

Private money:
who will really
own IC?

f.ii The Royal Academy
summer exhibition

zinSci@ght°

holding up the
leaning tower of Pisa

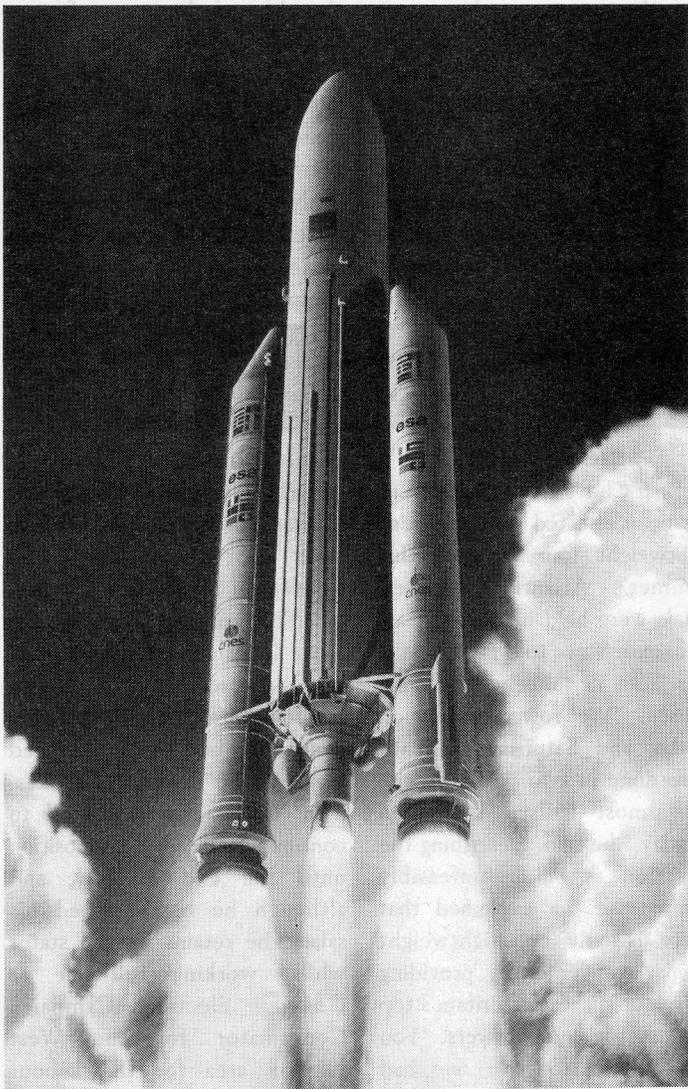


FELIX

The student newspaper
of Imperial College

Issue 1060
June 7th 1996

£6 million blown in Ariane disaster



As it should have been: Ariane 501 in launch.

BY BEN WILKINS

Scientists from Imperial watched with horror as 10 years' work was wiped out in seconds last Tuesday when the Ariane 5 rocket, on its maiden flight, exploded during its launch. On board were the four Cluster spacecraft carrying instruments designed and built by a team led by Imperial.

Ariane 5 took off from Kourou in French Guiana at 1:35 GMT. But just 27 seconds into the flight, a guidance system fault caused the 750 tonne rocket to veer wildly off course. The rocket started to break up 30 seconds later and ground controllers decided to end the mission for safety reasons. Two explosions were triggered in the main fuel tanks, destroying the rocket and its £500 million cargo. On the launch pad, jubilation turned to dismay as scientists watched the burning debris rain back down to earth.

Malcolm Dunlop from the Physics department, one of the investigators involved in the cluster mission, was watching the launch via a satellite link up at the Rutherford Appleton Laboratory in Oxfordshire. His

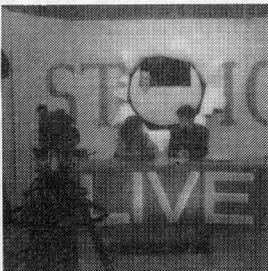
initial reaction was one of 'disbelief'. The overall cost of the project was over £6 million and scientists and engineers have been designing and building the instruments in the Physics department since 1988.

Chris Carr, a research officer who helped to build the instruments, was watching the launch from the European Space Operations Centre in Darmstadt, where the mission would have been controlled from. "We didn't have a very good view. At first a lot of us thought we had just lost the picture. When we saw the flaming fragments coming down, we realised that was it. Then there was complete silence for what seemed like a very long time"

Ariane 5 was the first of a new generation of satellite launchers, the most powerful ever built by ESA. This, the first flight, was officially experimental, and the decision to launch the Cluster mission on it was partly in order to keep the cost down. But Malcolm Dunlop insists that the decision to put the satellites on a test flight was the correct one. "Rocketry is a

Continued on page two

in summary



Stoic wins awards

Stoic, the student television of IC, has won two awards in national student TV awards. Robin Riley and Carlo Masserello won prizes for news coverage and live broadcasts. **page 2**

Disturbance for weeks

Weeks Hall students have complained that their exam revision has been disturbed by builders constructing a path beside them. Work due to take a week has lasted a month. **page 3**

Entertain us

ICU Council has approved proposals for a £109,000 refit of the entertainments lounge. The plans, which are due to go ahead this summer, will increase the capacity of the venue. **page 3**

STOIC triumphs



PHOTO: MARK BAKER

Carlo and Robin of STOIC with some of their award winning kit.

BY ALEX FEAKES

Members of STOIC, the Student Television Of Imperial College, have been celebrating success in the annual student TV awards ceremony hosted by in Norwich by the University of East Anglia's student television station. STOIC have been singled out in two categories: Best Live Coverage and Best News Coverage.

Carlo Masserella, STOIC's Chair, said that the awards were "good for STOIC," and that he was pleased that people are getting some recognition for their efforts. Mr Masserella himself won the Best News Coverage award for a short article about the Internet, while the other award was won for the live coverage of the band Urban Spice by a team comprising Robin Riley, Piers Williams, Elliott Parish and Mark Brown. The conference, under the auspices of NaSTA, the National Student TV Association, invited professional journalists to judge the entries for the 15 categories.

Other awards were scooped up by Birmingham's student TV, UEA's Nexus, and the rest by Glasgow University's GUST, one of the largest and better equipped student television

stations in the country. "Compared to STOIC, GUST is a much larger operation," said Robin Riley, Features Editor of STOIC. "STOIC's strengths are in editing, which is at least five years ahead of everyone else," he continued, pointing out that whereas most student TV is done by media students, often for part of their degree, STOIC's efforts were by relative amateurs.

Their entries into the competition were a bit of an after thought, according to Mr Riley: "We were surprised to win anything this year, as we didn't go. The tapes were sent off out of tradition really." He explained that their absence from the conference was due to a disagreement over the ethos of the awards, and that while STOIC made TV for broadcasting - both their entries were programmes which had been broadcast - some stations had "very obviously made programmes specifically to win awards."

Mr Riley said that he felt that this went against the spirit of NaSTA, and was not what they wanted to do in STOIC, and whilst they were pleased to win the awards, "they don't really mean anything to us."

continued from front page

risky business" he said, comparing Ariane 5 to the Space Shuttle disaster. "There's no reason why this one should have been any more dangerous than subsequent ones."

The European Space Agency Cluster mission was due to spend the next two years in orbit around earth to study the interaction between the solar wind and the earth's magnetic field - the magnetosphere - which protects the earth from sun's more violent outbursts. These observations would give scientists a better understanding of space 'weather'. They hoped to resolve unanswered questions on how the sun causes phenomena in earth's environment such as the aurora, power surges in transmission lines and disturbances in broadcasting.

Cluster was a unique mission described as a cornerstone experiment by space scientists. "It would have been enormous," said Dr Dunlop. "The

only way to get details of the three dimensional structure of the magnetosphere is to have four spacecraft. Previous missions with only one or two spacecraft could only give limited results."

It is too early to say what will happen to the Cluster mission next. According to Chris Carr the fundamental need for this research still exists and this research cannot be done in any other way "Its difficult to know what will happen. Somebody will have to decide whether this science is important enough to launch another mission"

Dr Dunlop is optimistic about the future. He pointed out that although the spacecraft were lost, all the research and development has been done. "Its rather like paying someone to develop some software for ten years and then throwing the computer out of the window - luckily the software was backed up, but we need someone to pay for a new computer!"

News in brief

steve: ace

IC Boat Club's coach, Steve Ellis, has been selected for the British lightweight four entering this summer's Atlanta Olympics. Trials were held in Lucerne last weekend: Steve told *Felix* that it was '99% certain' he would be chosen. "We rowed better on Friday and Saturday than we have done in two years, though we almost ballsed it up on Sunday," he said. Describing the selection as being 'unfeasibly competitive' he explained that there is only one lightweight men's boat entering, providing only four spaces for Britain's top 11-stone or under rowers. "You can't afford to have one bad day," he said.

IC Boat club manager Bill Mason's women's eight will be competing for a place in Atlanta in the Olympic regatta this weekend.

threat to Ghassan

Delegates at Tuesday's Imperial College Union Council were mandated to support a no confi-

dence vote for the ULU President Ghassan Karian. Mr Karrian left his job last week to take up a position as a campaigner for the Labour Party.

The announcement of the move less than a fortnight after his successor, ICU president Sarah White, was elected has been described as "cynical and manipulative" by a ULU spokesman. Ghassan was elected to continue in his present position until the end of July, and although he has resigned his salary, he retains his job status whilst working full-time as General Election Campaign Coordinator for the West London area for the Labour Party.

Representatives at the Council meeting were deterred from pushing for a no-confidence vote only by virtue of the fact that it would make the job handover for Sarah even more difficult than it is already. "I think I would have had a nervous breakdown," Miss White commented.

Weeks awakes to morning chorus

BY ALEX FEAKES

Residents in Weeks Hall have relief from three weeks of building in sight this week, as a project to open up Imperial's newly acquired garden behind the hall draws to a close. Workmen are creating a path alongside the Hall, but have raised the ire of students in the hall who are trying to study for their summer examinations.

The students have been driven to complain because the work has continued right into the exam period, when the original notice that they were given, dated May 15th, said that it should have been completed within a week. The problem had been aggravated by the hot weather, when students often have their windows open, and the pressure on space in other study areas on campus.

Talking to *Felix*, residents in the rooms facing the new garden explained how initially the noise hadn't been that much of a problem, but when mechanical diggers and circular saws started being used, the level of noise just got too much. "They start at eight sometimes," said one,

speaking loudly above the grinding of a paving slab being cut, "we raised a petition, and gave it to the housekeeper, but we were told to take it further."

Indeed, someone did take it further, responding to a spoof poster placed about the hall showing the telephone number for Ian Caldwell, "Director of Revision," and rang up the College's Director of Estates.

Mr Caldwell said that it was the first he had heard of the problems, saying that the students hadn't even spoken to their Warden about it. But he outlined some proposals on how they planned to alleviate the noise, including having set times for slab cutting and digging, or relocating the cutting to somewhere else. He stressed that "We are sensitive to exam pressures, although some students may not believe that."

The gardens behind the Hall were purchased by the College a few months ago as a possible site for an underground sports centre. Mr Caldwell is keen to encourage people to use the gardens for study, and the new path is meant to provide access.



PHOTO: ALEX FEAKES

UCAS director advises students: do it now

BY THE NEWS TEAM

Students should expect to pay fees from 1997 according to the Chairman of the Universities and Colleges Admissions Service. In a statement this week Tony Higgins urged school-leavers not to defer entry.

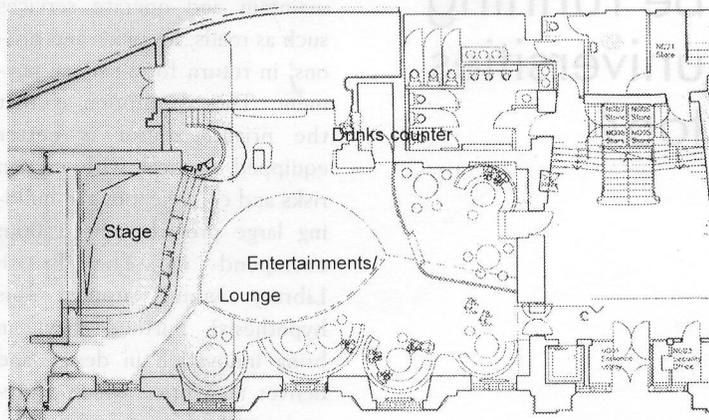
Each year, 40,000 students resit their exams to try and improve their grades and go to their course of choice. This year, students are being recommended to take an alternative course rather than resit. "We are saying, if you have a place this year you should take it, otherwise you might be caught out by a fee next year," said Mr Higgins.

The recommendations come during a climate of funding cuts

in the higher education system. A report published by the Higher Education Funding Council for England (HEFCE) this week revealed that 79 per cent of UK science, medicine and engineering departments have been unable to perform critical experiments due to cuts in Higher Education funding.

This news will add to the hardship of students who already have threats of a graduate tax and the abolishing of grants hanging over their heads. In a meeting of the Committee of Vice Chancellors and Principals (CVCP) in February, top-up fees of up to £3000 a year had been suggested. At present IC has no plans to charge students.

Ents lounge refit gets Council go-ahead



ICU Council this week approved plans for the refurbishment and expansion of the Ents lounge. "It's about time!" commented Ents manager Mark Horne, "It means that that maybe Ents will be taken more seriously at Imperial, and will bring the Ents here in line with other London Colleges". The £109,000 refit is due to be completed by the second week in September. Although offering a minimal increase in capacity, "it will provide a vast improvement in the standard of service," a thrilled Mark said.

Private companies now build, maintain and operate services such as roads, hospitals and prisons, in return for a service payment.

Should they be running universities too?

Wander past the Treasury building in Whitehall any day and listen closely. On a good day you can just about make out a chorus of Treasury officials indoctrinating yet another public sector body with the PFI mantra - a Syren's tune that draws listeners into a world populated by 'value for money service providers', 'efficient risk allocation' and 'specified outputs'.

The PFI (Private Finance Initiative), introduced in 1992, is a scheme that envisages more efficient public service provision through partnership with the private sector. Private companies now build, maintain and operate services such as roads, hospitals and prisons, in return for a service payment. The assumption is that the private sector is better equipped to deal with certain risks and complications in building large projects (the £500m overspend on The British Library would support this hypothesis). Further, they can bring innovation in design and deliver at a price which represents good value for money compared to a purely publicly funded and operated option.

The Initiative is projected to grow significantly: the Treasury's own target is for £14bn worth of deals by 1999, but a recent Treasury

select committee report believes this to be be overly optimistic. To date, the largest projects are transport related, with £2.9bn of the current £5bn worth of PFI projects coming from one scheme alone - the channel tunnel rail link.

The scheme is promoted nationwide by the Private Finance Panel - a sort of

Taking the initiative

pinstriped Jesus Army playing The Tune on clicking calculator keys; however, despite their best evangelical efforts, there are clearly problems. The appointment this week of a new Chairman to the PFI panel, Ross Goobey (the third in six months); the withdrawal of Bovis from the Initiative, citing complexities in the bidding process and excessive bureaucracy, and relaxation of some of the Treasury guidelines, are all testament to this.

In a valiant drive to widen the influence of the initiative, pressure is now being put on HE institutions to test their projects for its application. Universities are currently exempt from a mandatory test to determine if the proposed project is suitable for private sector involvement. Supporters claim that it will enable universities to be equipped with the most modern facilities and plan infrastruc-

ture expansion, independent of the external constraints imposed by government budgets. However, rather than popularising the scheme, it has led to greater confusion amongst officials at universities, because they say the Treasury has not understood their status. Crucially, says Mike Hansen, Director of Finance for Imperial, "they do not appear to know that universi-

ty borrowing does not affect the public deficit at all," thus invalidating the covert reason for the scheme's introduction.

Universities had assumed that the government was tacitly acknowledging that HE institutions aren't really in the public sector by excluding them from the mandatory PFI test. That they get significant funding from the Treasury is irrelevant. Universities are self governing establishments, and as Mike Hansen states, "it's got nothing to do with the government, where we get our money from. We can go to a bank, borrow from the bond market or use the PFI; it just depends on each case." Mike Hansen epitomises the pragmatic view: the PFI may be useful for some projects, but because universities have not historically operated under public sector constraints, the scheme doesn't offer anything new.

Of course, cuts in the capital grant, which thus far amount to 33% this year and a further 20% for next year could force the universities' hand, but this, Mike Hansen believes, simply reinforces the cynical view, that the PFI is largely to reduce the government's public deficit. The current round of gladiatorial efficiency savings at the Treasury

Mike Hansen concedes, however, that the PFI can deliver benefits through sharing risks and/or costs, and its introduction does at least offer another possible solution. PFI type deals have seen services such as car parking contracted out to private operators - hardly the stuff to whip up controversy in the SCR - but what

Biomedical Sciences building, funded partly by a HEFCE grant and partly from the College's reserves, provides evidence that there are easier options than the PFI for the university sector. The PFI is currently the least preferred option.

The mantra does have an appealing line, otherwise the other parties wouldn't have joined the chorus proclaim-



will put more pressure on the institutions to charge student's fees at a fair rate, giving them control over their own income.

Professor Norman Gowar, Principal of Royal Holloway and Bedford New College, sums up the current quandary: "the current [funding] system has all the disadvantages of a market system, with none of the advantages." Furthermore, PFI-type projects are not new in the university sector, as Mike Hansen states, "we have operated a common heating system with the museums for thirty five years, and a common library with the science museum for the last three years. This isn't revolutionary, it's common sense." It's relevance is further undermined by the evidence of the growth of the new universities, who took advantage of the 1992 borrowing regulations and embarked on large expansion programmes.

would you think if your lab wasn't owned by the College? Would you feel less secure if a private operator was running your hall of residence?

One extreme view envisaged by mass use of the PFI sees universities as virtual entities, merely enabling the provision of teaching and research through private agreements, rather than asset owning providers - there are already plans for an entire campus to be constructed in this way. Such a vision is unlikely to become reality in institutions such as Imperial, where private firms cannot provide the high quality demanded, for the simple reason that no such firms exist at the moment. The College is certainly not prepared to risk its reputation by entering into long term deals with untried firms which nobody has experience in negotiating, simply to impress Treasury officials. The controversial

ing it in the same visionary terms as the government. But the solution to capital financing in the HE sector cannot be divorced from the whole problem of student finances. Only when the Dearing Committee's report is published next summer will institutions be able to make coherent long term plans.

There is no doubt that sensible and relevant co-operation between public and private sector can deliver the benefits that the PFI claims. The Initiative in particular needs to gain wider private sector approval. So long as cynicism pervades the interpretation behind the scheme, it will take more than the Happy Clappers of Whitehall to ensure its long term success.

by Nooman
Haque, with
thanks to Mike
Hansen

photo: Mark
Baker

Summer Carnival

LIVE MUSIC
FROM

SHOWGIRLS

SUCCULENT

live hard house from

JAMES HOCKLEY

ROOM 1

ROOM 2

PoodleChaos

with live percussion from doh!

featuring DJ Cosy Slippers,

J-Trance (New Decade)

The Bard (Starfish), Billy McClimenes

& tarot card reader

7 COLOUR LASER

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SOUND SYSTEM

ROOM 3

CHILL-OUT ROOM
& COCKTAIL BAR

ROOM 4

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FREE ! Glass of Archers & Lemonade

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Cool things to do with any left over student loan, #1: buy a work of art.

1,300 works of art are on display in what is an utterly overwhelming exhibition. Paintings, prints, sculpture and architectural designs cram the walls of 13 galleries, floor to ceiling. There is a massive range: everything from 6-foot carbon and steel sculpture to tiny miniature portraits.

The exhibition also features a fascinating range of architectural models, including the rejected Cardiff opera house plan, the Millennium wheel proposed for the South Bank, and the new Wellcome wing of the Science museum.

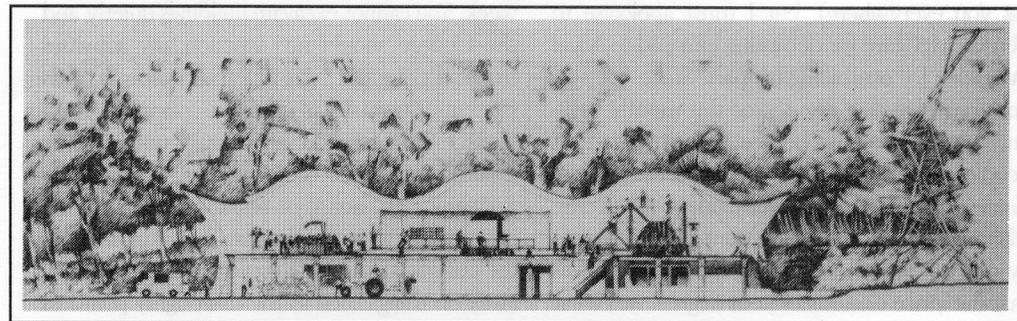
Right: Edward Cullinan Weald and Downland Workshop, ink on trace (not for sale)

Above: John Bellany Bounteous Sea (triptych), oil (£55,000)

Royal Academy of Arts, from Sunday



ROYAL ACADEMY SUMMER EXHIBITION



exhibition: royal academy summer exhibition rachel

column: simon baker

insight: the skew from the tower sarah tomlin

album: manic street preachers - everything must go vik

album: super furry animals - fuzzy logic paul

album: meat beat manifesto - subliminal sandwich nick

singles: k.s. pulaski, bEA and rachel

album: soundgarden - down on the upside vik

album: 60ft dolls - the big 3 ian

album: chemical brothers - live at the social paul

film: from dusk till dawn spooky

film: the juror sarah turner

book: axiomatic sandals

classical: orchestra's summer concert

play: one knight adrian thurston-gordon

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simon baker

Nay, nay and thrice nay. It's a lie, a vicious lie. OK, I had had a skinful, but 'can't dance for toffee' is a heinous libel. Once my lawyers had stopped laughing, I decided to take no further action. Under normal circumstances, I

dance like a demon. Honest, guvnor, and if you want proof I shall be out this very night bopping away to that new-fangled sound the young people call techno, location as yet unknown, but in the presence of witnesses. And as for you Ms Editor, one embarrassing moment and Uncle Simon's down on you like a ton of the proverbials!

After nearly eight months of my weekly elaboration of sound ideas (ranting) with virtually no response from anyone, it was heartwarming to see, as with London buses, two come along at once. Richard Halls' letter about the mobile phone ban was satisfying on its own – you're on my Christmas card list, Richard – but to receive correspondence from the Academic Registrar is more than a humble scribe such as myself ever hoped for. Modesty forbids me replying to the initial comparisons with *Private Eye* (flattery will get you everywhere), but I must apologise to Vernon McClure for demoting him and to Nigel Wheatley for overbilling his part. Since you will both be processing my degree this month, I can only say that you are both wonderful, the best people for the jobs, and I'd appreciate those Geneva bank account numbers I asked for. Making excuses, the head count was not made by me, but what I said about qualifications was that the 'place of study of your degree' was what you wanted to know rather than where the application is being made to. I took it for granted that the application wouldn't end up at Aberystwyth. This is a petty point, since the realisation that not only do people in high places read my column but listen to what I say too, fills this embittered old hack's heart with joy and makes it all worthwhile.

Now down to business. Sleaze, albeit in small measure, caught up with the Government again last weekend when one of the Welsh Ministers resigned over an alleged affair. While it in no way affects his ability to conduct his job, it was good to see that he took the most honourable course of action. In the same week, the Whitewater affair across the Atlantic resulted in three convictions for fraud. In each case the star witness was Bill 'inhalation only' Clinton, and his testimony was completely rejected by the jury. Put simply, they believe the President to be lying. It must be remembered that the last time the President was caught telling porkies, he (Richard Nixon) was forced to resign. If Clinton continues like this, he may well follow the same path. Additionally, the man who dodged the draft in Vietnam is now using the immunity from prosecution granted to a serving soldier to avoid a sex-



ual harassment suit, by virtue of him being commander-in-chief and thus a member of the armed forces. In Italy, former prime ministers Andreotti and Berlusconi have been charged with corruption, along with huge numbers of governmental, industrial and judicial figures. Before labelling the mother of modern democracies rotten and corrupt, it is worth putting into perspective the behaviour of wife-swapping, toe-sucking politicians. Nobody's perfect, but in this case the grass is greener on this side.

The BMS building seems to be ticking along nicely (although the Chemistry building is vibrating ridiculously at times), but the Library project is verging on the farcical. I am one of the lucky ones: work started the day after my last exam, and I have sympathy for those trying to secure their employment prospects in there at the moment. It is certainly true that the really noisy work is done before opening, and when they say noisy, they are not kidding – it involves smashing concrete and cutting steel with angle grinders. The fact of the matter is that no work should be undertaken on this project during the week. You cannot excavate buildings quietly, and the College should not sanction any activities that can potentially damage the prospects of its students. A little imaginative planning from College Estates and Schal could undoubtedly ensure that the job could be done at weekends and early in the holidays. Yes, it would cost more, but if the relevant authorities had stipulated in the contract that Schal could not throw money away on things such as the thoroughly pointless 'Hard Hat' pamphlet and the ever-increasing signs around the site perimeter (if these signs were at the behest of my good friend Mr Caldwell, I apologise). I appreciate that you cannot make omelettes without breaking eggs, but such scant regard for students at such a critical time is just not on. If the project had been properly managed, work would have begun last October, and I would love to hear why this was not done. All I can say is that life here in the sixties at the time of all the major redevelopment must have been awful. Or perhaps students were not viewed as those annoying little sods who limit the scope for conferences in those days.

It would seem that English football is again dogged with the problem of hooliganism, the twist this time being that it is the players who have committed the misdemeanours. Mr Gascoigne was apparently the protagonist in the wrecking of the team plane, damaging a couple of TVs. For my money, if they win Euro '96, they can trash the entire Cathay Pacific fleet and I'll pick up the tab. In that event, there will be one columnist sobbing so uncontrollably with joy that the Thames barrier will have to be raised.

“the realisation that not only do people in high places read my column but listen to what I say too, fills this embittered old hack's heart with joy and makes it all worthwhile”

MILLIONS of tourists have been photographed doing it, Superman did it once but changed his mind, now, John Burland, Professor of Soil Mechanics at Imperial College, hopes to stop the famous Tower of Pisa from leaning too far. Sarah Tomlin reports.

≥inSci^ght^o

The Skew from the Tower

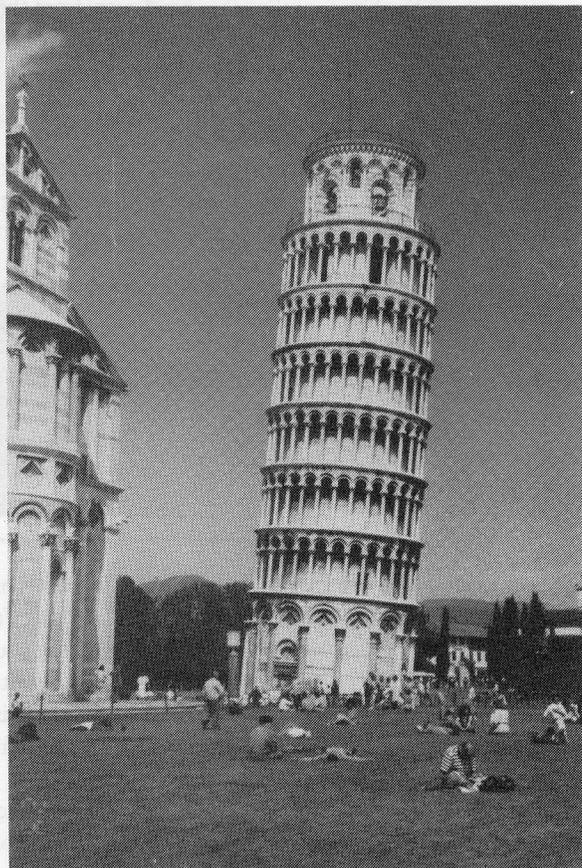
The leaning Tower of Pisa has been closed to the public since 1989, when another tower in Pavia collapsed, killing four people. Because of the historic and tourist value of the tower, the Italian government immediately set up a commission to investigate ways to save it. The commission now believes the tower could topple over at any time. The overhang is already 4.5 meters on the south side and it leans a millimetre more to the south every year. The weakest point of the tower is the compressed masonry near the base on the south side, which is under enormous strain and is in constant danger of exploding outwards.

The reason why the tower leans in the first place is a lesson for construction engineers everywhere. The source of the problem is a layer of very soft clay about ten meters below the tower. Professor Burland compared it to building a tower of bricks on a very soft carpet. On the south side of the tower, the clay layer is very slightly more compressible. This is why the tower leans to the south, although according to Professor Burland, the tower would have ended up leaning anyway.

You may find it surprising that the tower has survived to the present day intact but it is nothing short of a miracle that construction of the tower was completed in the first place. The tower owes its very existence to the changing fortunes of Pisa. Work was begun in 1174, but construction was held up several times when Pisa ran out of money, or needed it for more important concerns, like fighting wars. If it had not been for these breaks during construction, the tower would have fallen over a long time ago. Fortunately, building work was stopped each time just before it became critical, and the passing years allowed the tower to settle down in the clay. In fact, the tower was already listing to the south when the bell tower was finally added two hundred years later. The builders tried their own cosmetic surgery on the tower by slanting the bell tower to the north. Today there are six steps to the bell chamber on the south side and four to the north, giving the tower an overall banana shape.

If the architects of the 12th century were bananas to try to build their tower on a layer of soft clay, there have been many equally crazy attempts to save the tower, some which have done more damage than good. In the 1930s Mussolini

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pumped 80 tonnes of cement into the foundations, causing it to tilt even further. In 1991 there was a proposal to chop the tower off at the base with a diamond saw and then straighten it out with hydraulic winches. A number of less destructive measures were taken in 1992. To prevent the stonemasonry from bursting outwards, the lower walls were wrapped in steel cables. And in an effort to counterbalance the tilt, 600 tonnes of lead weights were placed on the foundations on the north side. Professor Burland seems pleased with the results so far. "We have reduced the inclination by 2cm and the overturning moment by 14% – in other words, the tower is 14% safer." However these are only temporary measures to prevent damage to the monument occurring before a permanent solution can be found.

In 1993 Italian and British engineers began tests near the tower to evaluate the viability of two different techniques. Both hoped to solve the underlying problem in the layer of soft clay. Carlo Viggiano of the University of Naples planned to drain water from the clay on the north side using electro-osmosis. If the clay could be dried out in this way, it would shrink,

allowing the tower to sink back down on this side. Tests in the laboratory looked promising, but engineers who tried this technique did not meet with success.

The other technique on trial involved the removal of some of the soft clay beneath the north side. The main difficulty with this method is the precarious state of the monument; clay has to be extracted from under the tower without greatly disturbing it. The soil extraction technique developed by John Burland and his colleagues uses specially designed drills, which have external casings only twenty centimetres in diameter. These can be inserted into the ground with the minimum of disturbance, and clay can be extracted one cubic centimetre at a time. It is hoped that removing the soil in this highly controlled way will allow engineers to monitor the stability of the tower at all times. If the work goes ahead and is successful, they will reduce the 5.5 degree inclination of the tower by around 10%. Not enough that the

average tourist would notice according to Professor Burland but he is optimistic about the future of the tower. "If we are allowed to do the soil extraction we will save it, extending its life by another 500 years." And if no work is done? "It will fall over! We don't know when, but it could be as soon as 2 or 3 years".



If you have a civil engineering problem, Professor John Burland of soil mechanics can straighten it out.

album: manic street
preachers - everything
must go Caroline

The Manic Street Preachers have had an unusual year or so. First of all guitarist Richey Edwards vanished without trace. The remaining members decided to continue as a three-piece, supporting the Stone Roses at Wembley. They then released the number two single, 'A Design For Life', before this album, their fourth. Controversially perhaps (or maybe not - The Beatles have just done it with John Lennon), they have used five sets of lyrics written by Edwards before he disappeared, with the remainder written by bassist Nicky Wire.

As before, the music is courtesy of James Dean Bradfield and Sean Moore and it is in its music that 'Everything Must Go' is an impressive album. The Manics show great variety in

style - pop in 'A Design For Life', 'Everything Must Go', 'Further Away' and 'Australia', while 'Enola/Alone' and 'Interiors' have an altogether rockier, heavier sound. The chord sound in 'Removeables' is reminiscent of Nirvana's 'Lithium', 'Small Black Flowers' has acoustic guitars à la All About Eve (of all people) while 'The Girl Who Wanted To Be God' sounds like a Seventies cop show theme tune. They layer the sound deeply using strings and horns, and are imaginative in their use of rhythm.

The lyrics, on the other hand, vary from the repetitive by Wire to the plain bizarre by Edwards. What on earth is the meaning of "Vulture stalked white piped lie forever"? - answers on a postcard please...

Still, if you are prepared to overlook the words, and Bradfield's occasionally bland singing, the music on offer here makes this a rather good album. (7)



album: super furry
animals - fuzzy logic Jason

It has to be the weirdest band name since Gorky's Zygotic Mynci. They released two singles: 'Hometown Union' and 'God! Show Me Magic' to tantalise our ears before hitting us with the full force of 'Fuzzy Logic'. It contains songs such as 'Something For The Weekend' that cause the singles to shrink into insignificance.

The album's full of 2½ minute pop songs to keep you entertained with one touchingly poignant ballad thrown into the middle of it. The lyrics are amusing and thoroughly bizarre, such as "I was found riding a unicorn, could be worse I

could be backwards born" from 'Hometown Unicorn'. The chorus of 'Frisbee' is Brucey's famous catchphrase "Nice to see you, to see you nice." The whole album sounds as if it was written while on some psychedelic trip, and there is even one song devoted to gravity and how it holds them down!

The Furies incorporate cool quirky sound effects into their music, also managing a bit of whooping while singing about shellsuits, marriage to the village idiot's daughter and honeymoons in Cyprus. Super Furry Animals are a fun band. (8)

album: meat beat
manifesto - subliminal
sandwich Nick

As you can probably tell from the title of this album, Meat Beat Manifesto are not indie shoe gazers. In fact they appear to be the Orb or the Aphex Twin or somebody else who like to fashion their own musical equipment from a microwave oven, a moog synthesiser and a selection of items bought at the local Homebase.

Subliminal Sandwich (all 140 minutes of double CD) is a selection of ambient and dubby grooves that the Orb were producing about 5 years ago. It's packed full of interesting and somewhat bizarre samples from old American B movies (heard that idea before anybody?) and singularly failed to impress me. It's chill out music, real background, almost as inoffensive as the Lighthouse Family and lacks any originality, (but the album cover is great).

This *very* long player passed me by in the two hours that I listened to it. I suppose that's the point of ambience, but surely there's more to it than that? What is lacking is the inspiration and innovation of Orbital & co. and the trancey touch of Jam and Spoon and Astralasia. With track titles like 'Assassination', 'Mass Producing Hate', and 'No Purpose No Design' you might even expect a bit of industrial NIN influence, but no, the same loops just go round and round, another sample extolling the virtues of frequency modulation or psychedelic mind altering drugs chattering from the hardly taxed speakers.

The album cover of Subliminal Sandwich is a frightening collage of stylised V2 missiles, with brains suspended from pieces of wire and a head connected up to what appears to be the National Grid, but after you press play it gets a bit lost. If you want to create that chill-out zone with this album, stick it on and then just forget about it. (5)

singles: k.s. pulaski and bEA

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nt - responsibilities
Living colour without their amplifiers or their soapbox.
A good groove, but never really gets going.

adam clayton & larry mullen
- theme from mission impossible
Half of U2 with their interpretation of one of the catchiest tunes ever. Dave Clarke provides a gem amongst the heavyweight remixes.

photek - k.j.z.
Rupert Parke's major-label debut - a quite magnificent blend of sparse, cut-up jazz beats and menacing techno.

mad lion - double trouble
A superb rare-groove sampling hip-hop track, so laid-back its horizontal, until Mad Lion ruins it with his inane ragga chanting

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new kingdom - unicorns were horses
A stonkingly good slab of noise-drenched ranting, with a brilliant mellower b-side

catatoria - lost cat
A catchy upbeat tune from these Welsh indie posters together with a couple of ace b-sides.

longpigs - she said
Re-release of their debut single from last summer. This song is overflowing with passion and Crispin's howling vocals. Brilliant.

placebo - 36 degrees
A jump up and down song from one of the new lo-fi bands.

m
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revelino - i know what i want
This is a sad attempt at a cross between Terrorvision and Nirvana. I know I want this record to stop.

the candy skins - get on
Domestic problems form the talking point of this top indie record. Go out and buy it.

x

more singles:^{rachel}

velvet jones - 'scuse me
Sounds a bit like like the Beatles, and, funnily enough, a bit like Oasis too.

dr robert - pond life
Fairly bland and harmless acoustics.

rare - don't make me wait
Bjork with extra background squeaks.

jocasta - change me
Formulaic indie: not that bad, but rather anonymous.

sun - there will never be another me
See above.

crowded house - instinct
Perpetuates the idea that middle of the road = tired and boring. Redeemed only by a rather good live version of 'Weather with you'.

glossary:^{ignorant felix editor}

a good groove: the raised surface of a brand-new LP

a dubby groove: as above, after being left out in heavy rain

a rare groove: as above, if still as good once your mate's returned it

ambient groove: still as above, only warmed slightly

chill-out zone: a refrigerator

industrial NIN influence: effect of nickel nitrate contamination.

catchy tune: sticky throat lozenge

heavyweight remix: Frank Bruno's face after a bad fight with Mike Tyson

major-label debut: a new product from Heinz

menacing techno: an intimidating computer scientist

indie shoe gazer: a shy, retiring Antiguan

hip-hop: seven-year old girls' playground game

lo-fi: a sugar-free fish substitute

rock the house: throw half-bricks through your neighbours' windows.

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xi

album: soundgarden - down on the upside^{vik}

It's 1990. Three unknown bands from Seattle tour the toilet venues of England. At the bottom of the bill are an energetic punk band with a burgeoning pop prowess. Second on the bill are a trio whose frontman lends credence to the old adage 'you are what you eat' (at least he does if he's been consuming footballs). Topping the bill are a group with a fine line in sludgy guitar riffs and bombastic choruses, a musical style that was then innocuously described as 'grunge'.

Flick to 1996. That band at the bottom of the bill has come, sold fifteen million records, and gone when their singer committed suicide (something to which you can't just say, "Nevermind.") The middle band are still anonymous and their singer is still, well, laterally unchallenged. The headliners? Well, they've gone from strength to strength, having sold seven figure quantities of records and are now releasing their fifth album.

And that album should see the Soundgarden continuing to blossom. 'Zero

Chance' and 'Dusty' pick up where the huge hit from 1994's 'Superunknown' album, 'Black Hole Sun', left off, using Beatles-style psychedelic touches to enhance their anthemic qualities. 'Never The Machine Forever', on the other hand, is a heavy metal workout that harks back to the heady days of old. But it's on the punk rock pieces such as 'No Attention' and 'Ty Cobb' that the (Sound)garden really begins to look rosy. The latter particularly shines as Chris Cornell and Ben Shepherd partake in some frenetic mandolin picking over the traditional boisterous electric guitars to create one of those hitherto rare things - a lighthearted Soundgarden song.

Herein lies the secret of this band's longevity. Where Nirvana and Pearl Jam seemed depressed at their success, Soundgarden have finally learned to enjoy it to such an extent that on this album they sound relaxed and comfortable but still challenging. Much of the music press still mistakenly label them 'Frowngarden', one of the most miserable bands on the planet. With this release, we'll see who has the last laugh... (7)

album: 60ft dolls - the big 3^{ian}

The 60ft Dolls have been around for a while, biding their time and releasing a bunch of singles, all of which can be found here. The album is basically fast guitar riffs and strained vocals on tunes that tend to sound raw and uncut. The opening track, 'New Loafers' is hardly impressive while the new single, 'Talk To Me', does not do them justice.

On 'Stay', the band's deft touch at combining fast riffs with great melodies just about puts them level with Honeycrack's 'Go Away'. On the fourth track, 'Hair', they sound like a band who could blow the world away if they last long enough. 'Hair' is a soft track loaded with riffs that blend in rather than standing out like sore

thumbs. Lyrics like "love your hair..." are not Neil Young material but the melody is seductive to the point that you won't be able to keep the tune out of your head.

There are other tracks here that sound great but you can't help feeling that they're wasted on just guitars, bass and drums. The best track, 'Pig Valentine' is like a diamond and was the reason I fell in love with this band. It belongs to the class of songs which include Nirvana's 'Smells Like Teen Spirit', Bush's 'Little Things' and the Manics' 'Motorcycle Emptiness'. This track is probably worth the price of the album.

The rest of the album is jagged, unable to fulfill the ultimate promise of being absolutely mind blowing. This is by no means a classic but, given time, the Dolls have the potential to produce a stunning album. After all, Nirvana were never this good on their debut. (7)

album: mixed by the chemical brothers - live at the social^{paul}

"The problem with clubs in London," I was recently advised by a Northern friend of mine, "is that there are just too many of them." He then went on to assert that in most Northern towns everyone knows the best places to go and so is guaranteed a top night out. Here in the smoke, on the other hand, you're faced with a bewildering array of good clubs, but few genuinely brilliant ones. If you want to have a mad time, you've got to look hard to find the places to do so.

The Heavenly Social is undoubtedly one of those places, having easily the wildest atmosphere I've seen in a London club. The Chemical Brothers, the current Heavenly Social residents, may be a bit samey on record, but as DJs they

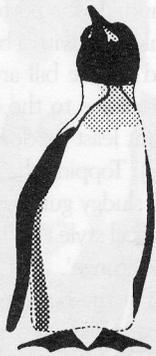
are peerless in their ability to, as they put it, "Rock the house." In stark contrast to most of London's house clubs, looking cool is just not an option. Everyone goes to get bevied, get out of their heads and have a mental time.

The problem is, how do you translate this sweat drenched, foot-stomping atmosphere to a CD? Well, you can't really, but the selection of tracks here is good and varied enough to rate as much more than just a handful of club tunes. The material ranges from the hip-hop of Eric B and Rakim's excellent 'Know The Ledge' to The Chemicals' own 'Get Up On It Like This' to the Charlatans remix 'Nine Acre Dust'. There's also a brilliant remix of Lionrocks' 'Packet Of Peace'.

There's been an endless stream of club compilations released over the past year or so, most of which have been mediocre. This one is completely different and ranks well above 90% of them. Go and buy it, or better still, go and experience the club for yourself. (9)

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celluloid guide:^{this week}

odeon kensington
01426 914666

secrets and lies
11.55, 3.00, 6.05, 9.10 [L]
sense and sensibility
12.30, 3.30, 6.30

the birdcage 9.30 [L]
spy hard
12.35, 2.45, 4.55, 7.05

things to do in denver when
you're dead 9.15 [L]
up close and personal
12.40, 3.35, 6.30, 9.25 [L]

muppet treasure island
1.30, 4.10

now and then
2.10, 4.40, 7.10, 9.40 [L]
[L]=late fri-sat 12.15

tube; ken high street. £7, £6,
£3.50 before 5pm mon-fri,
£4 before 5pm sat-sun

mgm fulham road
0171 370 2636

up close and personal
12.40, 3.30, 6.20, 9.30

secrets and lies
12.10, 3.10, 6.10, 9.10

the confessional
2.10, 4.40, 7.15, 9.40

kids 2.00, 4.30, 7.00

primal fear
12.30, 3.20, 6.10, 9

tube; south ken then bus
£6.20, £3.70 students and
before 6pm

mgm chelsea
0171 352 5096

the birdcage
1.20, 4.05, 6.50, 9.25

now and then
12.35, 2.45, 5, 7.20, 9.45

muppet treasure island
12.40, 2.40, 4.45

richard iii
1.40 & 4.50 not sat-sun,
6.35, 9.25

tube; south ken then bus
£6.20, £3.70 students and
before 6pm

chelsea cinema
0171 351 3742

fargo 2.20, 4.30, 6.40, 8.55
tube; sloane square then bus
£7, £6, £4 (£2.50 concs) 1st
perf

noir
0171 837 8402

the confessional
2, 4.15, 6.30, 8.50

blue in the face 1, 3, 5, 7, 9
tube; russel square
£6, 1st perf £4, concs £2.50

dusk
dawn

the
juror

film: from dusk till dawn

spooky

The Tarantino backlash pauses momentarily with the release of *From Dusk Till Dawn*. Having practically exhausted the potential of the gangster film he has moved onto the horror genre and in particular vampires.

George Clooney (*ER*) and Quentin Tarantino play Seth and Rich Gecko, a pair of murderous brothers fleeing for the sanctuary of Mexico. En route they take hostage a faithless preacher (Harvey Keitel) and his children (Juliette Lewis and Ernest Liu). Once across the border, they hole up in a sleazy strip joint called the Titty Twister, which also happens to be the home of a brood of blood-thirsty vampires.

The film can be split into two essentially different segments with only the five principal characters to link them. The first half is basically a road-movie as the two brothers cut a bloody swathe in their run for the border. The second half, however, is one long extended fight sequence as they fight for their lives against the blood-sucking fiends. The basic flaw with the film is that the two sections are too dissimilar to work well with the other. Luckily, both have enough merits in their own right to compensate for the disjointedness.

The first section is the more tightly written and directed of the two, allowing us to familiarise ourselves with the characters before all hell breaks loose. Unlike Tarantino's mobster heroes of his earlier films we are given little reason to like the Gecko brothers and for the first half of the film it is they who are the bad guys. With relatively little action going on Robert Rodriguez (the director) has had to restrict his normally flamboyant directing style and has consequently had to redirect his talent.

The second section lets Rodriguez off the leash and shows him in his true element. At this point, the film loses all originality, but remains entertaining enough for this to be of little consequence (providing you are not averse to a bit of blood and gore). There are, however, enough nice touches, mainly humorous for it to never get boring or particularly sickening despite the high gore content. The fact that they are fighting vampires has very little importance, apart from several Peter Cushing jokes, as it is merely an excuse to kill monsters in as bloody and violent a way as possible.

Although not up to Tarantino's early films, *From Dusk Till Dawn* is a highly entertaining film which shows what Robert Rodriguez can really do given half a chance.

film: the juror

sarah turner

The Juror is a courtroom drama with a difference. Unlike most films of this type, which deal with the defendant and their lawyer, it revolves around the life of a juror, Annie Laird (Demi Moore). Annie, an artist and single mother, sees her life change dramatically when she is chosen to serve as a juror in a trial of a powerful mobster, Louie Boffano.

"She is at a point in her life where she's a little bored and looking for a distraction," says Moore. "Being a juror doesn't seem to be harmful, and it will momentarily take her out of what she perceives as her humdrum life."

Alec Baldwin plays The Teacher, hired by the mob to help them win the case by tampering with the jury. He 'selects' Annie,

and forces her to influence the other jurors to reach a 'not guilty' verdict. To do this, he first befriends his 'pupil' by buying a few pieces of her artwork - strange looking wooden boxes, whose contents are supposed to be felt, not seen. Then

he threatens to kill her son Oliver (Joseph Gordon-Levitt), if she does not cooperate with him.

Annie's best friend Juliet soon becomes tangled in The Teacher's web of deceit, and after spending the night with her, he forces her to kill herself, as a warning to Annie. Fearing that he will kill her son as well, Annie takes her son to



Mexico, where the final scenes are set. However, the main focus of the film is not the courtroom but rather Annie's home life. As Annie, Moore makes an unusual single mother, but a likeable character, who captures the audience's empathy from the outset.

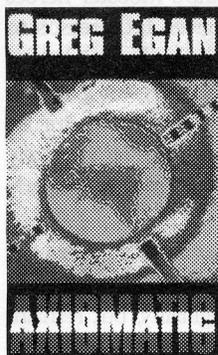
Although some parts of the film are unconvincing, and Annie appears to develop a superstrong personality, it

contains a few surprising twists, which keep you on the edge of your seat.

This is nothing compared to the quality of some of the films released recently, but it is easily worth the price of a cinema ticket.

book:axiomatic

greg egan sandals



Sometimes when you read a book by a familiar author, you realise that this is the result they were aiming to produce in their previous attempts. Although this book is a collection of short stories as opposed to a novel, Greg Egan has definitely hit the mark here.

Nineties science fiction has tended to find itself in the doldrums when it comes to new ideas based on science as opposed to sociology. (Cyberpunk is in general the latter.) Egan has come and shown that there are plenty of things still to be played with, although this is not to say

he ignores the social aspects of his fictions.

The stories are a combination of the older areas of weird cosmologies and quantum effects, and the newer areas of genetics, nanotech, and the mathematics of chaos, and most of them have a heavy streak of questions of 'self'. To illustrate, the title story concerns the use of nanotech to manipulate the brain, giving a person a new 'axiom' of behaviour, whilst 'The Moral Embryologist' discusses morals in the age of AIDS and 'The Hundred Year Diary' has a set up allowing information, including personal diaries, to be received from the future.

Egan is an up and coming Australian author and this, his third book (in paperback), is his most readable so far. If you chucked SF because everything you read could be traced back to Clarke or Asimov, this collection will renew your interest in the genre. If you have never tried SF, then this is an ideal introduction.

play:one knight adrain thurston-gordon

The fear of the armed maniac is a devil which sits menacingly on the shoulder of every seriously guilty individual, whether arrested by the state or not. 'One Knight', by Simon Francis frighteningly depicts such a nightmare situation. The "hostage", played by Henry Dunn, can't believe that he's been caught, because the hysterical "kidnapper" (Ben Shockley) is not part of the official legal-police-religious merry-go-round.

The "hostage" treats his kidnapper with

complacent contempt, as if he is a naughty child, because he knows that the kidnapper is committing a criminal offence and will be punished for it. The difference between their respective successes and failings in life turns out to be their perception of Elvis Presley's end! "Hostage" understands him to be an obese failure while "kidnapper" sees him as the King. This is a very watchable and worthwhile play, that makes you wonder what happened the night after the inevitable end.

concert:ic symphony orchestra

Copland: Quiet City

Britten: Piano Concerto

Sibelius: Symphony No. 2

The rehearsal time for third term concerts is less than half that for the previous terms. Nevertheless, this very substantial and ambitious program was performed with assurance, precision and zest.

The original version of Quiet City was composed in 1938 for trumpet, saxophone, clarinet and piano as incidental music for an experimental drama of that name intended for New York's Broadway. Steve Hick's controlled and sensitive performance showed that Copland's concern was kind but superfluous; however, it gave us the opportunity to experience the matching control of Daniel Elsen on the cor-anglais.

That same year, 1938, Copland visited Britten at the Old Mill at Snape in Suffolk, where they formed a firm friendship and where Britten played him the first version of Britten's Piano Concerto. Only three years before, Britten had lived, as an RCM student, in a minute room at 173 Cromwell Road. In that period he had written a lot of incidental music for the BBC, for documentary work, and for theatre works by W.H. Auden. The piano concerto is of that time.

Britten gave the American premiere at the Carnegie Hall in New York. To restore the Transatlantic balance, forty years later, Copland, conducting an 80th birthday performance of Quiet City in the Royal Albert Hall, had to abandon the stage when the elderly heating system (it was winter) began to rattle and thump with a volume approaching that of the orchestra.

Sibelius wrote most of his second symphony in the congenial climate of the hills behind Rapallo in northern Italy. The "Mediterranean Lyricism" of Walton's orchestral writing comes from a similar location and also the formal structure of his first symphony owes much to Sibelius. His "Valse Triste", which turned him into a cult figure, had originally been written to accompany a scene in a play entitled "Death" by his brother-in-law. His theatre work was well established before the composition of the symphonies and crucially augmented his formal abilities.

There have been recent studies (reported in Nature) suggesting that musical experience and training cross-fertilizes other mental skills. If this is true, the dismissive Government attitude to music in schools needs reassessment. The members of ICSO, following Dickens, Ash scholarships, Exhibitions and the joint IC/RCM course, form a unique group with their abilities in science as well as in music.

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Axiomatic is out now in paperback from Millenium, priced £4.99. The Union bookshop has copies.

For more information on Greg Egan see web page <http://www.sam.math.ethz.ch/%7Epkeller/Egan-Page.html>

One Knight

The Man in the Moon Theatre,
392 Kings Road, Chelsea

Imperial College Symphony Orchestra,
conducted by Richard Dickens with Stephen Tarlton (piano), Friday
24th May 1996

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Pimlico Connection
Socrates
Welsh

Alternative Prospectus
Felix
Handbooks
IC Radio
STOIC (Student Television of Imperial College)
Phoenix

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C & G RFC
Motor Club
Departmental Societies
Hover Club

Karting Club
Team Bo

RCS Union
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Swim Soc

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friday

7
june

Rag Meeting
1.10pm Ents Lounge. (R)

Ents
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Free minibus service
Leaves from Beit Quad, taking female students home (anywhere in central London) First run 12am, last run 2am. (R)

f r i d a y



saturday

8
june

Ents
DaVinci's. Football is home! **Standing Room Only** brings you the opening ceremony and match 1 of Euro 96 - a fortnight of the beautiful game. See all the matches live on the biggest screen in College. England v Switzerland. Bar from 1pm.

s a t u r d a y

**next diary
deadline:
noon,
June 10th**

As promised, we have now removed all regular entries unless we were otherwise informed.

Should you want your club entry re-instated, please inform us before the deadline.

sunday

9
june

Ents
DaVinci's. **Standing Room only**. A day of great games. 2.30pm Spain v Bulgaria. 5pm Germany v Czech Republic. 7.30pm Denmark v Portugal. Please note, our bar opening hours remain the same.

s u n d a y

Fleadh '96

Right then, we have all the details for tomorrow. If you're down to sell programmes at this year's Fleadh, you'll need to be at Finsbury Park at 9am and head for the production tent.

You must have your student ID with you, and you must be pre-registered (ie you can't just turn up!) For more information, explanations and such contact Mark Horne on 48068 or m.horne@ic.ac.uk, or via the Union offices on the first floor of Beit Quad.

monday

10
june

Ents
DaVinci's **Standing Room Only**. 4.30pm Holland v Scotland. 7.30pm Romania v France.

m o n d a y

Fulbright Awards

A new type of sponsorship, offering time in the States and sponsorship by business and industry, has been developed as part of the US-UK Fulbright Programme. Awards are offered for postgraduate study in the US and can be linked to periods of attachment to the sponsoring companies.

You need at least a 2i, as well as evidence of leadership potential.

The closing date for 1997-98 awards is 25 October 1996. Details can be obtained from the Careers office.

IC Union Colours Committee Awards for 1995/96

The Imperial College Union Colours Committee has awarded the following awards for 1995-1996. Those who have been awarded Union General Awards by their constituent college union are automatically given ICU social colours.

Honorary Life Membership and Pot
Matthew Crompton
Rachael Curran
Rachel Walters
Sarah White

Honorary Life Membership
Sarah Edwards
Andy Kershaw
Sarah Thomas
Tim Townend
Piers Williams

Outstanding Service Award
Eric Allsop
Juliette Deacock
Mo Dullo
Carlo Massarella
W. D. Miles

Gaurav Misra
Rob Hodgkinson
Barry Platt
John Savery
Matt Szyndel

Social Colours
Mark Baker
Nick Bradshaw
Paul Brown
Darathy Charlton
Vicki Cunniffe
Simon Cope
Cathy Dolbear
Chris Harrison
Lennard Kolff
Jon Lambert
Geoff Mullet
Anne Ovens
Mark Pallen
Rosie Proppett
Robin Riley
Mark Sharman
Zoe Thorn
Jim Totty
Laurie Tweedale

Hedonizm



Free June 7th 9 - 2 £1 / free £4 9

tuesday

11
june

Ents
Standing Room Only.
DaVinci's. 4.30 Italy v Russia.
8pm. Bar Trivia. Win £50 or a
crate of beer.

Cathsoc
12.00pm. Bagratt Centre, Mech
Eng. (R)

t u e s d a y

Jobshop

Although ICU has been unable to gain funding for a full scale employment service, we will be proceeding with a scaled-down version for now. Vacancies within the Union, College and the surrounding area will be advertised on a noticeboard outside the Union Office.

We will be focussing on part-time and holiday vacancies, and if anyone knows of any vacancies that our students could fill, please contact Michelle in the Union Office.

wednesday

12
june

Ents
A football free zone... Frolik!
8-12pm. Free.

w e d n e s d a y

Rag

Most of the Posts have been filled for next year, but we still need an editor for the Rag Mag Procurements, and Hall Rep. Coordinator.

Contributions are welcome for RAG MAG '97. Your input is important, so don't just sit back and criticise, why not submit a joke or idea?

We have loads of exciting events planned for next term, including the traditional Rag Week madness, Rag Raids on unsuspecting locations, and FIREWALKING on Saturday 16th November.

If you are interested in any of the above, please see any member of Rag or leave a message in the Union Pigeon Holes.

thursday

13
june

ICCAG
8.15pm. Weeks Hall basement.
Soup run for the homeless. (R)

ConSoc
1pm Southside. (R)

IQ
9pm Union bar. Contact
gaysoc@ic.ac.uk for more information. (R)

Ents
Standing Room Only.
4.30 Bulgaria v Romania.
7.30 Switzerland v Holland.
Cocktail Night: a dream combination - footie and sex on the beach! DaVinci's.

t h u r s d a y

icsf

Iain M. Banks will be signing copies of **Excession**, his new novel, on Tuesday 11th June between 1-2pm at **BOOKSetc**, 120 Charing Cross Road, WC2.

friday

14
june

Rag Meeting
1.10pm Ents Lounge. (R)

Ents
Standing Room Only.
4.30 Portugal v Turkey.
7.30 Czech Republic v Italy.
Typically Tropical - Beach Party, to raise funds for this year's Hockey Club trip to Barbados. Special Cocktail bar. 9 - 2am. £1

Free minibus service
Leaves from Beit Quad, taking female students home (anywhere in central London) First run 12am, last run 2am. (R)

f r i d a y

the
week
ahead

VACANCY

ASSISTANT
WARDEN

GARDEN AND WEEKS HALLS

Applications are invited for the position of Assistant Warden at Garden and Weeks Halls, which is available from October 1996. Weeks and Garden halls are run jointly, with the Warden resident in Weeks Hall, and the Assistant Warden resident in Garden Hall. There is in addition a Subwarden in each of the Halls.

The Assistant Warden will be responsible for assisting with the pastoral care, welfare, discipline and administration in Garden and Weeks Halls and he/she will be expected to reside in rent-free accommodation within Garden Hall.

Application forms and an information pack can be obtained from the Establishment Office, Personnel Division, Room 513, Sherfield Building, Tel. Ext. 45533 or 45532. Any non-undergraduate of the College may apply, but experience of pastoral care of students would be an advantage. Closing date for receipt of completed applications: Wednesday 26th June 1996.

VACANCY

ASSISTANT
WARDEN

LINSTEAD HALL

Applications are invited for the position of Assistant Warden of Linstead Hall, which is available from October 1996.

Linstead Hall, in Princes' Gardens, is one of the liveliest halls of residence. It houses 192 students, primarily first year undergraduates. The Hall is run by a Warden, an Assistant Warden and two subwardens whose responsibilities include managing a small bar and arranging evening meals.

Application forms and an information pack can be obtained from the Establishment Office, Personnel Division, Room 513, Sherfield Building, Tel. Ext. 45533 or 45532. Any non-undergraduate of the College may apply, but experience of pastoral care of students would be an advantage.

Closing date for receipt of completed applications: Monday 17th June 1996.

Last Notes

No 1: Manchester

Things to take with you:

Map, umbrella, guide-book, unconditional life insurance, camera.

Quaint local customs:

Morris dancing, worshipping Oasis, retail of illegal narcotics, theft and murder

Places to meet the locals:

Social Security Office.

Reasons to visit

Manchester:

Manchester United, Oasis

Reasons not to visit

Manchester:

Manchester United, Oasis

Useful Phrases:

All southerners are poofers

Can you insert this in pineapples and ship it to my home country?

Man United / Man City Forever (depending on who you're talking to: mistakes can have very grave consequences)

Take my watch/clothes/virginity/ money, just don't hurt me

Ah! It's raining again / seems to be pouring down / bit of a shower today, etc.

Things not to say:

Who's Noel Gallagher?

Which way to Coronation Street, please?

This is a post-industrial hellhole.

Liverpool FC forever!

Yes officer, I can identify them.

You ripped me off! This is baby aspirin!

I'm sorry, I don't have any change.

Anything in a southern accent.

Places to visit while you're there:

The Hacienda

Rusholme: the greatest concentration of kebab shops any where in the UK.

Places to avoid:

Moss side.

Things you should know about Manchester:

On a per person basis, they have more weaponry than in the US army and more drugs than Glaxo-Wellcome.

How to blend in:

1) Wear a Man United jacket, baggy jeans and at least three concealed weapons

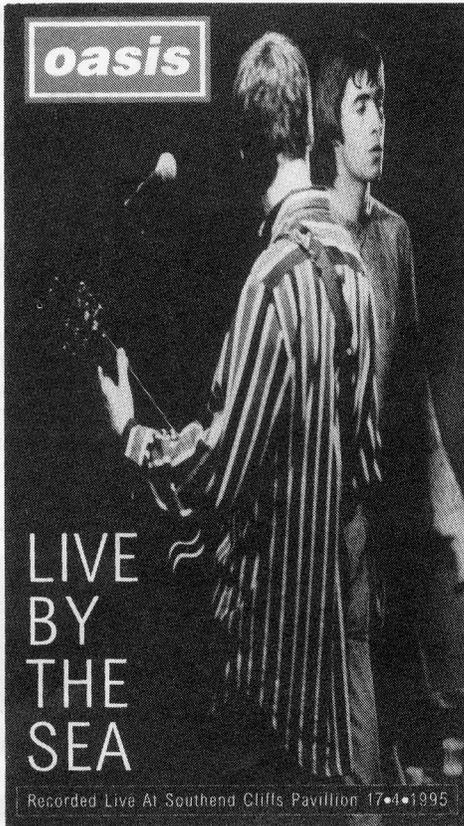
2) Anything + nylon stockings (on your head)

If we dropped the Bomb on Manchester

It wouldn't change much

Most likely to say:

When you're tired of life go to Manchester - Samuel Johnson.



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FELIX 1995 - 96

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LETTERS TO FELIX

crux of the matter

Dear Felix,

PLEASE GIVE OUR CRUTCHES BACK

The Health Centre has a policy of lending crutches to those who need them in exchange for a deposit of £50. However, because the need for crutches usually arises after an accident, very few patients have £50 cash or chequebooks on their person. In these cases we have lent the crutches anyway, asking the patient to sign a pledge to return them as soon as possible after the patient has recovered.

We started this academic year with 16 pairs of crutches. Now we have 3 odd ones. Since each pair costs £60, this is a significant loss to the Health Centre, as well as depriving others of this service

We would like our crutches back. To this end, we propose an

amnesty. Please return any crutches in your possession by Friday 14 June 1996 and we will cross your name off our black list. After that date we shall regard any non-return of crutches as theft of college property and will pass on our list to the Academic Registrar asking him to invoke regulation for students number 2. This means that once students reach their final year, no degree will be awarded until the debt has been settled.

We are also writing to all those who borrowed crutches and have not returned them. This will demonstrate that we know who they are.

Dr. Irene Weinreb
Director,
Clinical Services

Letters may be edited for length. Deadline for letters in Felix 1061: midday, Tuesday 11th June

FELIX

WEEK

<p>monday, high noon clubs & societies articles deadline</p> <hr style="border: 0.5px dotted white;"/> <p>monday 1.20pm reviewers' meeting</p> <hr style="border: 0.5px dotted white;"/> <p>monday 6pm news meeting</p> <hr style="border: 0.5px dotted white;"/> <p>tuesday noon arts meeting</p>	<p>tuesday noon letters deadline</p> <hr style="border: 0.5px dotted white;"/> <p>tuesday 6pm features meeting</p> <hr style="border: 0.5px dotted white;"/> <p>thursday night collating</p> <hr style="border: 0.5px dotted white;"/> <p>friday morning another Felix hits the street.</p>
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Solution to this week's crossword:
Across: 3. Olympic, 6. Error, 7. Eave, 10. Slapdash, 11. Cobalt, 12. Muesli, 13. Sideroad, 15. Materialist, 18. Shortage, 21. Nelson, 23. Straws, 24. Adequate, 26. Shoe, 27. Overt, 28. Subedit. Down: 1. Seal, 2. Tripos, 3. Organise, 4. Placid, 5. Cerberus, 8. Volga, 9. Cheshire cat, 10. Summons, 14. Detente, 16. Airwaves, 17. Lancelot, 19. Hitch, 20. Absorb, 22. Laurel, 25. Fate.

FELIX

FOUNDED 1949

PRODUCED FOR AND ON BEHALF OF IMPERIAL COLLEGE UNION PUBLICATIONS BOARD

PRINTED BY THE IMPERIAL COLLEGE UNION PRINT UNIT
BEIT QUAD, PRINCE CONSORT ROAD LONDON SW7 2BB
TELEPHONE/FAX 0171 594 8072

EDITOR: RACHEL WALTERS

PRINTERS: ANDY THOMPSON AND JEREMY

BUSINESS MANAGER: JULIETTE DECOCK

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ISSN 1040-0711

blame

Blame. Great fun to distribute. I've thrown it at various groups of IC staff so I reckon it's about time I blamed the students. Let me tell you a little story.

Once upon a time I was an undergraduate at Imperial. I wasn't a very good one, but I wasn't so appalling as to cause a fuss. Falling into that great mass of the high 2:2 / low 2:1, it's very easy to drift along unnoticed. But all was quite happy until I got to the end of my second year (by which time my course was, getting a little tricky). I failed a paper, bringing my aggregate below that acceptable level of mediocrity which apparently determines a student's ability to survive in Europe for a year.

I was very disappointed, so I phoned up the relevant member of staff to talk about it. He had no difficulty in giving me an explanation for his decision, and he said some very unpleasant things about it. No, that's not quite true. He was arrogant, patronising, unspeakably rude, insulting, unsympathetic and generally abusive. He told me I was 'a failure and a liability to my department.'

So what did I do, you ask? Well, I took it further. I told my friends. I told my friends' friends, and their cousins. My

Granny's next-door neighbour's cleaning lady knew. I talked to my brother on the phone for an hour about it. (He was in Hong Kong on holiday at the time). But did I tell anyone useful? Did I buggery. I don't know why. I think I was embarrassed.

In the light of the exceptionally noisy building work outside the library I phoned up the librarian last week, all set to demand explanations for the cavalier disregard for students' revision. But it was difficult to maintain my argument when he told me that no one had complained at all. I went into a meeting with Ian Caldwell this week's looking for justification for the appalling way students in Weeks had been treated. He was very concerned, but not only had he just found out, the Weeks' warden had no idea that students were unhappy either.

Look, folks, we cannot keep whinging. Call me hopeful, but I reckon that relevant, constructive complaint might achieve something. You're going to have to trust me on this one, but there really are some genuinely decent, dedicated, caring staff out there. Use them: I never did, and I wish I had. It might not have made any difference, but it might have stopped me wallowing (and fuming!) quite so much.

EDITORIAL TEAM:

NEWS: ALEX FEAKES FEATURES: MARK BAKER

SUB-EDITING AND PROOFING: TIM ST CLAIR

MUSIC: VIK BANSAL CINEMA: KATIE HOPKINS & WEI LEE

PHOTOGRAPHY: IVAN CHAN

PUZZLES: CATFISH CLUBS AND SOCS: SANDALS

ARTS: JEREMY SCIENCE: BEN WILKINS

COLLATING LAST WEEK: TIM, JEREMY AND GIDON

DELIVERING LAST WEEK: ANDREW

FELIX SPORT

IC Athletics Clubs Committee is sponsored by



IC Boat Club success at Duisberg

DUISBURG INTERNATIONAL REGATTA 1996

Imperial College Boat Club came through strongly in the International regatta at Duisberg at the end of last month. The World's premier crews assembled at the German International rowing course: the Olympic squads from all the major rowing nations competed in what will be one of the last events before the Atlanta Games.

Imperial College and Queens Tower Boat Clubs (IC old boys) sent four crews, consisting of two Senior Coxed Fours and an U23 Quad and Coxless Four. Racing at this level is the toughest competition that the IC crews have ever encountered. The U23



Coxless Four surpassed themselves in winning their event. Their winning time made them the fastest Imperial Coxless

Four, reducing the previous record set by the IC Commonwealth Games bronze medalist in 1994 by one second.

The U23 Quad finished third on Saturday, and racing as a senior boat on Sunday just failed to make the final, being beaten by the American World Championship finalists by only 4 seconds. In the Senior Coxed Fours the Queens Tower crew made the Final on Saturday but were unlucky to miss qualifying on the Sunday.

The Imperial boat, which is presently seeking selection as the Great Britain Coxed Four for the World Championship this year, qualified for the final on both days. They finished a close second on the Saturday and a slightly disappointing fourth on the Sunday. The Germans won the event on both days.

Crossword by Catfish

Across:

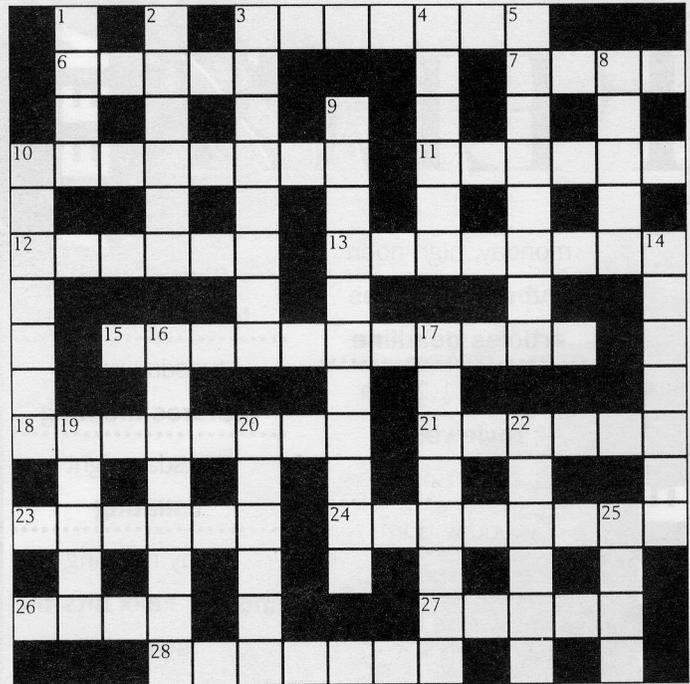
- 3. I comply with order from athletic committee (6)
- 6. Queen has right to alternative indication of mistake (5)
- 7. Permission not left for timber (4)
- 10. Hit and run is careless job (8)
- 11. Gunmaker takes in graduate and makes a bomb (6)
- 12. Mule is making a mess with the oat mixture (6)
- 13. Stuck oar in, and took the part this way (8)
- 15. Concerned about ownership of departing vessels which lost right of way in fog (11)
- 18. Rationing will begin in a little while (7)
- 21. Firm hold on naval commander (6)
- 23. Southerner with blemishes comes back, drawn (6)
- 24. Make the same after notice that this is just up to standard (8)
- 26. Dealt out from and put on

by farriers (4)

- 27. Almost secret, but out in the open (5)
- 28. U-boat on turning tide will make changes (7)

Down:

- 1. Animal made out of wax (4)
- 2. Journey overseas to get a degree (6)
- 3. Make arrangement for instrument I took to Kent area (8)
- 4. Be calm about many dressed in checked material (6)
- 5. Watchdog of church support lost one - sure to come up (8)
- 8. A small number mention Russian girl living by river (5)
- 9. Box containing contract brings about a grin from this one! (8,3)
- 10. Children are about to hesitate when court order is received (7)
- 14. Break camp before going



- east for relaxation! (7)
- 16. Broadcasting may cause atmospheric turbulence! (8)
- 17. The knight, his weapon and the end of his home! (8)
- 19. It's tied up, which causes delay (5)
- 20. Sailors all over the globe

- take it in (6)
- 22. This bush isn't hardy! (6)
- 25. Time consumed the gallery (4)