



THE FELIX

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<http://www.su.ic.ac.uk/Felix>

Student Newspaper of Imperial College

Has capitalism failed science? Dr Mike Taylor exands on his thoughts for Britain's future science research. **Page 9.**

Competition winners. If you entered our Crossword or Altered States comps, see **page 11** to see if you have won.



In Something for the Weekend:
Ken Saro-Wiwa's
new novel reviewed.
Win cinema tickets!

Students lose out to Waterstone's

ROBIN RILEY

Staff and students of Imperial College Union have reacted with dismay following the decision by College to award the tender for the new Bookstore to high street book-sellers Waterstone's.

Unofficial notification of the decision came in a telephone call from Professor Alan Swanson to Union Manager Many Hurford on the last day of term before the Christmas break, and was confirmed verbally later that day in an emergency meeting between the Rector and ICU president, Eric Allsop. At the time of going to press, the Union has received no official communication regarding the decision but is in no doubt as to the result, Waterstone's having been informed of their successful bid.

This has prompted the issue of a strongly-worded press release by Union executives, together with an advertising campaign condemning the decision. The new store, currently under construction beneath the main library, is due to begin trading on April 19th. When the new branch of Waterstone's opens, the Union will be required to cease the sale of books from its site situated on the Sherfield walkway. According to Union officials, the loss of the bookstore as a trading outlet may have potentially devastating repercussions for the way the Union operates, and the scope of its activities.

Mr Eric Allsop expressed his frustration at the lack of feedback on the Union's losing bid: "I still can't see what it was that Waterstone's could have offered that we couldn't."

Union staff had high hopes for their bid to tender, which reached the last round of competition with Waterstone's, beating Dillons, Blackwell's and the Modern Book

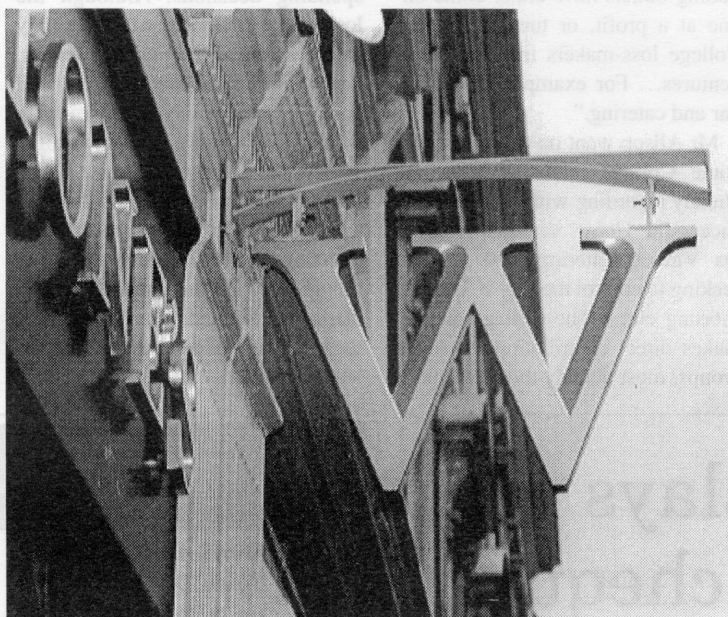


PHOTO: LING

The golden arches of the local branch of McWaterstone's. Waterstone's have promised a "powerful IT" investment in the new bookstore, described by the area manger to be a "bit whizzy."

Company. Mr Allsop suggested that the College committee set-up to advise the Rector on awarding the tender may have adopted a "Corner-shop mentality," labouring under the belief that the Union, lacking the resources of a national chain like Waterstone's, would be unable to operate a much larger store even though it would have access to the same suppliers, staff pool and Information Technology facilities as an external company.

The newly-appointed Deputy Rector, Professor Alan Swanson, was a member of the committee which examined the bids to tender. Speaking to *Felix*, Prof Swanson explained that all five bids were of similar quality, and that all five organisations had produced very similar estimates of the likely sales and profitability of the new store. He likened the decision to choosing

between equally competent candidates at a job interview, saying "Another group of people might have made a different decision."

Reports suggest the committee was asked by the Rector to focus solely upon determining which organisation would provide the best service, and not to consider the wider implications of each bid. This may have hindered the Union's bid, one of its main selling points being the fact that profits would remain on campus. Prof Swanson refused to be drawn on whether, with hindsight, this somewhat blinkered approach had in fact proven the best way to proceed. He maintained that the objectives of the committee had been clearly set out by the Rector at the time of its creation. Answering the allegation that the College had made a serious error of judgement, Prof Swanson replied: "College hasn't shot itself in the foot;

just maybe shot the Union."

The ICU President made clear his dissatisfaction with the way the decision had been reached, and particularly the timing of the announcement, which came just before the Christmas holiday. Mr Allsop reported that Union staff were "absolutely gutted" by the decision, and that morale was at an all-time low. He concluded that the decision by the College was "...the most devastating thing to happen to the Union for as long as I can remember."

The ultimate role of the committee in the final decision remains unclear. It is not known whether the committee directly recommended Waterstone's to the Rector, or whether it merely advised him upon the advantages and disadvantages of each of the two finalist's bids. Further recommendations may have been made by other groups, for example the College Management Planning Group. These questions may not be fully answered until the Rector, Sir Ronald Oxburgh, returns from a visit to Hong Kong.

The Deputy Rector was keen to repeat assurances that the shortfall in the Union's trading surplus resulting from the loss of the bookstore would be covered by an increase in the annual subvention. When pressed as to whether this switch in sources of income would affect the Union's autonomy, Prof Swanson claimed that the financing of most students' unions is arbitrary. He went on to explain that however well-run ICU's trading outlets might be, they operate from College property and so cannot really be considered independent sources of revenue. Furthermore, Prof Swanson pointed out that the loss of the bookstore affected only around 7% of the Union's total bud-

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Waterstone's awarded Bookstore tender

continued from front page

get, but conceded that there was "...no denying that the extent to which the Union depends upon the Governors has increased."

Waterstone's academic booksales area manger Hereward Corbett recounted being "chuffed to bits" upon hearing the news of their successful bid. Speculating as to why they had won the tender, he drew attention to the "powerful" IT investment Waterstone's had promised, and the positive references from the on-campus bookstores they already operate at universities such as Bath and UEA. Mr Corbett also pointed to positive relations with College officials, saying "We got on really well with them... after all, we are looking for a partnership."

Outlining plans for the new bookstore, Mr Corbett explained that it would broadly resemble the recently refurbished branch at Notting Hill Gate, but that an external designer would be brought in to make the IC store "a bit whizzy." The store will operate with a core staff of eight, and negotiations are already underway to transfer existing staff directly from

the Union outlet. It is not yet clear whether Waterstone's will offer part-time jobs to students. Innovations may include the sale of second-hand books and a discount voucher scheme. Although the new store will stock a small selection of fiction titles, Mr Corbett affirmed Waterstone's commitment to make the IC branch "The most authoritative and comprehensive science and technology bookshop in the country."

Defending the Union's ability to manage, Mr Allsop claimed "College have failed yet again to believe we are capable of doing the job. All our trading outlets have either come on-line at a profit, or turned inherited College loss-makers into successful ventures... For example, the Union bar and catering."

Mr Allsop went on to suggest that some College administrators "are already regarding with jealous eyes" successful Union ventures such as Da Vinci's Catering, and may be seeking to control the way ICU funds sporting clubs. The College already makes direct contributions to select groups, most notably the boat club.

Addressing the wider issues raised by the College's decision, the ICU President outlined the advantages of Students' Unions running their own trading outlets; they can offer a friendlier and hence superior service, they are receptive and adaptive to students' needs and any surplus they generate is wholly reinvested in improved services. The profits from trading outlets also afford ICU a degree of financial autonomy, protecting it from the vagaries of national HE funding policy. Were this autonomy to be removed, Mr Allsop believes, the College would have unprecedented control over Union spending decisions. Although the loss of the bookstore will have only minor immediate consequences, larger and longer-term projects, and perhaps even the day-to-day running of the Union may be increasingly subject to College authority. This, Mr Allsop maintains, could threaten to remove IC students from future decision-making processes, even though they are the intended beneficiaries of HE funding and ultimately the customers of campus trading outlets.

Fire alarm farce

MATTHEW KEMPTON

On the last Friday of term students in Southwell Hall, Evelyn Gardens had to evacuate the building after an impostor smashed five fire alarms. At approximately 5pm fire alarms started ringing in houses 56 and 57. After waiting outside in the street, where there was no roll call, the students were moved into the main entrance of the hall, where a bizarre set of events followed.

A member of Evelyn Gardens security ordered everyone to their rooms while a subwarden blocked the way to half the hall. At this point a drunken man came in, calling himself the 'senior fire officer of Imperial College' and ordered everyone out. This was clearly not the case as an argument followed which ended with the security man saying 'I don't know who the hell you are, just get lost' and the impostor leaving. Subwarden Guy Franklin later discovered the smashed fire alarms and also found the 'fire officer' wandering around trying to find his swipe card and glasses. He was taken to see the warden Ken Young who discovered that he had set off the fire alarms after drinking with a friend. A disciplinary hearing will take place soon.

College mislays a £million in cheques

NEWSTEAM

A major disaster for postgraduate students was narrowly averted thanks to the heroic efforts of the College Student Finance Office, who tracked down missing Engineering and Physical Science Research Council grant cheques worth nearly £1m in total.

The absence of the cheques went unnoticed until the 2nd January although they were expected on the last day of term.

In their defence, the Student Finance Office cited several factors that had contributed to the temporary loss of the cheques. The system for delivering funds has changed recently, in order to prevent institutions investing the money. Following Government initiatives, the EPSRC has introduced the practice of sending grant money only when it is due, rather than paying colleges in full at the beginning of the year. A decision to send the money on the 23rd December was reversed when the

SFO pointed out that College would close on the 20th. The EPSRC agreed to send them at noon on the 20th. Owing to bad weather the courier was late, though this turned out not to be the major problem...seeing as he actually took them to the Royal College of Art. The security guard who signed for the cheques at the time informed *Felix* that he hadn't realised the courier had got the wrong place, as "...the package was small and the address obscure."

Tony Cullen, Assistant Registrar, expressed his concerns about the matter "...only as a last resort would we have cancelled the cheques. It would have caused untold problems and aggravation to a lot of people, not least students needing to pay their rent and the like."

Fortunately the cheques were recovered on the 2nd and so they were eventually issued only one day late.

News in Brief

YANKS BEAT IC

On New Year's Day BBC viewers had a chance to watch Jeremy Paxman sneer at American as well as British students in the International University Challenge match between Imperial College and the University of Michigan.

IC started badly, and although they drew level a couple of times, Michigan leapt ahead in the last 10 minutes, beating IC by a wide margin. "We had an off day" said team captain Mark Pallen. He also conceded that Michigan were the better team. In an attempt to excuse what Paxman described as their dress, Pallen stated that Granada had told IC to dress casually but Michigan to dress smartly.

However, it is not yet over for last year's team; they are shortly to depart for the States to compete in their National Academic Quiz.

TRAFFIC BLACK SPOT

It was a bad start to the new year for the passengers of a white Volvo who were involved in a serious car accident last Sunday. The incident took place at the turning into Prince

Consort Road, just outside the Physics Department. The road was closed off for several hours and it took firemen over an hour to free the passengers, having to resort in the end to cutting the roof of the car off. In contrast the driver of the other car involved escaped with minor injuries.

The turning by the Huxley Building seems to be something of a traffic black spot. Last summer, as reported in *Felix*, there was an accident involving an out-of-control BMW and a stationary Rover. Luckily there were no serious injuries.

IC RADIO BROKEN INTO

Last weekend thieves raided Southside Disco and escaped with over £1500 of equipment belonging to Imperial College Radio. Having pulled the door away from the booth, they made off with two record players, a CD player and a mixer.

College Security are at present compiling a report on the theft. Anyone with any information on the theft should contact Paul Brown or Ian Hickvale, at IC Radio

D. E. Shaw is the most technologically sophisticated firm on the Street”
- *Fortune*

D. E. Shaw is arguably the hottest trading firm on Wall Street”
- *Investment Dealer's Digest*

Quantitatively Superior

D. E. Shaw & Co., L.P. is a small (around 400 employees), highly capitalized (over 800 million dollars in equity capital), very successful Wall Street firm specializing in various aspects of the intersection between technology and finance. We are aggressively seeking exceptional candidates in a variety of fields for positions in our offices in London, New York, Boston, Tokyo, and Hyderabad, and are prepared to compensate highly talented individuals at a level exceeding that of the market. D. E. Shaw & Co., L.P. is an equal opportunity employer.

D. E. Shaw & Co., L.P. will conduct a careers presentation:

MONDAY 13th JANUARY

IMPERIAL COLLEGE SCR

6:30 p.m.

(Food and drink will be provided)

Please contact Anna Keelan at the Careers Service for further details, or e-mail us: jobs@london.deshaw.com

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Further action from the AUT

MATTHEW BENNETT

The Association of University Teachers, the largest union involved in the one day strike in higher education last November, is to ballot its members on further action, which could involve disruption of universities' admissions procedures and exam marking.

The strike took place a week before the November budget and may have been one of the factors that lead to an increase in higher education funding of £100 million. This was hailed to be a victory as, although it constituted a real term decrease in funding per student of 0.5%, a fall of 3% was anticipated. The Universities and Colleges Employers Association, who negotiate pay for staff in HE, changed their offer of a pay increase from 1.5% to 5% over two years.

This offer was rejected by the unions involved in the dispute, and the unions organised a "boycott of bureaucracy" which mainly involved non co-operation in teaching quality assessments, which are seen as unnecessary and time consuming.

The unions rejected the improved pay offer because it came with a range of provisions and conditions attached, which they deemed unacceptable. One condition was that the workers who went on strike would have 1/260 of their annual pay docked. The unions insisted that only 1/365 should be docked, asking whether their members were only expected to work 260 days a year.

UCEA subsequently amended their offer to two years' increase of 2.5%, with fewer strings, including the removal of the 1/260 clause, but

this was rejected by the unions.

The AUT committee had pledged to give UCEA until the end of November to produce a "satisfactory" pay offer. When this was seen as unforthcoming, further action was suggested. The original ballot in November covered "other action short of a strike" and the unions instructed members not to cooperate with any reviews or assessments, to work only to contract, and not to do extra hours or carry out unpaid work or teaching. Academic teaching staff have been instructed to stop external examining.

The AUT then announced their intention to ballot members over a possible boycott of exam marking and a slowing down of admissions procedures. It is the problems that this will create for admissions that

the AUT says is "creating very considerable political interest that will help in convincing employers to change their position". Notices were sent to employers covering the intention to ballot in December, and the papers are expected to be sent out this week. Results are expected in late January.

On a local level, IC are one of the colleges who are sticking to docking 1/260 of the striker's pay, while many other institutions have already moved to the 1/365 scale. They did, however, make a one off payment in place of a pay increase to staff in December as a "pay advance on account" which was hailed by Mark Scrimshaw, the secretary of the IC AUT committee as a sign of the college authorities' sympathy to the staff's pay demands.

More funding for Mary's CJD research



PAUL SQUIRES

Researchers at St Mary's Hospital Medical School may soon be celebrating the arrival of a £1 million Medical Research Council grant. The funding will allow research into prion diseases to continue, with particular reference to Creutzfeldt-Jakob disease, an illness suspected to derive from the so called 'mad cow' disease, Bovine Spongiform Encephalopathy. The decision is to be taken some time this month following science budget allocations.

Professor John Collinge has been leading the research group at St Mary's and the extra funding would allow him to develop plans for the establishment of a research unit committed to neurodegenerative diseases. The possibility of such an offer comes after the recent successes of the Mary's team, which has been the leading institution researching into CJD. Last October they published the first direct evidence indicating the transmission of BSE from cattle to humans, as reported in *Felix*

1067.

Professor Collinge also intends to investigate new evidence that some people may have a genetic predisposition to the disease.

Also likely to benefit from MRC funding is Harash Narang, a scientist based in Newcastle. His controversial research, especially his claim to have developed a urine test for CJD and BSE, has highlighted the need for further research into this area. Though in his case, far tighter initial conditions are expected to be

imposed by the Research Council, ensuring that his findings are verified by other experts, before they agree to fund him.

In response to a likely Office of Science and Technology edict to concentrate funding on CJD-BSE research, the MRC's future allocations of grants will reflect the current 'beef crisis'. The OST is reported to be considering 'top-slicing' around £7 million of its own budget to fund "scientific efforts" into BSE and CJD research.

Tragic death of Professor Ruddock

KELLY ROBINSON

Imperial College's Physics Department mourns the sad loss of Professor Keith Ruddock, a highly-valued member of staff, killed in a road traffic accident on December 18th.

Professor Ruddock was born in a small mining village in South Wales. His exceptional mathematical ability rapidly earned him recognition at West Monmouth Grammar School, and secured him a place at IC to study Physics in 1957. It was here that he was to spend the rest of his academic career. The young Keith Ruddock developed an interest in optics. Under the influence of Professor David Wright, a leading optical physicist, he soon became influential in his chosen area of research, the study of vision in humans.

His success in improving our understanding of normal vision led to his study of abnormalities of vision in patients who had suffered brain damage as a result of stroke or tumour. His aim was not only to stretch the frontiers of medical science but also to help the many individual patients involved in his project. Ruddock was a true humanitarian, regularly travelling across the country to visit patients who were unable to come to London, carrying portable equipment specially designed by him. Several of his patients, some of whom knew him for nearly twenty years, became personal friends of the Professor.

He was awarded a Royal Society

Exchange Fellowship to work in Venezuela with Gunnar Svaetichin, a leading researcher into single-cell electro-physiological recording. On his return to IC, Professor Ruddock was able to use the knowledge he had gained to establish a research programme at Silwood Park, where he recorded from within cells in the retina.

Always finding his research led him into controversial ground Ruddock always showed great diplomacy, maintaining his stance yet at the same time respecting the views of others.

Not only was he a dedicated researcher, the Professor was also highly committed to teaching. He was a charismatic lecturer who instilled a deep enthusiasm for biophysics in his students, often competing to carry out final-year projects or PhD's with him. "Keith really engaged students during his passionate lectures on Biophysics, in fact I would say he was one of the best lecturers in the whole department" one of his students remarked.

In 1988 he became Professor of Biophysics and in 1991 was appointed Head of the Biophysics group in the Physics Department.

Ruddock greatly enjoyed visiting former students all over the world and also made frequent trips abroad to lecture. It was this love of foreign travel which fueled his passion for languages - most notably Chinese.

In addition to his work for the College, Keith Ruddock was on several editorial boards and national



PHOTO: MEILIN SANCHO

committees. He found his work for the Vision Research Working Party of the Wellcome Trust particularly enjoyable. In 1985 he became one of the four founding members of the Neuro-ophthalmology Club, the continuing success of which can be attributed to his relentless enthusiasm.

Ruddock was not just a brilliant scientist but a man who lived life to the full, cramming a lot into his 58 years. He took a keen interest in rugby and cricket and loved the

opera.

His political beliefs, formed in the Welsh valleys of his youth inspired a life-long commitment to socialism, led to his marriage in 1963 to Joan Anthony, now a Labour MP. They had known each other as teenagers and she followed him to IC. They spent thirty happy years together but they separated in 1990.

Keith Ruddock was well-liked and respected by all who met him and will be sorely missed by his family, friends and colleagues.

Imperial ranks fourth for research

MATHIEU RICHARD

The 1996 Research Assessment Exercise, whose results were published just before Christmas, show significant improvements in the quality of UK research since 1992.

The survey, organised by the Higher Education Funding Council for England, evaluates the performances of research institutions in 69 subject fields, classifying them in 7 categories, from 5* (excellence in all sub-areas) to 1.

In 1992, the ex-polytechnics participated in the survey for the first time. This year, 192 universities took part, covering a total number of 55,000 researchers. A clear rise in the standards of research has been accomplished, with a national aver-

age score higher by half a grade than that in 1992.

Unsurprisingly, Oxford was ranked top, closely followed by Cambridge. However, not all the results were so predictable.

Several universities far surpassed expectations, with Goldsmith College, for example, rising from 59th to 26th place and Bath University, which made it into the top ten.

The ex-polytechnics are clearly still catching up on the research front in comparison to the old universities. Most occupy the lowest rankings in the table apart from a few exceptions.

The figures show that most high-level research is still done in English universities but Scotland, Wales and

Northern Ireland are now contributing more significantly. As Brian Fender, HEFCE's Chief Executive puts it "the real winner of this survey is not Oxford, or any of the top ranking universities but the United Kingdom, which is benefiting from a huge range of high-quality work."

Imperial College was ranked fourth in the UK, after Oxbridge and LSE, attaining an average grading of 5. A breakdown of this figure reveals that of the research staff at IC, 26% were awarded a 5*, 50% a grade 5, and 22% a grade 4.

These results give a good overall impression of the quality of research at Imperial, but a more in-depth picture emerges when the 21 subjects submitted by IC are assessed sepa-

ately.

The departments of the Royal College of Science all obtained grade 5 or above, as did all the Engineering departments. Pure Mathematics received a 5* rating, leaving even Cambridge behind.

Slightly inferior results were achieved by the Royal Schools of Mines and Business and Management, though the grades did not fall below a 4.

This was somewhat balanced by the Medical School of Imperial College, St Mary's, ranking top in pre-clinical studies and the National Heart & Lung Institute receiving 5*s for all their departments, demonstrating IC's supremacy in hospital-based subjects.

ICU BOOKSTORE TO CLOSE AFTER 10 YEARS

After running the Imperial College Union Bookstore for over a decade, ICU has been forced to cease the sale of academic books from Easter. The loss of its £1M turnover will amount to a halving of the Union's trading activity.

Despite the Union's strong tender to run the new shop, the Rector has awarded the contract to Waterstones, a WHSmith subsidiary. They will be the sole provider of academic texts on campus from the 19th of April 1997 - the official opening date of the new shop according to the tender. The Union's investment in book selling equipment will be lost, as will years of experience in the IC market; a market built from the loss-making venture originally inherited by the Union.

In spite of two years of preparation, and a lengthy tendering process, the news was given to the Union only on the last day of the Winter term. ICU has still not received written confirmation, or explanation of the decision and the reasons behind it. Since the Union's bid got through to the 'second round', beating Dillons, Blackwells and The Modern Book

Co in the process, it is difficult to see how Waterstones' bid could have bettered it, nor how they can provide a superior quality of service for students.

The bookstore's growing surplus, after considerable re-investment in

for projects like its summer refurbishment of dB's (£130,000).

During its life the ICU Bookstore has admirably demonstrated how a single book shop can compete on a level field with chain stores. Close co-operation with departments and

students enabled it to stock the core books for each course, and electronic catalogue and ordering systems enabled books to be obtained as fast as any other book shop. Flexibility of operation and constant feedback from customers enabled the shop to respond to customer demands, and tailor its opening hours to suit the college.

Its pricing policy of never being knowingly undersold, and customer care ethos was enhanced by the combination of part-time student staff and experienced professionals to provide a truly friendly environment. The

only real problem was the congestion - alleviated somewhat by the opening of the ICU Newsagents - which would have been cured by a move to the new, larger shop.

If you want more information ring the Union Office on x48060, or email any of the sabbatical officers (see www.su.ic.ac.uk/union/index.htm)

"The CVCP believes that Student Unions are often the most appropriate, cost-effective and efficient bodies to run [catering, bar, entertainment, shopping and travel] services. They are non-profit-making; cross-subsidy allows profitable activities to support welfare services. Furthermore students receive an excellent opportunity to develop and practice those transferable skills which employers value most."

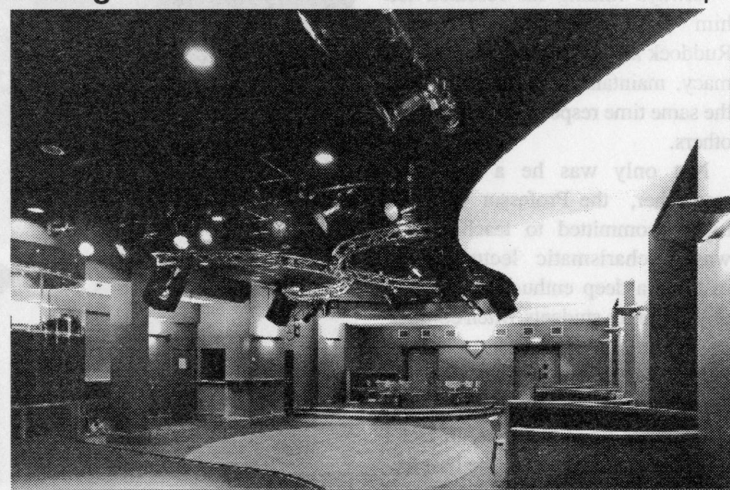
Committee of Vice-Chancellors and Principals, 5 March, 1993

the shop, reached in excess of £100,000 last year. Its loss will greatly affect the Union's ability to generate its own funds which, considering the growing financial pressures on higher education, must be ICU's highest priority. Without the flexibility of its own funds the Union will have to go begging to college

Your College no longer has a bookstore run solely for the benefit of its customers.

Your Union has less money to spend on its clubs and services, and its fortunes are now tied to the political vagaries of the time.

We have less opportunity to continue to expand its activities to meet student demand.



WHY SHOULD ICU TRADE ANYWAY?

The provision of commercial services enables the Union to both provide essential services to the college, and to ensure such services adhere to the aims and objectives of the Union, determined by you the students.

Via the Union's democratic committee structure, services are run in a student-orientated, and fully accountable manner. The union can ensure quality and value for money in a purely altruistic man-

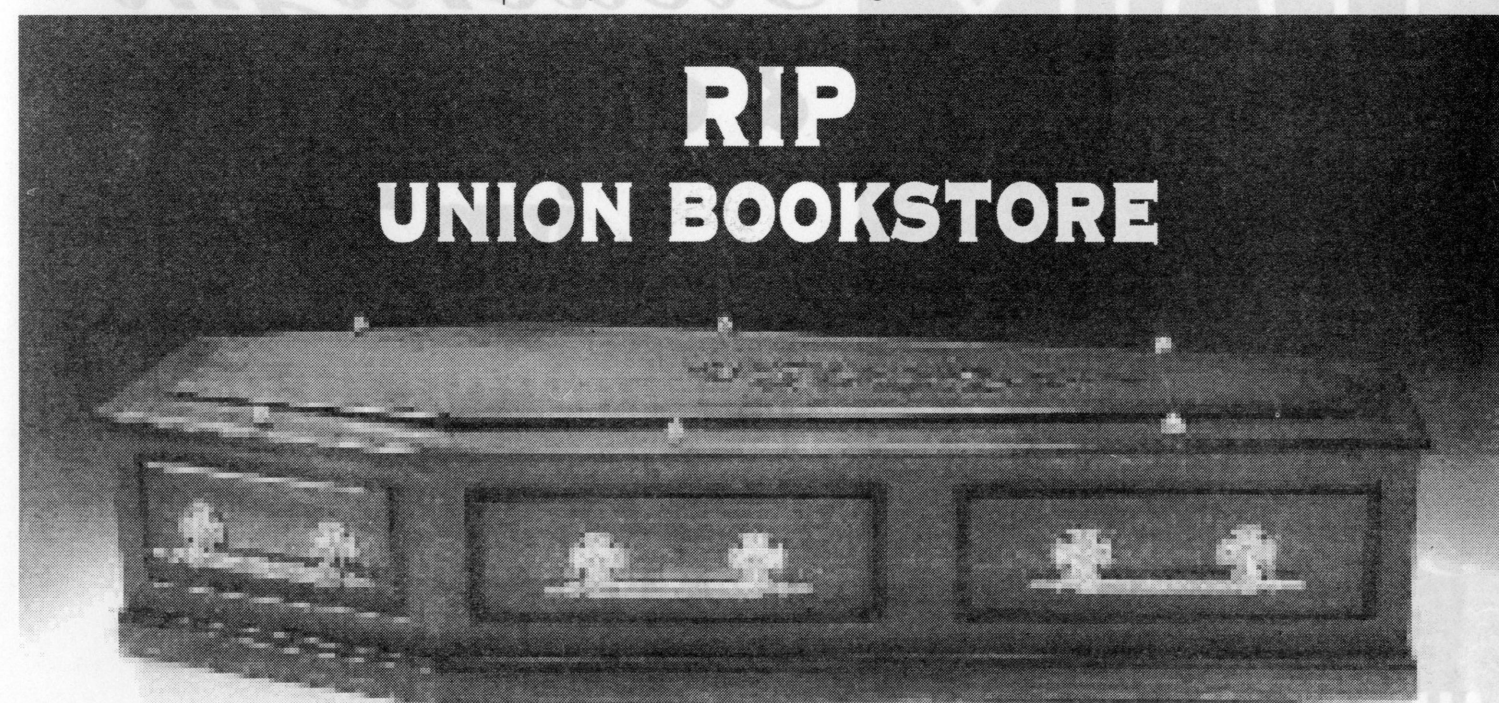
ner that no company can ever match.

The income they generate also contributes greatly to the well-being of the rest of the Union. Money that would otherwise have been spent off-site is retained within the College and ploughed back into the non-commercial services the Union provides. The students get to decide what they want their money spent on, rather than having to go cap in hand to college. Given the current financial pressures on College, is it likely that the summer refurbishment of dB's would have been a priority to the powers that be? It gives the

Union a level of autonomy and flexibility that could not be achieved were it totally reliant upon the College for funding.

Furthermore, the Union benefits from the professionalism engendered by the earning process. Staff and student officers of ICU are well aware of the harsh financial realities of the real world, and our policy of employing students wherever possible gives vital work experience as well as a timetable-friendly job. Unlike other employers, we recognise that college work and exams must come first, and so rota our staff around their commitments.

Graphic opposite: dB's, in the Union Building. Its £130,000 refurbishment was entirely funded by Union trading surplus.



THE FIRST NAIL IN YOUR UNION'S COFFIN ?

iCU

IMPERIAL COLLEGE UNION

**EVERY MON
STANDING ROOM ONLY
LIVE FOOTBALL**

**EVERY TUES
BAR TRIVIA**
win £50 or a crate of lager

EVERY WEDS
frolix
8-1. free

EVERY THURS
Cocktail Night
5-11. free

ALTERNATE FRIDAYS
'BUST-A-GUT
comedy club
(starts jan 17)

**JANUARY
FRIDAYS**

9-2 £1/free

jan 10

POP TARTS

& chill-out room

jan 17

Hedonizm
& chill-out room

jan 24

common people

with live music from

Satellite

jan 31

SHIFT
& chill-out room

In order to overcome the excesses of the festive period, a Mental Gymnasium of Science is recommended

Twentieth Century science had promised a Brave New World, until Auschwitz and the Atom bomb. Dr Michael Taylor challenges the unethical hotbed of politics and economics that still influences the scientific establishment today.

When scientists like Ampere, Volta and Ohm first understood electricity over two centuries ago, no doubt they dreamt night and day of fantastic machines to ease the toil of the land for food; to tap the riches of nature deep below mountain, river, tree and ocean. Their genius gave us the opportunity to have surplus production following the industrial revolution, meaning that we had the potential to harness nature's resources to meet everyone's needs. The invention of the light-bulb by Edison would release us from the blindness of the night. It seemed as though science had as its basic aim the mastery of nature to meet the basic needs of society - food, clothing, shelter and health.

Why now, as we are on the verge of completing the gene map of the human body, is half of our world held hostage by famine and disease? Is it the failure of science? If so, how can we justify research into time travel, the rings of Saturn or the division of a fundamental particle which, even after a closer look, seem irrelevant to society at large? If it is not the failure of science, then shouldn't we be the tribunes of society, opposing the very system that we know has failed to solve these problems?

It is important to appreciate that scientists are part of society and so are influenced by the ideas of society. The prevalent ideas belong to those who own and control the media, industry and academia. Darwin's theory of natural selection wasn't published for 40 years because of the strong creationist ideas in his society. Certainly scientists are the ones who choose to work with the military behind barbed wire fences as strategists of destruction, as torture technologists and as germ warfare advisors. Whether or not this is a free choice, in the face of the entry of the market into most campuses is debatable, but do scientists not have a

social responsibility even then? I argue we do. Let us never forget that it was a chemist who gave Hitler a formula for making soap from human fat to be sold in the market. A nuclear physicist outlined energetics of nuclear fission to the politicians who made the atomic bomb, from which generations of Japanese still suffer hereditary disorders; a biologist tested Anthrax on sheep, effectively quarantining a whole island off the British mainland, while a mathematician decoded cold war memos resulting in brutal military counter measures.

"Science has been plagued by capitalism"

Our crimes are many and our criticisms few. It is time we faced up to some hard facts. We are not in control of the fruits of our work. As pawns in a game of chess, we are employed by those who, by deciding our funding, also decide our aims for their own ends. Big oil companies like Shell and BP don't fund research into ecologically friendly cars, for example. Instead, the fruits of our labour are to be used by unelected and unaccountable corporation directors and military generals whose actions we have little or no democratic say in. I argue that only when scientists are part of a collectively run society producing for need, rather than for profit, will science not suffer the present corruptions under modern capitalism.

It is widely accepted within the scientific community that the annals of scientific thought are expanding as never before. A fact I can't dispute as a young researcher struggling to keep abreast of monthly developments in my own tiny sphere of research in the field of space and atmospheric physics. Unfortunately, education ministers and university chancellors

complacently proclaim that they are proud of the rate at which scientific research is being produced at a time when British scientists are deserting academia in alarming numbers, due to grossly inadequate salaries and resources. This leaves a disconcerting mass of untapped scientific potential and ensures the proliferation of starvation and deadly diseases.

These defenders of the system speak of the increase of efficiency in higher education, quoting the fact that approximately the same number of teachers now teach approximately twice the number of students in higher education as two decades ago. While this is true and reflects the wholehearted dedication of the teachers to education they never mention the fact that they have not increased resources. The annual government spending on higher education has remained at the same level - 7.6% of the GDP (which has itself remained level) since 1976. It is not surprising that over 120,000 members of staff in higher education were on strike on the 19th November demanding something better than the 1.5% pay rise they were offered. The myth that the cupboards are bare in Downing Street can easily be exposed when they try to justify spending £61 billion on each Trident nuclear submarine, while schools close for "failing", lecturers are laid off, and students live in poverty after having their rights to free prescriptions, housing benefit, income support and book grants stripped from them. Now they face a tax to pay for their education. When John Major spoke of the need to "go back to basics", he did not mean paltry investment in health and education.

Furthermore, can we be sure that we are really pushing back the frontiers as this expansion may suggest? If we measure progress by technological ingenuity alone then perhaps the answer to this question would be yes. If, on the other hand, we define progress as that which better life for most of humanity then, in a world where over a tenth of the population is expected to die young, the answer most certainly is no.

While the close links being fostered between science and industry should be nurtured to bring useful tools into the hands of those in need of them, the favouring of competition

rather than co-operation between research groups sponsored by business means that science has also been burdened by capitalism. The research centres place emphasis on lavish interior decorating and glossy pamphlets to market their products.

Although attention to detail in research is vital for a probing understanding, one look at job advertisements in science magazines such as *Nature*, *New Scientist* and *Scientific American* show the extent to which scientists have become narrowed. Intellectual isolation ensures a lack of opportunity for research, leading to delays in breakthroughs, during which time millions will die of diseases like cancer and AIDS.

Furthermore, the pressure faced by most young scientists to find contracts is married to a new measure of ability - the number of research papers written. Unfortunately, my own experience has taught me that if you want to write more papers in a year, something else has to give. Research inevitably becomes more superficial and speculative. Is this good science? I feel we should be probing for deeper knowledge and aiming towards sociological uses for existing and contemporary ideas.

"Research inevitably becomes more superficial and speculative"

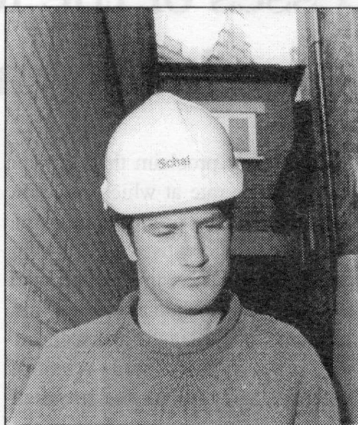
It is not only science that loses out by this superficiality. Ask someone when you next buy your fish and vegetables in your local market, "who is a more useful part of society: a doctor, a mathematician, a chemist, a biologist or a physicist?" They'll tell you the doctor even though all five of them have the same letters after their names.

At a time when we can send people to the moon while half of our population suffers from hunger and poverty then we have some serious moral questions to answer before the establishment can praise the achievements of science. In the words of Abu Saide Abolhair, "in the process of marching to the horizon of civilisation, let's first stand up and take a step further." Only when famine and disease become a past stage in our evolutionary history can we say that science is as broad as it is long.

First things first, let me wish all of you (or should that be both of you?) a Happy New Year. Slight change to the usual format this week as you will see later, but first a couple of things to deal with. Unfortunately space does not permit me to mention the execrably awful meal I endured on my first ever trip to the SCR on Monday. Shift the decimal point one place to the left on your cash registers, College Catering, and you will begin to charge what your products are worth.

There is however time to mention the grant cheque fiasco, reported elsewhere, but you heard it here first. Last Thursday the cheques for a significant proportion of the Colleges PhD students arrived in Sheffield. No problem, I hear you cry. A simple matter of delivering them to the Student finance office, where these things have been dealt with since the dawn of time. But no, the cheques went walkabout. So perambulatory were they, the possibility of stopping them was contemplated on Friday morning when they still hadn't surfaced. Thankfully, they turned up that lunchtime and were promptly dished out. What a start to 1997.

Simon Baker



Voice of Reason

There now follows an open letter to the Rector, Sir Ronald Oxburgh, concerning Campus Renaissance.

Dear Rector,

Firstly, let me thank you and Ian Caldwell for the excellent presentation that you gave last term on Campus Renaissance. Say what you will about the Estates Division, and frankly I have said more than most, they are not short of ideas and vision. The transformation of Queen's Lawn and surrounding area looks awe-

some, and the proposed reappraisal of Sheffield hinted at by Mr Caldwell is most refreshing; I found it both satisfying and unnerving that almost all my questions and suggestions had been anticipated! Quite rightly, the accommodation has not been overlooked, with the continued renovation and expansion of the existing stock. This, we were told would be paid for by commercial activities, principally conferencing. Here I began to waiver.

The question you will recall I asked concerned the funding of these projects by conference profits. I clearly failed to explain myself, hence your somewhat terse responses. The problems I have with this are as follows. As Ian Caldwell said at the presentation, College accommodation is a net consumer of cash, despite existing conferencing and reasonably high rents to students. This should be a cause of grave concern, and rectifying it to an extent should be relatively easy. All support services, such as cleaning and maintenance, should be contracted out. Imperial is in the business of educating not running service companies. It also seems unnecessary for IC to own the halls of residence. Whilst

acknowledging that Linstead Hall could be an exception, the possibility of selling the freeholds and leasing back the buildings or mortgaging, as is the trend in corporate property management, should be investigated. We have highly valued, poor performing assets, tying up huge amounts of cash. Only when the bottom line is in a healthy condition should large-scale investment be contemplated.

As it is at the moment, I fear that a likely consequence of the proposed investment will simply drive up costs to the point that the College prices itself out of its chosen market, and begin to compete with hotels and other, more specialised providers. This will inevitably put upward pressure on student rents, which could even force those for whom halls would have been the natural choice to seek accommodation elsewhere. The way in which IC can generate more revenue is not to expand inefficient low-margin activities, but to first tackle waste, improve management accountability and divest functions better done by others. There is enormous scope College-wide.

Wishing you and Lady Oxburgh a Happy New Year.



Westminster Eye - Hamish Common

I must be in luck: each Monday morning I wonder what I'm going to write about for the week, and each time another Tory MP takes a tumble. Jerry Hayes, the 43 year old Member for Harlow, is at the centre of yet another sex scandal for the Conservative Party, with an ex-researcher of his spilling the beans to the News of the World. Sex scandals are a serious business, in more ways than one, and they usually follow a set pattern: there is some basis in truth, and some breathtaking naïveté in the MP's past. A press release then goes round on Saturday, in time for the Sunday vultures to prepare their stories. Since MPs are taught to keep quiet in these cases, the papers are full of the other side's story. If the MP is a minister, he will resign immediately. If he is a backbencher, he will return to face the wrath of his constituency, populated mainly by shocked elderly ladies.

This case has a nasty twist, however. The story was released by his ex-employee and one-time Young Conservative Paul Stone, who received £75,000 for the exclusive: a tidy packet for a 24-year-old trainee accountant. The role of Max Clifford, the ubiquitous publicist who simultaneously announced his "vendetta" against the Tories, is worrying: he freely admits he timed the announcement with the Prime Minister's new crusade on family val-

ues to cause maximum damage to the Government, saying "in a new year and in the run up to a General Election, it is important to remind the British public of the Conservative Party's real values." He promises to reveal more scandals in the coming months. His justification is the poor treatment, at the hands of the NHS, of his disabled daughter over the last ten years, and he has taken it upon himself to wreak revenge on the Government. The Labour Party are playing the long game: they have managed to criticise Clifford for such a brazen declaration and point out that they never make political capital out of Tory scandals (although John Prescott couldn't resist a quick jibe that "Major's new push on family values was bound to end in tears, and it has.") They are acutely conscious that they may soon be targets themselves.

Even the press are beginning to tire of these ceaseless scandals, with the tabloids giving it headline news treatment one day and completely forgetting about it the next, and most broadsheets fitting it around other more newsworthy stories. With Paul Stone's supercilious smile shining out of the paper's alongside Max Clifford's horrendously arrogant presumptions, and a story based purely on the word of 24-year-old with a £75,000 cheque - no evidence has appeared - I am confident of where my sympathies lie.

IMPORTANT NOTICE FOR INTERNATIONAL STUDENTS

THE PROCEDURE FOR EXTENDING YOUR LEAVE TO REMAIN HAS RECENTLY CHANGED. WITH EFFECT FROM NOVEMBER 25TH..

- 1. ALL APPLICATIONS TO THE HOME OFFICE (IND) MUST BE MADE ON AN OFFICIAL FORM WHICH IS AVAILABLE FROM THE UNION.**
- 2. THE FORM SHOULD BE COMPLETED IN FULL OTHERWISE IT WILL BE REJECTED.**
- 3. YOUR APPLICATION FORM SHOULD BE PRESENTED BEFORE YOU CURRENT LEAVE EXPIRES.**
- 4. THE FORM MUST BE ACCOMPANIED BY ALL THE NECESSARY DOCUMENTATION OTHERWISE IT WILL BE REJECTED.**

FAILURE TO COMPLY STRICTLY WITH THESE PROCEDURES WILL RENDER YOUR APPLICATION INVALID. THIS WILL MAY WELL HAVE SERIOUS CONSEQUENCES IF YOU BECOME AN 'OVERSTAYER' AS A RESULT.

FOR FURTHER INFORMATION PLEASE CONTACT MARTIN THOMSON IN THE UNION ADVICE OFFICE - APPOINTMENTS CAN BE MADE VIA THE ICU RECEPTION (X48060) OR DIRECTLY ON X48067.

EXPLORATION BOARD

STUDENTS WHO MAY BE PLANNING EXPEDITIONS THIS SUMMER, BUT WHO HAVE NOT YET APPLIED FOR RECOGNITION, SHOULD NOTE THAT THE SECOND AND FINAL MEETING OF THE EXPLORATION BOARD IS ON WEDNESDAY 5TH FEBRUARY. PROPOSALS MUST BE SUBMITTED BEFORE THE END OF JANUARY TO THE BOARD SECRETARY DON ADLINGTON, WHO CAN BE CONTACTED ON X49430.

LETTERS TO FELIX

Dear All,

One of our Union's best services (and biggest earners) has just been lost. Do you care? Do you even know? You should.

The ICU Bookstore used to make around £70000 profit annually, all of which was directed back into the Union, and ultimately to us - the students.

It also used to offer basic stationery and essentials at near-cost price, obviously to the direct benefit of all at IC.

Further, it was one of the biggest and most successful Union-run stores in the UK, a fact that you would expect College to have been proud of.

Yet the decision was made, somewhere 'up there' in the Sheffield building to put the contract out to tender. Ignoring the facts above, and typically not asking the customers of the bookstore what their views are, ICU was made to compete with the country's largest outlets. Despite submitting a competitive bid, the Union came second and Waterstones will operate from the new library site.

Even if ICU had been successful, their profitability would have been severely dented by the high rent and overheads. They will continue to operate from the walkway site, but are prohibited from selling texts. The future of the store is uncertain, but whatever the shop is used for (ideas on a postcard) it will be impossible to recoup the lost funds. Negotiations are underway for College compensation to the Union, but what type of solution is this? £70000 less for the

College to spend, with no financial gain for the Union and large sums of money disappearing off the campus and into Waterstones' bank account. Why?

This disregard of the Union and the students needs seems to me to be symptomatic of a fundamentally flawed 'us and them' attitude. The College decision-makers repeatedly act without researching or even informing the student population. Plans are made out of sight, then presented imposingly so that we can only accept or reject them, when both students and staff should have been involved from the beginning.

It is a mistake to run IC as a profit-motivated research company. It is a university and its prime function is to educate - without students it could not exist at all. Yet, undergraduates especially feel increasingly sidelined and that they are working for the college rather than the college working for them. This matters! The bad news will spread, and the appeal of universities with superior student facilities, such as Sheffield will grow. An IC that is socially dead will not be academically great.

ICU owns none of its buildings, and its continued existence relies on the benevolence of College decision-makers rather than any legality or rights. The next few years will see major upheaval around the site, particularly in Beit Quad. Perhaps College will take the opportunity to act positively for the non-academic, non-economic good of the students. I doubt it.

Jeremy Thomson, Phys 3.

Letters may be edited for length. The guest editor's opinions are not necessarily those of the editor.

Deadline for letters in Felix 1075 is Monday 2nd December. Please bring some form of identification. Letters may be e-mailed to our address: felix@ic.ac.uk

COMPETITION WINNERS

The lucky winner of the *Felix* bumper Christmas crossword competition was **Paul Timms**, an undergraduate from Materials. As the first correct entry out of the hat, Paul receives a copy of the huge Collins College Dictionary for his trouble.

The winner of the Altered States competition which appeared in the Christmas edition of *SfiW* was **Scott Lavery**, a third year from Civil Engineering, who correctly identified the colour of David Bowie's eyes and wins a copy of the Altered States CD for his trouble.

All you have to do now is to step forward and present yourselves in the *Felix* office to collect your prizes. Congratulations to you both, and to all those who managed to pick up prizes of one sort or another in the massive *SfiW* Christmas lucky-dip and giveaway.



Student Newspaper of Imperial College

Editor Alex Feakes / Advertising Manager Mark Baker

Right. Hands up all of you who knew that, (a) there was going to be a new bookshop, (b) the franchise to run it had been put out to tender by the College, (c) the Union had been invited to tender and had submitted a proposal, (d) the current bookstore would no longer be allowed to sell books once the new shop opened, (e) the Union runs the current bookstore and (f) the surplus made on the bookstore is ploughed back into Union services?

I suspect that (a) and (e) might be common knowledge, (f) may have elicited a small response, but (b), (c) and (d) are largely unknown to the majority of staff and students here. This is through no fault of their own, they are not involved with management of the shop, and have not been kept informed of the ramifications of possible outcomes of the tender.

The college general public are the ultimate beneficiaries or losers of any trading activity on campus. Presumably they are interested in whom supplied the products they bought and where their money will

go, but unfortunately have little idea. Some form of market research may helped form a picture of how best a franchise holder might achieve "academic bookselling excellence" in line with the Rector's wishes.

The committee appointed to award the tender might then have had an expanded brief to consider the peripheral benefits of a campus bookshop as well as a straight forward service based examination. A different, some might say less narrowly envisioned, set of criteria might of led to a different decision, as the Deputy Rector might say.

Anyway, enough carping on after the horse has bolted etc. There are, however, a few questions that remain to be answered over the conduct of the College toward the Union with regards to the bookstore, and why the College is giving the impression that its long term plans discount the Union as a valid, autonomous and vital part in this institution's reputation and the maintenance of its member's well-being.

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FELIX SPORT

IC Snooker team defeat national champions

In their last inter-varsity match before Christmas, the Snooker Club travelled to Cardiff University to play their reigning British Universities Sports Association national champion team. The four intrepid players who braved the trip were Alex Robinson, Tim Dann and recent Christmas Open finalists Russell Towers and Simon Baugh.

The opening best-of-three matches did not start well with two wins by Tim, 2-0 and 2-1, before Simon lost his first match 2-1.

The Imperial College team then rose to the early threat with wins by

Russell 2-0, Simon 2-0 and Alex 2-0 and 2-1. After this phase IC led 13-8, and seemed to have given themselves an unassailable position.

In the final single-frame legs, honours were even for Tim and Russell taking a win and a loss each. Simon then won both his one frame matches to produce a final victory margin of 17-10 to IC.

This was a great result for the Imperial College team, defeating the best in the land, and hopes are high for both the A and B teams if they can continue this sort of top-form into the BUSA play-offs next month.

Uni-Hoc start-up appeal

As you may have noticed, there is no Uni-Hoc club here at Imperial College. We think that it is about time that there was!

Uni-Hoc is a brilliant game - fast, furious - maybe occasionally violent (all in the spirit of the game) and best of all fun.

To the uninitiated it is merely an indoor version of hockey, though those who get to know it realise that it is more along the lines of ice-hockey. Anyone can play - be they

male or female, beginners and pros. Uni-hoc is a simple game and we intend to play above-all for fun. There are only a few rules (if any), and games will generally be a good excuse for a swift half or two afterwards.

So, if you are interested, please sign one of the posters around the campus, or e-mail a.rugg@ic.ac.uk or h.k.wong@ic.ac.uk - and we'll get back to you with details of our plans to establish IC's most exciting club!

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