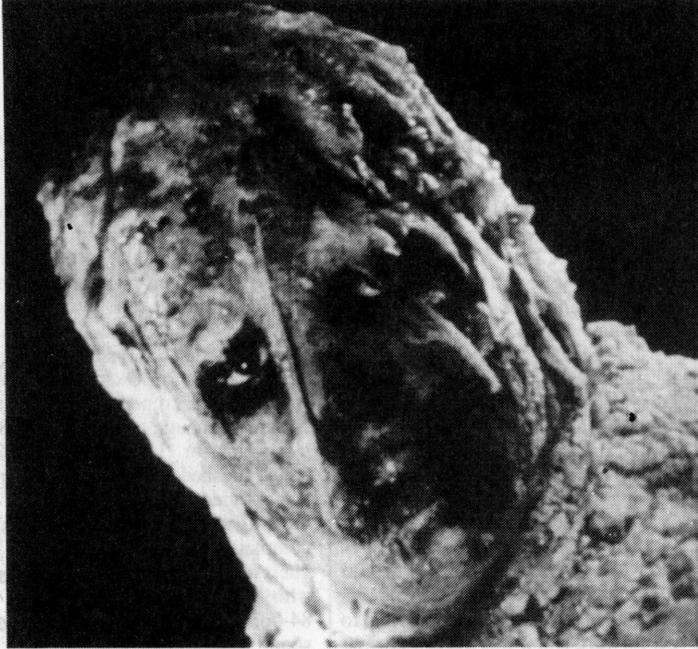
RSM 1 Camborne 4

Sunday February 15th

Selkirk Hall 1 Tizard Hall 4

Picocon 5

icsf



Picocon is the event of the year; it's the convention of the Science Fiction Society of Imperial College. As the name suggests, it is a small convention and it lasts for only twelve hours but during this time there will be speakers, videos, quizzes, games, RPGs and slide shows.

This is the fifth Picocon held at Imperial College. Over the past years we have had many top quality speakers including, for example, David Langford and Brian Stableford. This year our guests of honour are author John Brunner and space artist Dave Hardy. Both men are British and are highly esteemed in their separate fields of work (which are generally dominated by Americans).

John Brunner has written several books, mostly science fiction, and has won several awards including the prestigious Hugo award for *Stand on Zanzibar* (1968) and the Nebula award for *The Sheep Look Up* (1972). He has written professionally for over thirty years and has contributed much to both the intellectual and lighter sides of science fiction. His talk should be very entertaining and provoke much discussion.

Britain has produced a few talented science fiction artists. One of the latest and most noted artists is David Hardy. Along with Patrick Moore, he wrote *Challenge of the Stars* which he illustrated using a vivid sense of imagination and scientific accuracy. As well as speaking about science fiction art in general, Mr Hardy will also be giving a colourful slideshow.

As well as our guests of honour, we have invited many other authors, science fiction and fantasy buffs who should be popping in from the real world (or unreal world as the case may be). After mingling with the 'rich

and infamous' (no, I don't mean the WellSoc and Consoc committee members), you could join in with the fantasy and wargames. Hopefully, we should be running Car Wars or Paranoia and other role playing games.

Throughout the day, various video films will be shown. These will include *Dark Star*, *The Hunger* and *Scanners* (especially for all you bloodthirsty non-vegetarians). Last year, the ICSF challenged the Cambridge Science Fiction Society to a trial of charades and hack questions, we thrashed them in one game and narrowly lost another. This year our superconductivity-HAL-computer-like team intend to demonstrate their superiority with style, so come along and give them your support.

Refreshments can be bought and will include drinks, sandwiches and pizzas.

You don't have to be a science fiction or fantasy hack to attend Picocon. The convention starts at 10.00am and finishes at 10.00pm on Saturday February 21st, and is held in the Biology seminar rooms (old Bot-Zoo common rooms) in Beit Arch. Entrance will be £2.50 non-members, £2.00 members.

TIMETABLE

10.00	Heavy Metal
11.30	Danger Mouse
12.00	ICSF vs CUSFS
1.00	Danger Mouse
2.00	Dave Hardy Slide Show
3.00	S.F. Music Quiz
3.30	Dark Star
5.00	John Brunner
6.00	Scanners & Meal Break
8.00	ICSF vs CUSFS
9.00	The Hunger

Film Society

IC Film Society's next presentation, this Thursday 26th in Physics LT1 (doors 7.30pm), is John Huston's *Prizzi's Honour*, starring Jack Nicholson (*Easy Rider*, *One Flew Over the Cuckoo's Nest*) and Kathleen Turner (*Bodyheat*, *Romancing the Stone*, *Crimes of Passion*).

John Huston, one of Hollywood's greatest directors, who made such classics as *The Maltese Falcon* and *The Treasure of the Sierra Madre*, manages to keep up his standards in *Prizzi's Honour*. Huston keeps on making films which are different and unusually cast but very entertaining such as *Prizzi's Honour*.

Jack Nicholson plays the enforcer of a Brooklyn mafia family, who falls head-over-heels in love with Kathleen Turner, who he later finds out is a freelance contract killer. Nicholson's performance as the awestruck, slow but not dumb, mafioso is both believable and very funny. Time Out recently called Kathleen Turner, 'Hollywood's hottest actress,' and it's no understatement, you'll know why if you see *Prizzi's Honour* or any of her recent films. However *Prizzi's Honour* is not just a film with two big stars giving electric performances, it is also a very subtle and funny spoof on the mafia and on mafia films. If you miss this film you miss out.

Martin Gans

50p members, £1.00 non-members.

Micro Club

Last Thursday, 15 members of Micro Club squashed themselves into a minibus and headed out towards Croydon in search of Rediffusion Flight Simulators. Despite mad drivers and a turbocharged 2CV we managed to reach our destination only slightly worse for the trip. Many thanks to Pete Hands for agreeing to drive.

Inside we were given a humorous talk on the history and principles of simulations including two videos of some of the incredible graphics which are now possible. With heads still buzzing of WIDE screens and sub-pixel anti-aliasing we were taken on a tour of the shop floor.

Don't forget the talk by Sir Clive Sinclair on Thursday February 26th at 1.00pm in Physics LT1. The title is 'Sinclair Computer.' Since the word is that he is about to release a new computer this should be an interesting talk.

Micro Club meets every Wednesday at 1.30pm in our club room at the top of the West staircase.

Socialist Society

IC Socialist Society proudly present 'Tony Benn MP' on 23rd February in the Great Hall at 1pm. This is a Monday but I hope that as many of you as possible can come. All are welcome.

Tony Benn MP, the former Lord Stansgate, is the former Labour Energy Minister and is currently a member of the Labour NEC. He has been called the 'darling of the left' and is a brilliant speaker. He was the MP for Bristol East until 1983 and has now a 6264 majority in Chesterfield. He holds the record for the most times returned to Parliament. This will hopefully be the best speaker meeting at IC this year, so please come along!

Real Ale Society

Last Wednesday Real Ale Society visited Young's brewery in Wandsworth. We were shown how the brewery has developed over the years, the building was originally built on a field where sheep had been kept, hence the name 'Ram Brewery,' and their woolly pet 'Ram Rod.' Although the company, which has a share trust scheme allowing employees to benefit from the company's profits, has kept pace with new equipment, old machines are preserved turning small corners of the building into a museum. One traditional practice still used is to deliver the products to local hostellers by horse and dray. This led to a visit by the Queen to see the magnificent horses, but although she had been surrounded by bottles of 'Ram Rod' she was refreshed with a cup of tea.

Real Ale Society prefers to visit sampling rooms, which makes the rest of the evening interesting...

The regular meeting on Thursday was also a success, the next one is Thursday February 19th.

STOIC

Yes, the student television of Imperial College is starting transmissions again next week with a debate between the presidential candidates. The week after, we will be showing the Hustings UGM 'Live' and you can see edited highlights of the Hustings the same evening. So don't miss our long-awaited return to the cathode tubes of Imperial College. Watch the presidential debate, at 1.00pm and 6.50pm next Thursday in the Union Snack Bar, Southside TV lounge, and all the campus halls.

STOIC—Are you getting the full picture?

Reviews

As reported in the national media a showing of the banned BBC film 'Secret Society' about the Zircon satellite programme, took place at the Conway Hall, near Holborn, last week. FELIX despatched two intrepid spys to penetrate the dangerous subversives.

Squeezing into a hall packed with young radicals, middle aged trendys and ageing reformists, all craning to see past the assembled media brandishing cameras and microphones, I managed to find a spot where I could get a reasonable view of the large projection video—although I suspect many others didn't. After a confused rearrangement of the stage and a short introduction, during

naughty ministry of defence types have been concealing it from Joe Bloggs MP.

The main thrust of the accusations was really quite simple; after the Chevaline debacle of the seventies (a massively expensive and not particularly successful update of Polaris), the Ministry of Defence promised to inform the Commons Public Accounts Committee of any

launches and their purpose is to conduct is, to detect any new radar sites or ones.

A successor to Rhyolite, code monster of Greek legend was proposed in Congress in 1975 in Argus had gone ahead to replace the ground station. The Tacksmen 2 facility in launch activities at Tyuratam, missiles from launch station vulnerability of ground station made a Rhyolite successor codenamed Aquacade is now launch by Titan 34D.

mission frequency, pulse duration, antenna beam pattern and polarization, so that ELINT essentially means listening rather than looking from space.

The information they provide is used in the design of jamming equipment and decoys for bombers and missile warheads. By knowing the precise characteristics of an enemy's monitoring systems, it is possible to evade detection by flying through gaps and weak spots in his coverage. Radio transmitters can indicate the location and identity of military units, their morale and identity of military formations. The first indication of BMs in the early 1950s; and ELINT systems routinely used to determine the location and performance of Soviet missiles.

At present the US employs an ELINT system code named Rhyolite. The satellite enters a 22 300-mile (35 880-km) high circular orbit above the equator. It takes 24 hours to complete this orbit and appears to hover over one spot on earth. Rhyolite carries a virtual forest of antennas including a dish antenna at least 70 ft (21.3 m) in diameter. Its onboard equipment can detect signals from the host.

claiming that the reason for the programme's ban was not even the political secret of the concealed £500 million, but some confused exposé of the non-independence of Polaris. So what's all this cheap thriller knock-on-the-door-in-the-middle-of-the-night stuff about?

One is occasionally driven to wonder whether it's not an elaborate ploy to advance Mr Campbell's

content of their programmes in the run up to an election. It is worth remembering that any review of secrecy legislation in the light of the Zircon affair could lead to more, rather than less, restrictive conditions. The search for motives can be endless, in fact so good a subject for the imagination is it that you can bet there will be any number of books cashing in on it. What's more you can



which the announcement that they were in breach of the official secrets act was met with a loud cheer, the meeting went straight into a showing of a quite clear tape of the offending item.

The audience saw Mr Duncan Campbell leaping from dish-covered ground station to dish-covered ground station presenting a sort of 'Boys Own' Guide to signals intelligence satellites. Interspersed with Mr Campbell's concerned boy scout visage was lots of stock footage of rockets taking off and people assembling civilian satellites. Later we were treated to several interviews with assorted civil servants and ex-science advisors.

The best of these was an interview with a former Chief Scientific Advisor to the MoD who happily chatted for several minutes about the theory of spy satellites and their obvious detectability. However, his face dropped and he sat frozen for a good ten seconds when asked about the Zircon project. When he finally came round from this icicles-in-the-underwear like trance, he only managed to burble something about not having heard of this project.

It emerged fairly clearly that once you launch a spy satellite anyone whose technology has advanced to the level of the telescope can deduce what it is. A number of references were made to the relationship between US and British intelligence services but no insinuation was really made to anything you couldn't have read in the press during the GCHQ dispute. Then in the last five minutes Mr Campbell's monologue launched into the cost of the whole enterprise and how our

project costing more than £250m—yet here was this unheard of Zircon project costing twice that.

The attempts at covering up the existence of the Zircon project were shown to be amateur in the extreme. It was alleged that the Zircon satellite would be sent up under the cover of being a Skynet (military communications) satellite. When the planned launching of the first two Skynets were announced, so were the names of Britain's first two planned astronauts (one from the RAF, one from the RN), one to accompany each satellite on a space shuttle launch. Yet, when the 3rd "Skynet" was announced, there was no mention of any Army astronaut to accompany it. The first two Skynets were being put over the Atlantic, but according to a British Aerospace press release of the time, the third "Skynet" was going up at 52° East (ie over Russia), to facilitate communication with the "large British military presence in Hong Kong." When quizzed about this, the MoD replied that the satellite's destination was a secret, and the BA press release was quickly rehashed to eliminate any mention of its intended location. It was admitted that each Skynet needs its own radar dish on the ground. Cut to newly built Skynet ground base in Hampshire, all construction complete. Count 'em carefully; yep, there's only two radar dishes ie only two Skynet satellites.

The immediate impression left as our Duncan's stirring right-to-know speech faded away, amid numerous subtle references to the title of the series, was a doubt that any of the contents could be a strategic secret. We were then treated to Tony Benn

journalistic career. More plausibly it has been suggested that the use of the official secrets act is an attempt to worry the media about the political

be pretty sure that the Beeb won't have to worry about the viewing figures for the rest of the "Secret Society" series.

Free student travel



The OCs helps to fund adventure travel.

Well, where are you going this summer? South American rain forests or South Coast near Dover?

Either way, the chances are that you won't be very far from the nearest OC member - a valuable source of advice in any language.

The choice is yours, the know-how is ours.



OCs: A very special link

Old Students' Association Office, Room 303 Shelfield Building, Imperial College. Telephone 589-5111 Ext. 3076



Small Ads

ANNOUNCEMENTS

● **IC Micro Club** 1.00pm Thursday 26th. Physics LT1. Sir Clive Sinclair talks on "Sinclair Research and the Past, Present and Future of the Personal Computer." Don't miss it!

● **Tuesday 6.00pm** Union SCR. The moment you have all been waiting for...The wine tasting of the century...Red Bordeaux alias Claret. Only the finest wines will be shown—the world can rely on us. An absolute snip at £3.50.

● **Anyone** who wants to help form (or join) AngloSoc contact Jim (the) Bunny, Chemistry I.

● **LOST** two members of the wine tasting committee, last seen in Southampton and somewhere in Soho. If found please return to SCR, 6.00pm Tuesday c/o Fiona Leckie, Chem III.

● **Birth** announcement, 4th day, Wed 25th Feb, 8.30-12.00. Place: Union Lounge. Interests: Mantronix, L.L. Cool J, Cabaret Voltaire, Age of Chance, Guana Batz, Fuzzbox.

● **LOST** on Saturday night? Want a place to go? Stagefright, Union Lounge. Be there or be somewhere else!

● **Any qualified** Union van drivers who would be interested in driving for a childrens' play scheme in Acton, should contact Cathy Harris, ICCAG, through the Union pigeonholes. It involves driving 10am—6pm. At the moment the scheme is only functioning every other week due to shortage of drivers. They have a van.

● **Jazz & Rock** club election papers are up—get signing up your names NOW!

● **Thank you** to everyone who helped at the Valentine's Party, especially Pete and Tim from IC Radio, Dave, Mole and Paul from DramSoc and Emma, Mike, Rufus and friends from Rag Comm. See you all at the next one (tonight). Spud.

● **Be prepared**—IC Symphony Orchestra Concert. March 6th. World famous renditions of Hindemith, Liszt and Vaughan Williams for only £1.00. Tickets available from Haldane Library or on the door.

● **Special Notice**—If you have any belongings in the Garden Hall Storage Room in the basement of House 12 Prince's Gardens, please make sure that they are marked with your name and room number clearly. During the Easter break, the storage room will be cleared of all items not marked accordingly. The Warden and Subwardens take no responsibility for items which are thrown away because they were not marked clearly, or those items belonging to non-hall residents, who have not made prior arrangements.

● **Found**—at 216 Hamlet Gardens after party 30th Jan. Gold bracelet—initials S.P.B.W., blue scarf, white silk scarf, red earring, Postman Pat badge, red pen-knife, screwdriver. Come and claim, or contact anyone of us. Linz Hambleton, Doc III or Nigel Lee, Chem Eng II.

● **Friends of Hyde Park** join BenchSoc. Free geese and bruises. Contact the Welsh Tourist Board for details.

WANTED

● **Urgently wanted**—photos of the pianist at the Guilds D&D on Feb 6th—contact Charles Brereton, int. 7082. Will pay for reprints etc.

FOR SALE

● **Honda CB 175** (L reg). Dead battery, warped front

wheel, otherwise sound. £65. Contact T. Tsikas, Huxley 508/b ext. 6987.

● **Renault 14TL** (1979, T reg), only 43,000 miles, one owner, MOT & tax until May 87. A very reliable car for £700 to include Philips stereo radio/cassette. Phone Morris Sloman, ext. 5041 or evenings at 346 7857.

● **Canon TX SLR** camera, 50mm 1:1.8 lens & skylight filter for £45, to include Marexar 2x teleconverter and Sunpak auto 140 flash. Phone Morris Sloman, ext. 5041 or evenings at 346 7857.

● **Kawasaki (GPz 305)**, (A reg), taxed 15,500 miles, red, very tidy, for quick sale. £600 or offers, phone 01-351 9346.

ACCOMMODATION

● **Single room** in student house, Fulham area. Bus directly into College. £35 per week (minimum of £12 housing benefit per week). Tel: 381 6501.

● **Flat for 2** available in Earls Court (Philbeach Gardens). 1st floor, large room, front facing, own cooker, fridge and sink, gas fire. Rent £30 per week plus gas. Free hot water, shared shower and bath. Contact Steve Little, Physics III via undergraduate mail boxes. Be quick, this flat will go!

● **URGENT!** Available immediately: Vacancy for a female in double room in mixed, friendly flat in Hamlet Gardens. Only £20 p/w (after housing benefit). No deposit. Contact Sue Daley, Physics II or Tim Norman, Life Sci II

PERSONAL

● **Morse Part 2:** Di-di-di-dah (Beethoven's 5th) is V.

● **Assassination** required? Contact Ninja Colcutt, Min Tech III.

● **Ere Dave**...we gonna see the puppies from outa-space tonight? Yup pups...we gonna see 'em at the vicars 'n' happy dogs party.

● **I bet** he drinks Laffite Première Cru! No he doesn't—he's not a member of IC Wine Tasting Soc.

● **Heather**—I love the new hairstyle. Is it permanent? C K.

● **Probably** the best wine in the world, probably the Union SCR, probably 6.00pm, definitely £3.50.

● **Q.** Why does Dave use a Zenith?

A. It's the only camera he can't break.

● **Why** hasn't someone who used to work with gallons of blood been tested for AIDS yet?

● **Yes**, it's rat race time once more!

● **Wanted**, older man for deep relationship, contact Nick c/o ICSSO wind section.

● **Rumford**—where's the bear?

● **When in danger** or in doubt, run in circles, scream and shout. Anon.

● **Many thanks** to all those people who helped with the Life Sci cheese & wine. Love Sabina.





What's On

FRIDAY

Friday Prayers12.55pm.
 Union Building, Halaal food provided. See Islamic Society.

Fencing Club6.00pm.
 Beginners and experienced fencers welcome.

Vicars & Tarts Party7.30pm.
 Prizes for best vicar and tart. 12 o'clock extension. £1.50 on the door dressed, £2.00 on the door otherwise.

Bert & the Family Scrogg9.00pm.
 Royal College of Art 'Artbar'. Bert arrives in trendsville but retains his musical integrity! No sell out! Fuck all (free to all). See Bert.

SATURDAY

DJ's Grekky Show9.00am.
 999KHz. Featuring the Triple Track at Ten, Twelve, True Stories, a look around College for the week and lots more. Free.

International Nite5.00pm.
 Main Dining Hall, Sheffield Building. £2.00 before 9.00, £3.00 after 9.00. Tickets from Union Office, Rm 436, Chem. Eng.

Stagefright8.30pm.
 Appearing live. Union Lounge. Cheap beer and disco. Free. See Peter Hartley

SUNDAY

IC Wargames1.00pm.
 Union Dining Hall.

Dry Slope Ski Racing4.00pm.
 Come for fun—fast and frantic skiing against other London colleges at Welwyn Garden City. Meet at Southside with Rail Card if poss.

MONDAY

Tony Benn MP1.00pm.
 Great Hall. Speaking to IC Socialist Society. All welcome. See IC Socialist Soc.

Concert Band Rehearsal5.45pm.
 Great Hall. All players please—concert in 3 weeks.

Beginners Ballroom .7.00pm.
 Dancing Club in the JCR. 70 pence.

WellSoc Speaker Meeting7.30pm.
 PLT 1. Prof Wilkins talks about "The Scientist as a Hero." £1.50 membership on door.

Chamber Music Concert7.30pm.
 The Music Room, 53 Prince's Gate. Wine included in admission. Refreshments available. £1.00. See Chamber Music Soc.

Medals Class8.00pm.
 Dancing Club in the JCR. 70p.

TUESDAY

Prayer Meeting8.15am.
 Christian Union in the Union Upper Lounge.

Mass12.40pm.
 Chemistry 231. All Welcome.

Jazz & Rock Club12.45pm.
 Jazz Room. Committee meeting—all members welcome to attend the fun. See Jazz and Rock Club.

Recitation of Qur'an1.00pm.
 Prayer Room (9 Prince's Gate). See Islamic Society.

IC Amnesty Meeting5.30pm.
 Brown Committee Room (venue may be different and will be specified on posters etc. See Boshier—Chair of IC Amnesty.

Beginners Rock 'n' Roll5.45pm.
 Dance Club in the JCR. 70 pence.

Wine Tasting6.00pm.
 SCR. Tasting of Claret including a quiz! (The best wine in the world). £3.50.

Judo6.30pm.
 Union Gym. Beginners Welcome.

Intermediate Ballroom7.00pm.
 Dance Club in the JCR. 70 pence.

Cricket Club7.45pm.
 Spring term nets at Lords indoor cricket school. 9.00-10.00pm every Tuesday. Meet 7.45pm Mech. Eng. Foyer. Sign up outside the Bookshop on the lists.

Improvers Ballroom .8.00pm.
 Dance Club in the JCR. 70 pence.

Nigel On The Wireless9.00pm.
 Aural Titillation on IC Radio. 999KHz Medium Wave.

WEDNESDAY

Tafseer of Qur'an1.00pm.
 Prayer Room (9 Prince's Gardens). Talk given by Dr Darsh. See Islamic Society.

Circuit Training12.30pm.
 Beit Gym. Free to Keep Fit Club members. £1.00 membership. See J Day

Imperial Workout1.00pm.
 Southside Gym. Please wear something comfortable and bring training shoes. £1.00 membership, 50p per lesson. See J Day.

IC Wargames Meeting1.00pm.
 Union Dining Hall.

10-Pin Bowling2.20pm.
 Chem. Eng. Foyer. £4.00

Rock 'n' Roll Routines3.00pm.
 Dance Club in the U.D.H. 70p.

Tap Dancing5.00pm.
 Dance Club in the Lounge. £1.00.

ICSO Rehearsal7.00pm.
 Great Hall. Only 10 days to the concert—please turn up to save the rest of Richard's hair! See ICSO.

Social Evening8.00pm.
 Main Refectory, Sheffield. Ballroom, Latin American and Rock 'n' Roll. 70p students, £2.00 non-students. See Dance Club

Ffourth Day Disco8.30pm.
 All you wanted to hear—cabs, skidoo, hip-hop and many more. Be there or beware!

ICSO Rehearsal10.00pm.
 Queen's Arms. Genial frivolity after another of those—we're getting close to the concert—rehearsals. All welcome.

THURSDAY

Youth Hostelling Club12.30pm.
 Meeting in Southside Upper



Lounge.
Fencing Club12.30pm.
 Union Gym. Professional Coaching for beginners and experienced fencers.

BUNAC12.45pm.
 JCR. Everything you want to know about working and playing in America.

Sir Clive Sinclair1.00pm.
 LT1 Physics. "Sinclair Research and the Past, Present and Future of the Personal Computer." All welcome. See IC Micro Club.

Baha'i Society1.00pm.
 LT4, Chem. Eng. Dept. Slide show on the construction and opening ceremony of the Baha'i Temple in India.

QT Stunt Coordination Meeting1.00pm.
 Southside Upper Lounge.

Arabic Class1.00pm.
 Prayer Room (9 Prince's Garden). See Islamic Society.

ICSF Library Meeting1.00pm.
 Green Committee Room. Access to our vast Library. Organisation of future events and news from all over the SF World. Members Only.

Imperial Workout6.00pm.
 Southside Gym. Please wear comfortable kit and bring running shoes. £1.00 membership, 50p per lesson. See J Day

Judo6.30pm.
 Union Gym. Beginners Welcome.

FilmSoc7.30pm.
 Physics LT1. 50p members, £1.00 non-members (membership available).

Lesbian/Gay Society 7.30pm.
 ULU Building, Malet Street. Womens' group meet in Rm SE, Mens' group in Rm 3b. Different speakers/events each week followed by trip to pub.

ICCAG Soup-Run9.15pm.
 Weeks Hall Basement—normally back by 11.30pm. See Derek Hill, Physics III.

American Express ?

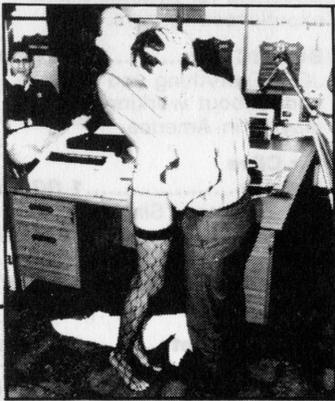
The St. Valentines Day Massacre returned to the City and Guilds Union Office last Friday. This time it was a slaughter of the innocents. Duncan Royle, Guilds President, knew that Anne Driver, "Vice" President, was in for a surprise in the form of a tarzanogram, while Anne knew that Duncan was to be greeted by a shapely stripogram. Neither of them knew the other's secret. The whole affair was conducted under cover of the reopening of the Guilds office by the Dean of City and Guilds. The Dean duly cut the ribbon to the office and chatted with Duncan, during which time the astonishingly heavy press coverage, at least four photographers and a video team, did



not seem to be dispersing. At last, Tarzan arrived, complete with loin cloth, and proceeded to hurl the Guilds VP over his shoulder and carry her off, to cheers from the audience.

Then came Duncan's turn. He was given ten of the best by a saucy schoolgirl brandishing a ruler. Then, after being forced to "unwrap" his present, he decided to inspect it more closely. Not satisfied with the lady's state of attire, he rounded the whole event off by removing what was left of her clothing, with his teeth!

When "pressed" on the matter, Duncan confessed that he was not in control of his faculties and had been completely dominated. "I kept my eyes closed most of the time."



(Lots of) rooms to let

The Easter Lettings Scheme in Beit and Garden Halls and Houses in Evelyn Gardens has been attracting a lower number of bookings than predicted. To date only seven outside bookings have been taken for the scheme. Commenting on this, Michael Arthur said that the advantage of the Easter Lettings Scheme was that it only incurred costs in proportion to the number of rooms booked, as students would only be moved as necessary and cleaning costs involved only when rooms

needed to be cleaned.

The scheme has run into additional problems with only half the booking forms required having been printed. The existing forms, which were to have been produced by the Sheffield Print Unit, were eventually printed by the Union Print Unit. While a similar scheme has been successfully run over the summer for several years, this is the first time that this has been tried over Easter. The schemes in Southside and Linstead Halls are still being run by the Conference Centre.

Rag haul

The Royal College of Science Union raised £390.57 last Saturday in a collection of behalf of the Church of England's Childrens Society. The collection, based on the theme of James Bond & Mata Haris, was carried out by only seven members in the Ealing Broadway shopping centre raising a record £134.57. The manager of the centre commented that it was "so good to see students doing something for the community." This collection has seen two RCSU students bringing their yearly rag totals to over £250 each.

The RCS will be collecting again tomorrow as part of IC Rag's Monopoly Game with several other British universities taking part. The event is expected to raise in the region of £10,000.

All new JCR

IC Union will be pressing for control of the JCR bar, it was confirmed at Tuesday's UGM. The meeting approved Union president Christine Taig's recommendations that the Union support long term plans for a new JCR in the same Building as the new sports hall. In the interim ICU will be looking to gain some financial compensation for the loss of conference income in the JCR, as well as control of the bar. The JCR issue has had a much lower profile since the successful boycott of the QT burger bar three weeks ago. It is unlikely that significant progress will be made until the results of the Academic Staff Assembly survey are known; the staff are being questioned on the reorganisation of the Sheffield SCR, which is tied in with the refurbishment of the JCR. College Deputy Secretary Brian Lloyd Davies told FELIX yesterday that the new JCR was in the earliest planning stages, and that the chief concern for the College was still how to accommodate the increasing numbers using the refectories.

Conman haul

The 'Linstead Conman', who stole £500 from a student earlier this term, has been operating in the College area for at least 18 months. Chief Security Officer Geoffrey Reeves told FELIX yesterday that there have been 7 or 8 incidents where the man has approached students asking for large sums of money. In several cases, students have handed over sizeable sums. The man's story has been much the same in each case; he offers 'gold' watches and jewellery as security for cash.

The conman restricts his approaches to Chinese or Mediterranean students. College security commented that the Gerard Road police station were taking an interest in the case, checking through their files in an attempt to identify the conman, and that they would be very grateful for further information. When the conman was first reported to Security, they contacted Air France, using the name and Paris address given by the conman, but both the name and address turned out to be false.

The wardens of Linstead and Beit halls told FELIX that none of their residents have been approached recently, but they reiterated Security's appeal for any information, which should be passed on to College Security or the police station in Gerard road

On the air

After problems caused by flood damage last week, the IC Radio medium wave transmitter is back on the air again. Technical manager Dave Stanley said that reception had been improving all week and that he expected further improvements during Saturday. The transmitter housing is being insulated to prevent a future recurrence of the problem. Isn't science wonderful?

Many thanks to Sinclair Stammers of the Biology Department for his help with this issue

MR MEN

No2 Where are the Mr Women?

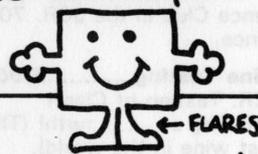
Like most Mr Men Mr. Easy is looking for a Woman. But why aren't there any



The first person he asks is Mr Miner the intellectual.



Here's Mr I.C. Radio the DJ, maybe he can help.



ELO, ELO, KINKY BOOTS, MUMBLE...



By Mark