



GREEN WEEK 2011

Get ready for next week's events with a special green feature : Page 22-23

NHS Trust rejects improper financial behaviour allegations

Charles Betts
Maciej Matuszewski

The Imperial College Healthcare NHS Trust has rejected allegations of impropriety from *The Sunday Times* and *Private Eye* concerning its commissioning of management training courses from Coalescence Consulting, which is owned by the Trust's interim chief executive Mark Davies and his wife Karen Johnson.

Davies is not employed directly by the NHS. Imperial College pays £2,000 a day to a company called Scenario One, owned by Johnson, for his services. He can be engaged for up to 200 days a year for no more than two years and has already been paid £144,000. He will be paid £800,000 by the trust if he holds the position for the full term.

It was reported in *The Sunday Times* that over £55,000 has been paid to Coalescence Consulting since 2010, including £39,570 so far this financial year. The courses were said to include “equine guided leadership”, run by Redland Equestrian, which is owned by Johnson and lists Davies as a director. It has also been reported that staff are very angry about money being spent on leadership training courses.

The Trust has stated that the decision to commission Coalescence took place before Davies joined Imperial College Healthcare and that that the services of Redland Equestrian had last been employed more than two years prior to him taking up his post. A spokesperson for Imperial College Healthcare NHS Trust said: “The Trust has never commissioned equine leadership courses while Mark Davies has been its

...Continued on Page 5

Tommy Allieri

Are we apathetic?

As students across the country prepare for further action, Felix asks Imperial about the importance of protesting: Page 6



POLITICS



Palestinian students come to Imperial
Page 15

MUSIC



Aftermath of the Felix Music Night
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TELEVISION



Dealing with the hard-hitting *Top Boy*
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HIGHLIGHTS

What's on

RAG LOST

Possibly the most fun you can have without spending any money, LOST is a unique event where you wind up somewhere in the countryside and all you need to do is get back to the Union for a well-earned drink. The day starts with a blindfolded coach trip, and then you need to beg and barter your way back, with prizes for most interesting ride hitched and highest raisers.

**Beit Quad, Imperial College Union
Saturday 26 November**

The Data Debate

Scientific data is more freely available than ever. But does the push for openness help or hinder science? A debate to launch the new issue of Index on Censorship magazine, 'Dark Matter: what's science got to hide?' Registration in advance at <http://bit.ly/rF8NWP>

**Mech Eng, Lecture Theatre 220
Tuesday 06 December
18:30-20:00**

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**Royal Geographical Society
November 25-26**

GREEN WEEK

We've gone Green. Like the Hulk, but not as angry



So we've gone a little environmentally mad this week. Next Monday marks the beginning of Green Week, where Imperial holds several environment-themed events. You might just notice the green headers throughout the paper this week. Check them out, we've also gone fact crazy. And I mean literally everywhere. Our Environmental Fact Guru has earned their year's (zero) salary with this week's performance. Have a look at our double page spread, see what events take your fancy, and get going!

Editor

CLASSIFIEDS

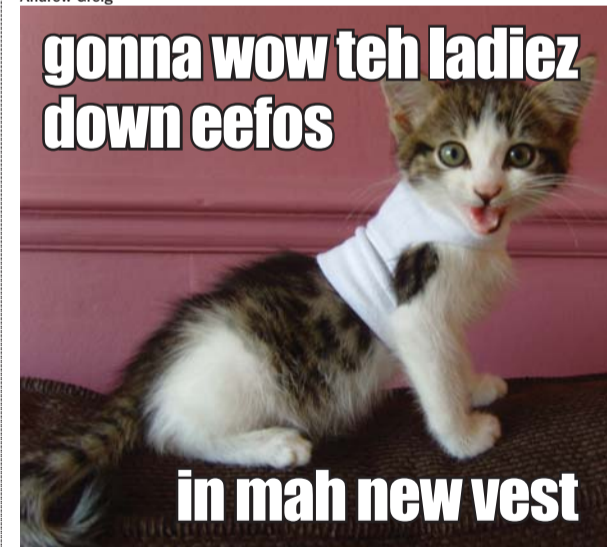
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Just so we're clear, Felix accepts no responsibility for services bought or sold, capiche? Good.

Lolcat of teh week

Andrew Greig



FELIX

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NEWS

Online calculator launched

Prospective students to have increased access to financial support information as new package approaches

Sophia David

A new online calculator was launched this week by Imperial, aiming to give prospective students better access to information on the financial support available to help fund their studies.

“We’ve been working ... to develop a financial support package that is attractive and reassuring to prospective students.”

With tuition fees rising to £9,000 per year and new financial support arrangements being introduced by the College, the calculator is designed to help prospective undergraduates considering joining in September 2012. By inputting details about their financial circumstances, prospective students and parents can receive information on the support they may be entitled to, from both Imperial and government sources.

Sir Keith O’Nions, Rector of Impe-

rial College London, said: “Over the last year, we’ve been working closely with our Students’ Union to develop a financial support package that is attractive and reassuring to prospective students. The new web tool helps us to communicate that package alongside the other types of financial assistance available to students from government sources. It gives anyone considering undergraduate study at Imperial clear advice on what support they may be eligible for and reinforces our message that if you have the ability to manage our courses, we will help you manage our costs.”

Scott Heath, President of Imperial College Union, said: “As a student from a single-parent family I am greatly aware of the financial considerations around university application. Tools such as the finance calculator are invaluable, as they make it clear how much support prospective students could get if they come to Imperial. To anyone who is considering applying, or is just curious about the result, I recommend that they try the calculator today.”

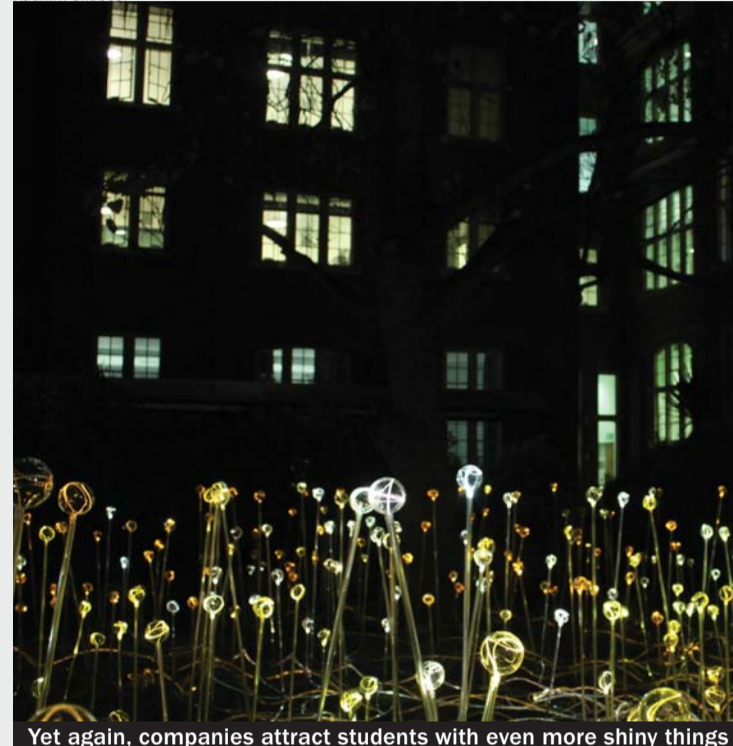
The new financial package for 2012 will provide support on a sliding scale to a wide range of students. All those from households with an annual resid-

ual household income of up to £60,000 will be eligible. Those students in the top bracket (from households with an income of £55,001 to £60,000), will receive a £900 bursary. At the other end of the scale, a maximum amount of £6,000 will go to home undergraduate students from households with an annual residual household income of up to £25,000. Of this £6,000, £2,500 of this will be used directly towards paying tuition fees, whilst the remaining £3,500 will be paid directly into the student’s bank account.

“To anyone who is considering applying ... I recommend that they try the calculator today.”

The launch of the new calculator on Monday coincided with Student Finance Day, designed to explain the changes to student finance from 2012 and improve understanding of the new system.

Kadhim Shubber



Yet again, companies attract students with even more shiny things

Beit Quad was transformed on Tuesday evening when J.P. Morgan installed their ‘Field of Sparks’ light installation. Similar to exhibits at the Eden Project and the V&A Museum, it was made up of stems and spheres containing fibre optic threads.

Exhibition Road hosts festival to coincide with Olympic Games

Navid Nabijou

For those of you planning a work placement this summer, here’s something that might make you reconsider. The (Exhibition) Road Show, a nine-day street festival being held right on Imperial’s doorstep, is set to be unmissable. Part of the wider celebrations for the 2012 Olympics, the event will be held from July 28 until August 5, coinciding with the beginning of the Games.

The event draws parallels with Exhibition Road’s original namesake: the Great Exhibition of 1851. The blueprint for all ‘Great Exhibitions’ to come, it drew people from all over the world to marvel at its exhibits, presented in the spectacular (now destroyed) Crystal Palace in Hyde Park.

During next year’s festival, the lengthy refurbishment works on Exhibition Road – long the chagrin of Imperial students rushing to morning lectures –



Artist's impression of the completed refurbishment of Exhibition Road

will be displayed in all their glory, along with large trailers hosting an array of different entertainments. Amongst the exhibits lined up are a number of art-science collaborations; and in the evening a live orchestra will accompany ballroom

dancing and salsa.

And if all that still doesn’t tickle your interest, you won’t be able to resist the spectacular aerial acrobatics display, set amidst the columns of the College’s main entrance on Exhibition Road.

Sponsored Editorial

More student cuts

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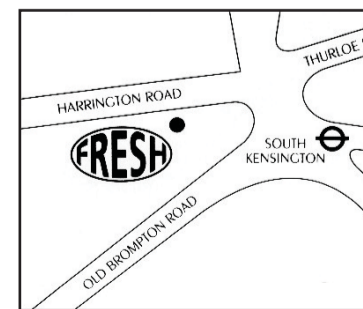
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Agile minds ask more questions

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News Editors: **Sophia David**
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NEWS

Trust responds to news reports

...Continued from Front Page Chief Executive. Preliminary investigations indicate that there were two half-days in 2008 - more than two years before Mark joined - where a small group of senior clinicians and managers from the Trust attended the equine guided leadership courses. Approximately 15 people in total attended. The purpose of the training was to assist in the development of leadership skills amongst newly formed clinical management teams.

"Imperial College Healthcare NHS Trust (ICHT) commissioned leadership and development services from Coalescence Consulting in line with normal processes prior to the appointment of Mark Davies as interim Chief Executive in May.

"Prior to his arrival at ICHT, Mark Davies resigned as a director of the company. On arrival he declared an interest in the company and he has not been involved in the decision-making regarding the continuation of any services. Taking all relevant factors into account, the Trust has thought it is still appropriate for the company to provide services to the Trust. "Imperial College Healthcare has

made payments to Coalescence Consulting of £39,000 for this financial year. However, this figure does not relate to the commissioning of any equine courses and relates to leadership development training including coaching, facilitation, strategic planning sessions and team development."

"Taking all relevant factors into account, the Trust has thought it is still appropriate for the company to provide its services."

Mark Davies is described as a "Senior Consultant and Executive Coach" on the Coalescence website. Karen Johnson is described as "Managing Director of Coalescence, Board Development and Executive Coach".

In response to the allegations, Mark Davies wrote an email to all Imperial Healthcare Staff on November 14 that is inline with the response from the spokesperson for Imperial College Healthcare NHS Trust. He concludes: "I hope this clears things up and reassures [the staff] that all the business carried out was completely above board and in line with Trust policies."

Issues still remain regarding the financial and administrative situation of Imperial College Healthcare, which manages five London Hospitals including Charing Cross, Hammersmith and St Mary's. The Trust, which the *Fulham & Hammersmith Chronicle* recently reported had the seventh highest number of "complaints referred to the Health Service Ombudsman in 2010/2011", is facing a budget deficit of over £35m. While it rejected claims by made by the Independent earlier this year that it is considering closing down St Mary's as a result of this shortfall, many will be wondering whether the cash-strapped organisation can afford to be paying tens of thousands of pounds for "leadership development training".

Imperial College Healthcare NHS Trust



Chief Executive of the Imperial NHS Trust Mark Davies

FELIX

WE (STILL) NEED YOU

News Reporters

...and everything in between.

Illustrators

If you're interested in getting involved with Felix in any way, just send an email to felix@imperial.ac.uk.

Photographers

Or swing by the office, we have a microwave now. Score.

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FEATURE

Why aren't we protesting?

Matthew Colvin reports on what prevents students from taking to the streets

The past year has seen student activism reach previously unmatched levels. Just over a year since the first major protest against the Coalition Government's policies on higher education, the past week has seen another take place on the streets of London. Organiser for the National Campaign Against Fees and Cuts Michael Chessum has announced a further day of action next week on November 23.

These protests have seen vocal support from other universities, yet one constant remains – a perceived lack of interest from Imperial students. Despite the close proximity of Imperial to the heartland of the protests, there has been no recent concerted effort to gather students in an effort to join the protestors.

Felix spoke to students this week in order to determine their opinions towards student protests and unravel the reasons behind what could be perceived as campus-wide apathy. What emerged from conversations were varying claims covering a wide area of Imperial life.

One of the most popular responses students gave for a lack of political activity was a large workload. A first year EEE student remarked that they had "too much work to be bothered," with a second year biochemistry student referencing "four deadlines last week" as an example of such assignments.

It may have been one of the most popular responses from students Felix asked but could it really be the case that a perceived higher workload is responsible for a lack of political motivation? Other individuals are keen to make mention of Imperial's unique position as a science-based institution – a second year biochemistry student commented that, "science is in isolation; it's not about dealing with relationships. People do not disagree that something is wrong but science is not directly about what happens now."

Equally, it is a possibility that political identity has something to do with the decision of students not to protest. It is, of course, wholly irresponsible to class the majority of Imperial students under one entire ideology, but does this university lend itself to one particular viewpoint? In particular, a viewpoint that encourages uncapped fees in order to benefit the university? Rory Fenton's article (right) attempts to dissect the issue in greater detail.

Felix contacted Imperial College Conservative Society in order to gauge its opinion on the current political cli-

Tommy Allieri



Last Wednesday's protests attracted thousands of students from across the country

mate amongst students at Imperial, something the chair describes as "very different from 10 years ago at Imperial, where nearly everyone I knew was out en force for the protest against the invasion of Iraq." When asked as to the reason behind Imperial's comparative political inactivity today, the chair noted a number of potential reasons, including an "intense" workload, "apathy along the lines of 'I can't make' a difference" and Imperial's location in Central London, claiming that "Imperial students would rather be doing something that is more exciting."

"There are a whole host of reasons in my humble opinion, but I believe raising awareness is fundamental so at least there is an informed choice to be active or not."

Yet Imperial students have stood together en masse in protest for a joint cause – not in Central London, but at last December's Life Science Protests. Following the announcement of staff redundancies and departmental restructuring in the Department of Life Sciences late last year, over 1000 students signed a petition against the proposed changes. Alongside this, students took to protesting outside a Senate meeting.

Felix spoke to one of the organisers behind the protests, Dan Wan, then a third year biologist, to determine what set this protest apart from others in

terms of attracting support from Imperial.

"I think when something as emotional as this hits this close to home, people start to take a stand. Personally, I just felt that I owed it to the lecturers who had taught and were teaching me at the time. These lecturers had invested so much time in teaching, coaching and interacting with students, bringing us up from freshers to graduates. We all got to know them not just as teachers, but as people. The manner in which these people we respected and admired were being sacked was completely atrocious. I guess someone had to stand up and show the College how badly they were handling the entire situation."

Asking whether Imperial would benefit from a more politically active and aware student body, Wan believes that, "as a student body, Imperial likes to keep themselves to themselves. In some ways, it can be healthy that Imperial students rather concentrate on the matters that directly affect themselves, such as the Life Sciences Protests."

When asked why it is that national events do not command the same amount of attention from Imperial students, Wan concedes that this "is something I have always struggle to understand. I don't think it is a lack of opinion, you can see that through just talking to people around campus. How-

ever, I don't think it is apathy either. There is a lack of encouragement to do so, possibly.

"Maybe the political views are just too varied, and the Union can't easily pinpoint some and support those. Maybe the Union and its involved students are too wrapped in internal politics to really notice what's going on beyond Beit Quad to an extent where they would join a protest en-masse. I'm really not sure. I don't particularly think it is the Union's fault, either. I know they have done plenty to support and oppose national political proposals in the past. Look at the Browne Report, the President that year was actively involved in consultation with Lord Browne himself."

Unlike other student unions across the country, Imperial College Union refuses to break ultra vires, or act outside of its constitution. Actively supporting the protests, as sabbatical officers from other UK universities have done, would be an example of this. Felix spoke to Union President Scott Heath and Deputy President (Education) Jason Parmar to discuss their views on the situation. Heath – supporting the view that being at a science-focused university lends itself to students focusing on their degrees and future careers – is keen to stress that the sight of students from other universities protesting is not in-

dicative of the feelings of Imperial students: "We may see counterparts at UCL and LSE leading their students on protests but that doesn't mean their entire student body is more caring than ours about political issues."

"Instead of fighting the College about its stance of the £9k fee, the Union worked with it to ensure students are more financially supported when coming to Imperial next year. Student will have more support than they get under the current £3k fee system. Instead of spending hours promoting marches, we are championing the ideas we raised in the NSS response that will directly affect our members and will reap greater benefits for the students of tomorrow."

Parmar, conversely, supports the view that "it is the political stance of the students as a whole," alongside a higher workload: "The majority (but of course not all) of our students tend to focus on their degrees and involvement with societies. Our students can often feel like they're over-worked and don't feel like they have time to campaign on political issues."

In terms of actual activism, it is clear that this university is unique. Ultimately, the fact that this institution finds itself in such a science-focused position will allow the debate surrounding student protests to continue for now – behind closed doors.

FEATURE

Protesting at Imperial

Kelly Osborne on why she feels the need to protest

What protests have you been to recently?

The last protests I went to were some of the student cuts protests last year. The student cuts protests were genuinely intimidating so I haven't attended recently.

Why do you feel the need to protest?

I feel it is another way to express your opinion in a democratic society, where other mechanisms of getting your voice heard, such as writing to your local MP, feel like they are getting nowhere.

Do you think the protests regarding the changes to the current student finance system so far have achieved anything?

I think they have allowed people to express their genuine outrage at an elitist system that will harm the lower middle classes

opportunities of higher education, which is important. But I also feel they have been counterproductive in that they have been infamous for violence and general idiotic behaviour by the minority of people.

Do I think the current government will change their minds about the increasing fees over the protests? Not unless it proves to be economic for them.

Why do you think that Imperial is politically inactive compared to other universities?

I read recently that scientists, and male scientists in particular, are less likely to display empathy than the general population. (From Matt Ridley's, Nature via nurture) A lack of empathy could lead to apathy on issues that do not directly affect you, and so I think imperial students are often

from privileged backgrounds where cuts on education or rising food prices due to climate change won't affect them.

I also think it has become unfashionable, other ways of expressing annoyance are preferred. And of course everyone is very busy and stressed.

Do you think that Imperial should in fact be more active and whose responsibility is that?

I don't think people should be forced to protest, I think people should care about the issues at hand and so use their initiative to go to protests, if they feel the issues would benefit from that sort of complaint. Maybe its society's responsibility to shape future generations to be less indifferent? Although I'm not trying to say that not protesting makes you indifferent.

“They have allowed people to express their genuine outrage at an elitist system that will harm the lower middle classes opportunities of higher education, which is important.”

Just how conservative are we?

Rory Fenton on Imperial's political viewpoint

The week before I started my first year here I went to the Fresher's Fair at Queen's University Belfast, my local. Going to Imperial's the week after was a more or less similar affair – the same hobbies and sports, the same international societies and charities. But one thing stood out as missing – where was the political Left? Unlike Queen's with its range of left wing groups all vying for attention, singing revolutionary songs and pronouncing on student fees and corporate greed, this fledgling physicist saw just two people quietly manning a Socialist Workers stall, nestled uncomfortable between stalls from the various investment banks and oil companies we all know and love on campus. The Left, it seemed, had left. The question is – has it ever been here? Is Imperial naturally conservative?

“One thing stood out as missing – where was the political Left?”

We certainly aren't socially conservative. Imperial was ranked by LGBT rights group Stonewall as the most gay-friendly university in the UK and if anything is stopping students from availing of the freely distributed condoms around cam-

pus it's the infamous “ratio”, not old-fashioned morals.

But while we may be generally apathetic, when we do get political are we, as a student body, quite right-wing? This seemed to be the case last year when Imperial College Union spoke out on the Brown Review of tuition fees. This made them no different to any other students' union except for one thing- they spoke out in favour of the fees. So did Felix. Brown was in favour of uncapped fees, a move that even the Conservative-led coalition government opposed and yet our union, a lone island in a sea of student union outrage, backed them.

But how representative of its students was ICU's decision? From the Union's own survey at the time of the Brown Report, while some 90% of students (including overseas students) supported some kind of fees, just 13% agreed with a fully uncapped system, as supported by their Union. So it seems that the full extent of the Union's stance was unrepresentative of its students. But it remains the case that 90% of students agree with paying something for our time here, putting them significantly at odds with the majority of students nationwide.

Of course the elephant in the room for such an issue is class – some would argue that Imperial students are simply posher than most and naturally lean towards con-

servatism to protect their vested interests. It is certainly true that Imperial students are more privileged than most – some 37% came here from private schools and just 2.9% qualified for free school meals, compared to 7% and 5% respectively in the country. But Oxford and Cambridge with their famously privileged intake still have significant left wing groups and student protest movements. And while, yes, the current Conservative leader went to Oxford, so did the Labour leader. We're still no further.

“90% of students agree with paying something for our time here, putting them significantly at odds with the majority of students nationwide.”

So how does this perceived right-wards shift fit with the idea that Imperial students are apolitical? The chair of Imperial's Conservative Society points out that “conservatism as a movement and being a member of the political party are two vastly different things”. Viewed in this way, things start to make more sense. Conservatives at Impe-

rial aren't so much dyed-in-the-wool Tories as libertarians, “conservatives with a small ‘c’” in the words of the Conservative Society chair. More philosophical than partisan. In fact it may well be that the relatively calm political atmosphere here enables people to have opinions that in another university would leave them ostracized.

“Some would argue that Imperial students are simply posher than most and naturally lean towards conservatism to protect their vested interests.”

It would seem that IC student opinion tends to be shifted to the right of most other universities but there may be many reasons behind this. It could just be that more than anything else, the calmer, more tolerant political atmosphere simply allows for a wider exploration of different ideas. A strange irony for such an apolitical place.

SCIENCE

Science Editors: **Kelly Oakes**
Alexander Karapetian

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In brief

Frog trade linked to killer fungus

Scientists have reason to believe that the global trade in amphibians may have helped create and spread a deadly fungal disease. Dr Matthew Fisher, from the School of Public Health at Imperial College London, has led an international team of scientists in the inquiry of this issue. Their research has shown that trade may have allowed non-lethal strains of the chytrid fungus from different parts of the world to come into contact with each other. This interaction has led to the formation of a new and lethal strain of chytrid fungus by a process called recombination, and which may be responsible for the decline of the amphibian population.

Scientists are perplexed by the fact that some amphibians are able to coexist alongside the chytrid fungus, *Batrachochytrium dendrobatidis* (Bd). In an attempt to trace the history of Bd, 20 samples of the skin-infecting fungus were isolated from 11 amphibian species worldwide and subsequently sequenced and compared. As the researchers had already suspected, results yielded that there actually exists more than one type of strain of chytrid fungus. A total of three were found and the deadly, global panzootic lineage (GPL) was identified. Evidence of gene exchange was found in the hypervirulent BdGPL, which has made an appearance in at least five continents so far. The fungus is responsible for the extinction of over 200 species of frogs, toads, salamanders and newts and has caused infections in North America, Central America, the Caribbean, Australia and Europe.

Experts have been able to match the initial dip in the amphibian population around the 1970s with the emergence of the amphibian trade. In one scenario, a captive breeding and reintroduction program attempting to boost numbers of an endangered Mallorcan midwife toad may have actually helped spread Bd from captive African clawed frogs to toads. Despite widespread effort to understand the emergence of chytrid fungus, many aspects of its existence still remain largely unknown. Dr Fisher stresses that to halt further spread of this lethal disease there is urgent need to increase global biosecurity. DOI: 10.1073/pnas.1111915108

Katherine Portilla



This isn't what we meant by Green Week...

Global warming is happening, say sceptics

Carys Cook on why the Berkeley Earth Project is a step in the right direction

It's officially official! The Earth is heating up. This is the conclusion of the most up-to-date and comprehensive study into recent changes in Earth's land surface temperatures. The Berkeley Earth Project (BEP), based at the University of California, was developed by a group of climate scientists and statisticians in response to criticisms by climate sceptics of existing surface temperature records. The project combined over 1.6 billion measurements from the last two hundred years from over 39,000 weather stations globally, and utilised new statistical algorithms to integrate the multiple fragmented data sets available from the historical record. Their results reveal an 1°C increase in average global temperature since the 1950's, a conclusion that is supported by multiple existing temperature records produced by the Met Office, NASA, the US National Oceanic and Atmospheric Administration and the Climate Research Unit (CRU) at the University of East Anglia.

So you may ask why is this news worthy, if the scientific community already knew the Earth was heating up? Well, unless you have had your head stuck in a bucket over the last few years, you will know that the climate science community has had a pretty rough time of it lately. Death threats, slander and the risk of a ruined career are all possibilities climate scientists must face today. Despite an overwhelming consensus held by the vast majority of climate scientists that the Earth is warming, there is still a palpable disparity between this agreement and the views held by a small but very vocal and influential group of climate change sceptics.

No one is resistant to their often overblown criticism: the Nobel Prize winning Intergovernmental Panel on Climate Change, which serves as a platform for climate scientists to communicate their findings in a format directly accessible to policy makers, politicians, business leaders and the public, was heavily criticised last year for accidentally including a small piece of literature in one of their reports that had not been subjected to peer review. Another example of attack was the 'Climategate' 'scandal' in 2009, when hackers released thousands of personal emails written by scientists based at the CRU into the public domain. The emails were forensically analysed by climate sceptics for evidence of data manipulation and falsification, causing a huge slew of global governmental inquiries into climate science, and resulting in untold damage to the public's opinion of the field.

Surface temperature records such as those produced by the hacked CRU scientists have long been an easy target for climate change sceptics – criticisms include data falsification, sample bias, large degrees of errors on temperature estimates, poor spatial coverage and increasing urban development. It is no small coincidence that some of the scientists involved



I didn't commission this piece just so I could use a photo of baby polar bears. Honest

in the BEP are considered as some of the most vocal climate change sceptics in the academic world, with the project developed to address these very concerns. The ultimate irony, therefore, lies in the fact that despite the criticisms of existing records, the attempt to produce a more 'robust' temperature record has produced the exact same results as the previous records.

Another possible issue is the BEP's decision to release their findings to the public before subjecting them to peer review – they argue that an open access wiki-style forum is better for the scientific process than independent reviews by academic peers, an opinion that may be more damaging to the robustness of their conclusions than they realise. Another less publicised concern, though bordering in the conspiracy realm, are questions being asked about the motivations behind the funding

“The basic notion that we are performing a very dangerous experiment with our planet now seems difficult to refute”

sources of the BEP – in particular, the Novim Group, a charitable NGO who funds the BEP and only one other research program investigating climate engineering in response to dramatic climate change.

Professor Sir Brian Hoskins, director of the Grantham Institute of Climate Change and a climate change advisor to the government, agrees that the findings of the Berkeley Earth Project are not particularly groundbreaking: “The overall message – that by using a different technique the same answer is produced

that others have found – is not usually seen as significant enough for a paper in a major journal.” As recognised by the BEP group, one of the complaints held by some non-specialists critical of how climate science is produced is the isolated and potentially closed off nature of the formal peer review process. Without getting into the philosophy behind the ensuring scientific rigour, there is no doubt that, by and large, independent review by peers is an excellent form of improving the quality of scientific publications. Professor Hoskins expressed some concern about the BEP's decision to hold back on subjecting their findings and methods to peer review before releasing them into the public realm. “After all of the criticism of the Intergovernmental Panel on Climate Change, I am really surprised that they have done this. I am sure that most academics feel that their papers are improved through the formal and informal peer review process and I do not think we should circumvent this.” He agreed that whilst it is possible that the closed-off nature of the peer review process can damage the public's perception of climate change research, the reaction should not be to get rid of it. “It is healthy for climate science to be treated in a sceptical manner: like all science it should be continually probed and tested. Hopefully this work will help us move on to discuss the really challenging science of climate variability and change and the implications of it. However the basic notion that we are performing a very dangerous experiment with our planet now seems very difficult to refute.”

Whilst it seems that sceptics can now finally agree with the scientific community that the Earth is indeed warming dangerously, they still have many questions that they feel remain unanswered, such as whether rising greenhouse gas emissions are in fact causing climate change. Time is running out to convince the world that this is the case, and despite its foibles and motivations, programs like the BEP are certainly a step in the right direction.

Nanocars with four-wheel drive

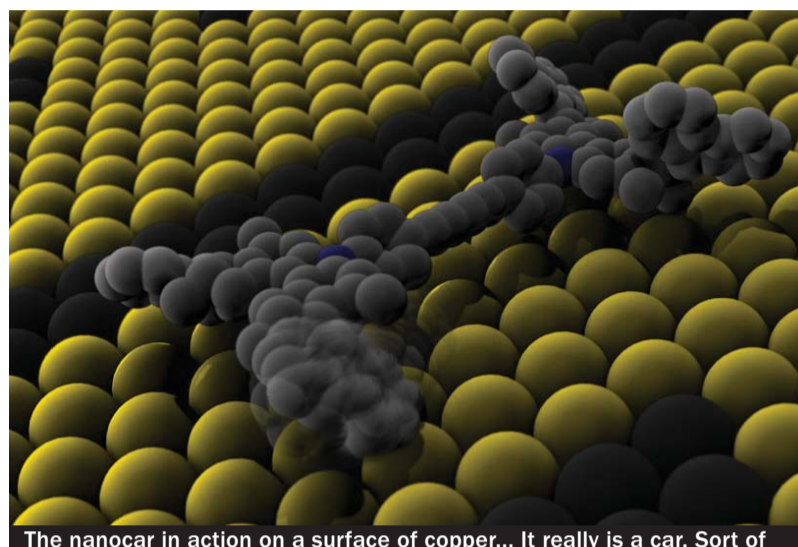
Philip Kent

Researchers at the University of Groningen, Netherlands have announced that they have successfully produced a single-molecule 'car', capable of moving by use of its four 'wheels' when excited by a scanning tunnelling microscope (STM). This announcement follows previous research by the group, led by Ben Feringa, into light-driven molecular motors, first reported in 1999.

Molecular motors use light or other stimulation to rotate a hydrocarbon group around a double bond. After rotation to form an unstable isomer, an exothermic isomerisation process causes the groups to rotate into a more stable position (helix inversion), with the result of movement. This process can be repeated to return to the original configuration.

This new research involves a molecule designed with four of these motors about a central axis. Electrical pulses produced by the STM excite the motors, and cause it to move across a copper surface; the direction of the pulses can be controlled by the operator of the STM, and so precise control over the movement is possible.

The group experienced difficulty in making all the motors work in tandem – they reported that perfectly straight movement is not possible. However, their calculations predicted a maximum of 7nm of movement per 10 STM



The nanocar in action on a surface of copper... It really is a car. Sort of

pulses; with 6nm of movement being experimentally observed, meaning that the 'swerving' of the car is not as a significant problem as could have been. The molecule requires a STM pulse of 500 millivolts or greater, so imaging the molecule is possible without movement by use of a lower voltage. In addition, negative voltages caused no movement.

The direction of motion can be controlled by the configuration of the molecule. Depending on the orientation of the groups on each side of the axis, the correct isomer can both produce forwards movement and no movement, depending on the 'landing' of the

molecule – if the molecule is not correctly absorbed in the right orientation, movement is prevented due to the front 'wheels' moving in the opposite direction to those at the back. In addition, isomers in an incorrect configuration produce haptic movement, due to the onside and offside of the 'car' moving in alternative directions.

Conditions for the molecular 'car' prohibit commercial use at present (vacuum conditions and temperatures of 7K was necessary), however, lead author Tibor Kudernak told the BBC that this was the next problem to resolve.

DOI: 10.1038/nature10587

Cyborg yeast is out to get you

Jula Humphries

Scientists have succeeded in creating an artificial feedback loop between a computer and yeast. Algorithmic programs on the computer controlled flashes of light to start and stop gene expression, thus regulating how much protein was produced. This in-

“The computer, with its algorithmic wizardry, analyses the fluorescence.”

novative technique could possibly be used in industry to control production of biofuel by microbes.

The beauty of this technique lies in its simplicity, in contrast to the incredibly complicated biochemical pathways it could potentially control.

Phytochrome, a molecule that detects light, has active and inactive forms in red and deep red light respectively. Upon becoming active, it can set off gene expression cascades to produce a desired protein.

The level of gene expression can then be measured through the amount of fluorescence a reporter molecule emits in the presence of the desired protein

The computer, with its algorithmic wizardry, analyses the fluorescence. Once a threshold level of protein expression has been reached, deep red light is fired back to the yeast, the phytochromes are turned into their biologically inactive forms and the circuit is turned off.

Feedback control allows for precise regulation of these artificial circuits; it is an important process already utilised by biochemical pathways in cells, famously in the krebs cycle and in engineering. However, in silico feedback control is the first time science has managed to transcend the

“It is an important process already utilised by biochemical pathways in cells”

communication barrier between computer and cell.

The implications of synthetic circuitry are wide; in silico feedback could be used to create biosensors to regulate the level of by-products generated from manipulated metabolic pathways. It could be utilised within biofuel and small molecule drug production to allow for tight control of yield production.

Whilst it is an exciting step forward, it is just a small part of the technical breakthroughs that will be needed to generate complex synthetic biological circuits.

DOI: 10.1038/nbt.2018

Imperial iGEM success

Elsa Sotiriadis
Farhan Abdullah

It was a truly triumphant success for Imperial this November at MIT in Boston, where the iGEM world championship took place. iGEM, first launched in 2004, is the most prestigious and largest undergraduate competition in synthetic biology worldwide. Imperial has a long history of success in the competition, but the Imperial iGEM team managed to break all records this year.

The group of nine students took home a series of major prizes from both the European jamboree in Amsterdam, where they were declared regional winner, and the world championship in Boston. Despite the strong competition, Imperial was a proud finalist and 1st runner up for the final grand prize, and won the iGEMers prize as well as numerous other prizes.

With their project, the iGEM researchers have tackled the problem of world-wide soil erosion and desertification of drylands. Lacking a stabilising and anchoring root system, the nutritious soil is highly vulnerable to erosive forces, such as rain and wind. Arable land, on whose cultivation approximately two billion people depend, is being successively lost. Soil integrity is crucial to avoid the severe aggravation of food scarcity, and biodiversity loss due to the effects of climate change.

The first module, 'Phyto-Route' aimed at rewiring E.coli chemotaxis by introducing a malate chemoreceptor from a soil bacterium. The seeds would germinate and then secrete L(-)malic acid (malate), acting as chemoattractant, E.coli would then move towards

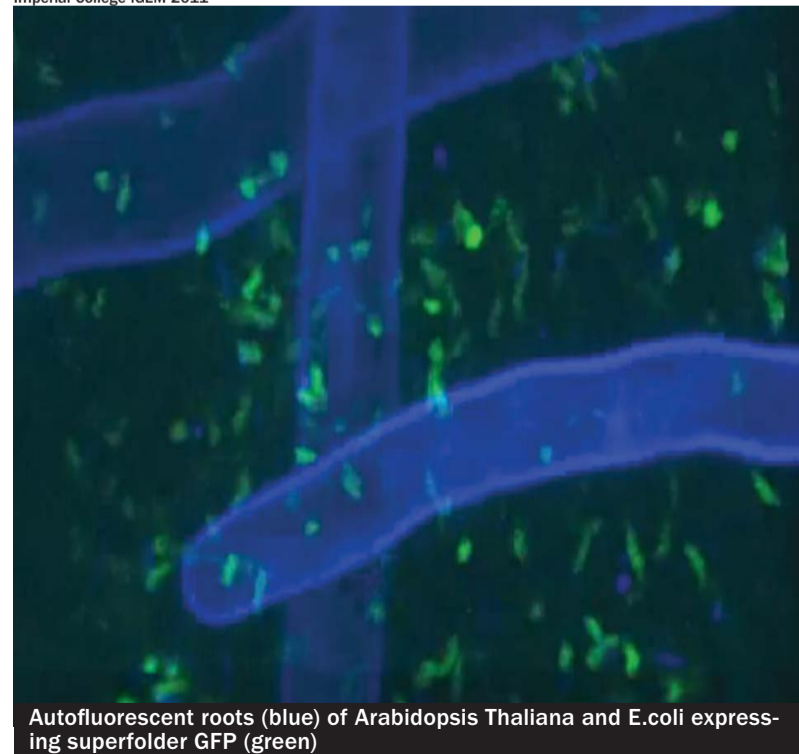
the gradient and be actively taken up into the roots. Capillary assays have shown effective malate chemotaxis of cells containing the construct and the natural uptake by roots was demonstrated with confocal stack imaging.

With the second module, "Auxin Xpress", the students successfully expressed the genes for Auxin expression from *Pseudomonas savastanoi* in E.coli. They further determined the IAA expression level of the module and the IAA concentration threshold for optimal root growth, thereby laying the basis for further fine-tuning of gene expression levels. In simulations of soil erosion (watering with hoose) and application of the optimum concentration of IAA, the team has demonstrated improvement to soil stability.

The concerns about releasing GMO to the environment were addressed by the third module, "Gene Guard". This safety mechanism should prevent the spread of synthetic DNA to naturally abundant soil bacteria with a combination of separately existing toxins and anti-toxins, rendering the recipient cell of horizontal gene transfer non-viable and thereby minimizing the contamination risk of the natural rhizosphere. In the very short time span of a summer, the group has paved the way towards a smart and safe solution that could improve the lives of billions of people around the globe.

Certainly, the enhanced engineering of biological systems with standardized parts, the fostering of synergies between systems and synthetic biology, and the study of ecological, human and ethical implications will continue to provide means for optimized, inspired and impactful researching-during iGEM and happily ever after.

Imperial College iGEM 2011



Autofluorescent roots (blue) of Arabidopsis thaliana and E.coli expressing superfolder GFP (green)

SCIENCE

Science Editors: **Kelly Oakes**
Alexander Karapetian

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In brief

Pandas' confusing diet explained

Giant pandas lack enzymes to digest the principle components of a fibrous plant diet. It has long been assumed that their famous bamboo regimen is digested by symbiotic bacteria.

Now, researchers from the Chinese Academy of Sciences have confirmed the symbiotic hypothesis (Proceedings of the National Academy of Sciences, DOI: 10.1073/pnas.1017956108). The authors analysed RNA sequences from microbes found in fecal samples of giant pandas, and compared the results with other mammals. Seven unique strains of bacteria, closely related to cellulose-digesting *Clostridium* taxa, were found only in the pandas' digestive tracts. The newly discovered symbionts produce enzymes that cleave cellulose into absorbable glucose.

Strong teeth, pseudo-thumbs and copious gut mucus also help to sustain this unusual bear.

Jennifer Whyntie



Another excuse for a cute animal picture...

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Natural born killers?

Pavitar Devgon on what makes some people become psychopaths

We can all name famous psychopaths, be they the fictional Hannibal Lecter or real life Jack the Ripper. They can cause fear or uneasiness in even the most hardy of us. But what really makes a serial killer? Why are psychopaths so different from 'us'?

The Horizon episode, Are you Good or Evil, examined the search for a so-called 'moral gene'. At a fundamental level, humans are animals, so how did we come to possess morals, something other than instinct or self-motivation to guide our actions?

Paul Bloom and Karen Wynn designed an experiment to see if children were naturally born with a sense of morality or whether it was something they learned growing up. The experiment consisted of showing children a play with one 'good' character and one 'bad' character. When asked to choose a character, almost 70% picked the 'good' one, as most people presumably would.

But what about the 30% that were drawn to the bad character? Would they become bullies or 'troublemakers'?

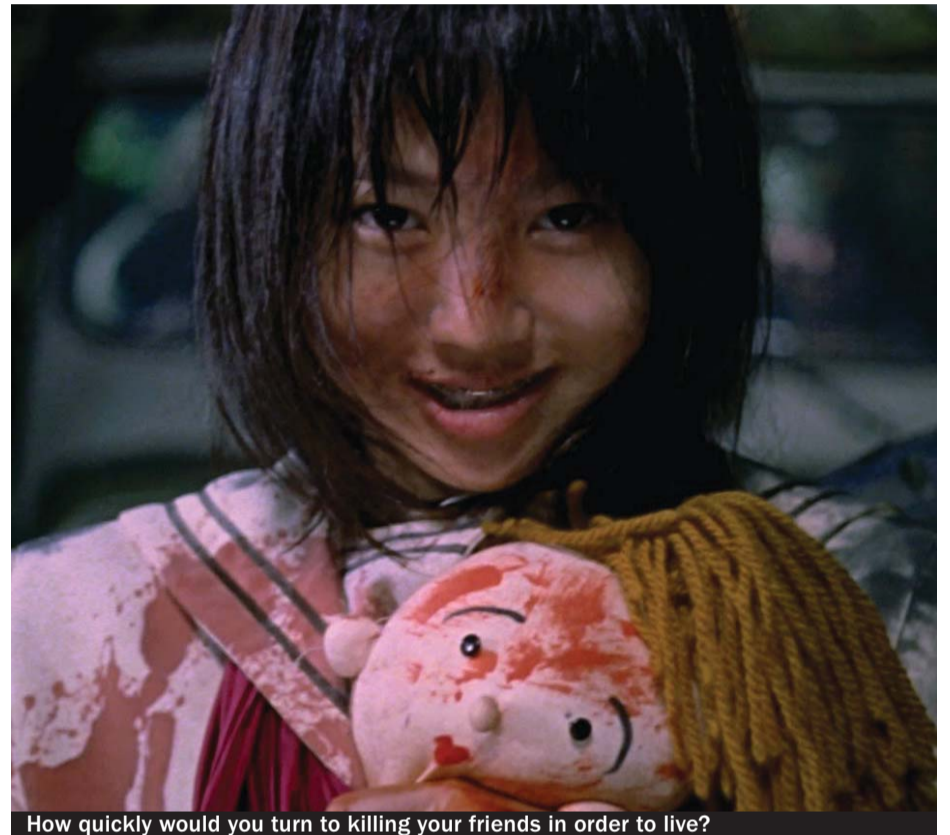
Another aspect of the show looked at military marines who were trained to fight, defend and, when necessary, kill. At a training base in the USA, marines are trained to act on instincts that have been drilled into them by years of training. This is necessary because when under pressure, they cannot afford to waste time reviewing actions; after years of discipline, the body reacts in the way it needs to, even if it means taking a life.

But one cannot ignore the idea of right and wrong. It is the reason why ex-soldiers returning from battle cannot readjust to society – they have lost their sense of morality and hold more than just the opposing army in contempt; they struggle to have empathy for anyone. As Captain Jack Hoban, a US Marine Corp, says "Humans are not natural born killers." Psychologically, they cannot handle the idea of killing with morality, so they lose this sense all together.

However, not all soldiers are psychopaths. The Marines soon realised that instead of turning cadets into killers, they should turn them into 'protectors'. Protectors would only kill when absolutely necessary; rather than remove their moral compass, they would 're-calibrate' it.

Both neurobiologists and psychologists have worked extensively into finding a chemical or gene that gives us our moral traits. Bob Hare is a psychologist who has looked particularly far into this field.

On the outside, serial killers look normal and just like everyone else; no sign of self-inflicted wounds or grotesque disfigurements. Psychologically however, they seem to have a profound lack of empathy and an egocentric mind-set. They are not necessarily unemotional, but while emotions usually guide us to act, the psychopath feels no compulsion; they could very easily slaughter innocent victims, despite understanding the



How quickly would you turn to killing your friends in order to live?

emotional impact.

In order to test this, Bob Hare brain scanned known serial killers using MRI while words were displayed on a screen. Monitoring the brain's impulses, Hare noticed that emotional words trigger certain synapses for most people. In the psychopaths' brains, there was indifference in responses to both emotional and regular words. Hare soon developed a 'psychopathic checklist' that tested things like personality, how you would react to certain situations and impulsivity.

Professor James Fallon, a psychologist working in the field of disorders like depression and schizophrenia, was asked to analyse a variety of PET scans to deduce the characteristics of the people to whom they pertained. One common theme emerged: the activity of two areas of the brain seemed to split the group, the orbital cortex and parts of the temporal lobe that surrounds the amygdala. These areas are known to control animal impulses and decision-making. All of the scans with damage in these areas came from serial killers. Was this the sole cause of psychopaths' behaviour?

In 1993, one family was tested used genetic analysis. All of the males in this family had a background in violence and, interestingly, all of them had a mutation of the same gene sequence. The findings then showed that a variant of the MAO-A gene promoter (or 'warrior gene' as it became known), could also lead to psychopathic behaviour later in life.

Our brain chemistry and genetic mutations can reveal the traits corroborating with psychopathic behaviour. But will everyone with

the genetic mutation become serial killers? The idea seems so wrong.

While visiting his family, James Fallon was asked by his mother to research his father's relatives. He discovered that there was a lineage of violent killers in the family dating as far back as 1667. James decided to test his immediate family using PET scans. Only one brain showed classic psychopathic behaviour – his. Continuing further, he found that he had also inherited the 'warrior gene'. Both characteristics were there and yet he was not a psychopath. He did have certain traits such as hot-headedness, lack of patience and at times, an uncaring attitude, all common amongst serial killers. This showed that the mind-set was there, but not at an extreme level.

Interestingly, the traits of psychopaths – impulsiveness, an uncaring demeanour and lack of pathos – can be found in professional jobs, such as CEOs and leaders of big corporations. Many of these people would rank highly on Hare's checklist. It's interesting how someone with a similar mind to a killer could work so well in business and society. Not that all bosses are psychopaths.

Fortunately, there emerged a third factor that ultimately determines your 'destiny': your childhood. If you have the genes and brain patterns, a nurturing childhood environment can reduce and even remove the risk of becoming a psychopath. Conversely, a damaging, dysfunctional, abusive childhood could trigger the aggressive genes. Your genes may lay the foundations, but your upbringing dominates who you will become.

SCIENCE

China is living proof of Fisher's principle

How we can explain China's gender ratios from an evolutionary standpoint and what they mean to imbalances in the rest of the world

Marcus Shephard

Fisher's principle is an evolutionary argument that explains why most sexual species tend to have a stable gender ratio that approximates 1:1. The principle is that, as one gender increases in abundance, the marginal value of having offspring of the other gender increases. So any genetic predisposition to have more of one gender than the other gets balanced out. Most species exhibit this property, and historically the gender ratio of Humans at birth has been ~105:100. Males having a slight historical surplus due to our greater tendency than females to get ourselves killed; fighting wars, hunting bears, or similar. The stability innate in Fisher's principle is elegant, and easily understood, and this is why it is celebrated as one of the greatest arguments in evolutionary theory.

In China today there are between 30 and 50 million men who will die single for the simple reason that they are surplus, there simply aren't enough women in China for them to marry. Historically the Chinese, as with most cultures, have favoured male offspring over females; however Fisher's principle has seen that the advantage of having female offspring has never been

weakened. As people have promoted their sons, any resultant surplus has been met by greater breeding success for the pool of girls, maintaining the gender balance. The one-child policy wreaked havoc with this. Given the choice many more parents preferred sons to daughters. Orphanages began to fill with abandoned daughters, and by the early eighties the official sex ratio at birth in China had risen to 108 boys to 100 girls.

In one sense children are an investment for parents, an investment which comes to fruition in old age, when the children become the providers and care-givers for the elderly parents. In this context males are seen as preferable; historically they have been much better equipped to earn the money needed to support the parents. Daughters are somewhat of a dead-end, generally married away into a family which they would then support, replaced by wives married in to accompany sons. This system only works when there is an adequate supply of women to be wives, and in China the relative birth rate of women was falling fast during the 80s and 90s, dangerously so.

The second blow to gender balance was the advent of screening for gender using ultrasound. Although sex-specific abor-

tions are illegal in China that has done little to close the Pandora's box combination of the one-child policy, the possibility to effectively 'pick' your child's gender, and a social pressure to have sons. By the turn of the millennium China's sex ratio at birth had hit 120 boys to 100 girls, inflating an already wide gender gap.

This situation has posed a series of problems for both the government, and society. Within society there is now an extensive group of effectively unmarried men. While marriage is not necessarily the ultimate goal in life, it is something many people strive for. These men are not evenly distributed across society either. In accordance with Fisher's principle, as women have become scarcer, their marginal value has increased and single women have a leverage that is not present in societies with healthy gender ratios. In a curiously retrograde way, it creates a twisted form of social mobility, as women are able to marry upwards, should they so chose. The losers in this are the poor, the rural, the unskilled and the unfortunate. A surplus of males is never good for a country, it can lead to unrest, and you might expect violence against women, abductions and forced marriages to become more common. There is also

the human cost, with many poor men who are unable to find a wife facing an old age without a companion, without children to bring them joy or care for them. Finally there is the issue of competition between males; older men who have had more time to accumulate wealth have an advantage over younger males from comparable backgrounds, and so there is a tendency for the age difference between male and female partners to grow, as older men outcompete younger, poorer men for the few available girls. None of these outcomes are positive, and yet there are no simple solutions to easily bring the gender gap down.

Despite this there is evidence that Fisher's principle is in effect; the increased value of daughters in such an imbalanced society is starting to be noted, and in the last few years the ratio at birth has been falling. It is now down to around 118 males to 100 females, which while still severely imbalanced, is an improvement. There are few direct interventions any government can impose to ameliorate this sort of situation. Rescinding the one-child policy offers no guarantee that people will not continue to pursue a 'sons first' policy, and keep abandoning or aborting daughters. There is a possibility of offer-

ing direct incentives to people producing girls, but this offers up the worrying concept of placing a value on a child's life, when that value should be innate. It also doesn't consider the financial burden to the country. Ultimately, the most powerful changes China could make would have to be social. Empowering women as wage earners equal to men would weaken the concept of men as providers. Offering better end-of-life care so that parents are not so dependent on children for support would have a similar range of social benefits, albeit at a cost. Fundamentally there needs to be a change to the historical patriarchal paradigm so that society sees women as equal in potential and value to males, at every level of society, not just in the educated middle and upper classes. These changes are not simple, and China is not the only country that will find itself needing to implement them. While China's situation is more pronounced, India and Indonesia are examples of other countries with a growing surplus of males that will need to be balanced out in the future. It is too late for the millions of surplus men in these countries, but hopefully in time, things can return to a more balanced state, for the benefit of all people living in the country.

Quantum information

Alexander Karapetian

Two developing technologies have been touted to mark the emergence of new quantum systems. Published in the journal *Science* last month, the fields of plasmonics and nanophotonics promise to speed up the advent of quantum information systems, which are capable of achieving processing powers that are orders of magnitude larger than classical computers.

Quantum computers operate by manipulating photons to represent binary digits, and can harness quantum mechanical effects to provide superior parallelism during processing. These systems use Quantum Bits (or qubits) in order to represent a larger number of states with fewer bits compared to classical machines.

Metamaterials, artificial nanostructured objects with exotic properties, will be used in combination with optical emitters to improve transfer rates and data processing. This hybrid technology which takes advantage of the emerging

fields of plasmonics and nanophotonics will allow 'quantum light' to be used in future machines.

Professor Vladimir Shalaev, scientific director of nanophotonics at Purdue University's Birck Nanotechnology Center, said that the technology, being a "seamless interface" between the two fields, "could guarantee the use of light to overcome limitations in the operational speed of conventional integrated circuits".

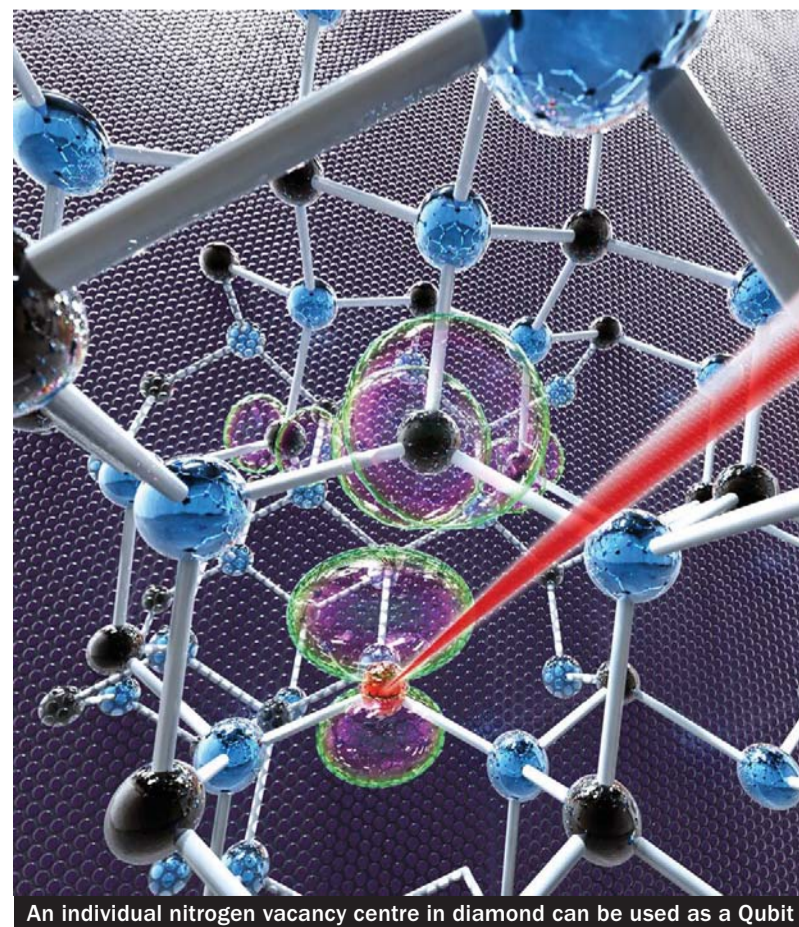
Researchers propose the use of plasmon-mediated interactions, which are devices that can manipulate individual photons and quasiparticles such as plasmons, combining electrons and photons together, in order to increase circuit throughput.

The individual photons and plasmons can be coupled by way of a nanowire, a technique pioneered at Harvard University allowing data to be encoded one photon at a time, increasing transfer rates of meaningful output. The use of hyperbolic metamaterials is another approach which will allow recording and

reading data with single photons. "We need a very efficient source of single photons", Shalaev said, "the challenge here is to increase the efficiency of generation of single photons in a broad spectrum, and that is where plasmonics and metamaterials come in".

One obstacle quantum computers hope to overcome is the challenge of preserving entangled quantum information long enough to be read and recorded. A possible solution involves the use of diamond with "nitrogen vacancies". These are natural defects which occur in the crystal lattice of diamonds. "The nitrogen vacancy in diamond operates in a very broad spectral range and at room temperature, which is very important", Shalaev commented.

The hybrid technologies will be put to use along with work from the new research field of diamond photonics. Hyperbolic metamaterials integrated with nitrogen vacant diamonds are expected to work to produce single photons efficiently and hasten the onset of stable quantum information systems.



An individual nitrogen vacancy centre in diamond can be used as a Qubit

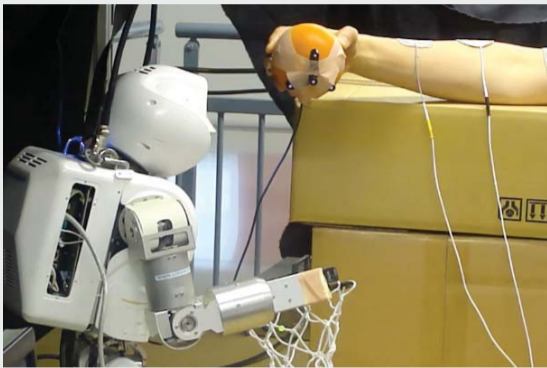
TECHNOLOGY

Technology Editors: **Chris Bowers**
Feroz Salam

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Tips & Hacks

Robot controls human arm



Human-machine interfaces till now have largely depended upon humans telling machines how to behave, to help us achieve our goals. Now, work at the Montpellier Laboratory of Informatics, Robotics and Microelectronics has shown that things can work the other way around, with a robot controlling the movements of a human arm using electrodes attached to the arm. Given the goal of dropping a ball into the net and a human carrying a ball, the robot can apply electrical impulses to the arm that swivel it to the required position. The robot then generates a short pulse that releases the muscles in the hand and causes the ball to drop into the net. While it's not entirely clear what the applications of this ability are, it's hoped that the robot might assist in hospitals with patient rehabilitation. When used regularly by a person with limited limb movements, the system should re-familiarise the body to regular motion.

Stop Online Piracy Act under fire

A long drawn out legislative battle is looming in America, with media houses and Senators pushing forward a draconian new copyright law that redefines the responsibilities of content providers and users in adhering to copyright law. In simpler English, this means that websites such as YouTube and Vimeo would be responsible for ensuring that copyrighted content wasn't stored on their servers.

The implications of this would be huge, as it would probably mean the end of content-sharing as we now know it. Given the volume of data uploaded to YouTube (35 hours/minute in late 2010), the cost of exhaustively monitoring uploaded content will probably prove prohibitive for most video hosting providers. The law has naturally been met with vocal opposition from a coalition of leading technology firms: in a rare show of unity, Facebook, Google, Twitter, AOL, eBay, LinkedIn and Yahoo have published a public letter to the Senate expressing concern about the 'serious risk' to innovation and job creation within the industry. Another key provision of the bill would make unauthorized streaming a felony.

Whatever the final outcome of the American policy debate, there's bound to be an impact on British copyright law in the near future. Preserving our right to keep our data private and pushing for fairer copyright solutions is vital.



Free vs. open source: why you should care

Sanchit Sharma on why 'Free' is more than you expect

I recently had the opportunity to attend a talk by Richard Stallman, founder of the Free Software Foundation, and a strong Free software advocate. He spoke on Free software, and the rights of us all as users of software, and in the process he brought something to my attention.

A term is being increasingly used in the media, one which is taken by most to have a positive connotation. I'm sure you've all heard it before – 'Open Source'. Open Source means simply that the code is available for anyone to view if they so wish, and then compile themselves if they don't want to use the package normally provided to them. Whilst this is indeed a good thing, it is often taken by the media to mean much more than it actually is.

What the media often imply it means is 'Free', used in a context more akin to 'freedom', a concept coined by Richard Stallman in the 80s. A commonly quoted description is "Free as in speech, not free as in beer", and to this extent, it is sometimes instead called "Libre" (for example, the free office suite LibreOffice) to try and avoid the confusion. It is on this that Stallman spoke.

Making the choice

Free software has an altogether different meaning, and is much more about morality than open source is. There are four freedoms listed by the Free Software Foundation as fundamental to free software.

Free software often (nearly always) overlaps with Open Source but the two are not the same thing, and this is something that, in my experience, few people realise. In short, Free software was created due to moral reasoning, it's about people having power over their own computing and being able to decide how to use their own computers, whereas Open Source is the development technique that came from this. Open Source software (like

Chromium, amongst others) is not necessarily free software, as free software insists on the four fundamental freedoms listed above and Open Source proponents don't always agree with these freedoms. However, all free software (such as the GIMP) is by definition also open source, as this is necessary for freedom.

Why it matters

So why should you care about this? There are numerous reasons to avoid any non-free (proprietary) software (including backdoors allowing the writer to control your computer, large and unwieldy programs using more memory, and of course, more bugs, to name just a few), but in practice completely avoiding proprietary software is impossible.

There are two main reasons that it's important for you to know the difference, and why it's important to care.

Firstly, individuals should be aware not only of the dangers of trusting proprietary software, but also of the fact that Open Source software does not always remove these dangers to the same extent that Free software does.

Secondly, there has been a thought process prevalent in software companies over the past few years. "If it fails, open source it and claim that you're giving back to the community", trying to gain good rep by 'giving' their failed projects to the community. Many people fall for this, believing that Open Source is inherently a good thing, but this is simply not the case. In actual fact, these programs are often given very restrictive licenses, and/or rely on the community to clean it up so that it can become a useful program. Free software licences force companies who donate software to the community to actually give the software up when they donate it, thus allowing it to truly become community owned.

So, in short, Free software conforms to the four fundamental freedoms, but Open Source

simply conforms to freedom 1. Free software gives you, the user, freedom, but Open Source does not.

Free software everyday?

How much should this matter to you? Finding truly Free software, for a variety of reasons, is a lot more difficult than you would hope, so it might not be wise to depend on it. Yet if you get the chance, supporting and using Free software is definitely the way to go.

The four freedoms of Free software

Freedom 0:
The freedom to run the program, for any purpose

Freedom 1:
The freedom to study how the program works, and change it so it does your computing as you wish. Access to the source code is a precondition for this.

Freedom 2:
The freedom to redistribute copies so you can help your neighbor.

Freedom 3:
The freedom to distribute copies of your modified versions to others. By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.

TECHNOLOGY

Boosting mobile innovation

Kin-Hing Lo explores the revolutionary impact of mobile proliferation on our lives

As each second ticks away, there's a quiet revolution going on in every town and every city across the globe. Mobile technology disrupts the way we live our lives, the way we communicate with others and the way we function as a society. In the time it's taken you to read just this sentence, over 3,000 mobile applications have been downloaded to handsets across the world. Many of these applications may just be pointless bird throwing, rope cutting and fruit slicing games but a growing number of innovative new applications are changing the way in which we communicate, shop and travel.

Freeing innovation

Just a couple of years ago, creating a new and innovative product to solve a problem would require you to design a bespoke piece of hardware, manufacture it, distribute it and retail it through a high street store or a mail-order catalogue. You'd need to find a designer, a manufacturer and suppliers for your components. Then you've got to find a distributor to take your product, a retailer willing to dedicate the shelf space to it and a marketing firm to promote it. The route from idea to marketplace was slow, expensive and risk-ridden: launching a new product to solve real world problems was a process accessible only to those with the deepest pockets and

those willing to take the biggest risks.

The modern smartphone is a platform which democratises innovation by cutting the cost of development and the associated financial risk to almost zero. We can cut out manufacturing, design, distribution and retail – just write code, deploy it through an application store, make money and iterate. With a single piece of commodity hardware, it is possible to access realtime information from a huge array of local sensors such as GPS, a camera, microphone, accelerometer, compass and a barometer. Combine that with the ability for your smartphone to provide context (through your social networks and location) and the ability to pull in data from millions of sources online, all you need to do is to combine data from those sources in a useful way to solve a real problem and the hardware and APIs do the rest. With the ease of innovating on the smartphone platform, it's no wonder the pace of innovation has been so quick.

Improving lives

In the UK, mobile applications have helped us to communicate with our peers around the world, to live healthier lives, saved us time and saved us money. 'Google Translate' and 'Word Lens' have helped us to traverse language barriers and to communicate with people regardless of whether or not we share a common language. 'Transport for London' and 'Addison Lee' have



Mobile applications have intrinsically changed the way we process information and go about our daily lives

helped us to get home safely after a night out. Various GPS navigation apps save us time by routing us around traffic jams – traffic jams reported by other users of the application. Applications such as 'ShopSavvy' compare prices against other high-street shops and online stores so we don't get ripped off.

The 'Asthmapolis' application helps asthma sufferers by tracking their symptoms over time, looking for a deterioration in symptoms and analysing where those symptoms occur so public health officials can find the source of the pollution. And there's Lewisham Council who keep their streets clean with a mobile app for members of the public to report graffiti, fly-tipping and other environmental crimes.

Looking to the developing world, the promise for mobile technology to have a positive social impact seems to be even greater. Many developing countries currently lack the efficient physical infrastructure we take for granted (the roads, phone lines, GP surgeries and banks). Mobile technology can be deployed incredibly quickly in these countries as one mast covers a huge area – instantly giving the population access to services such as mobile banking, healthcare and trade. Several short

mobile phone calls will allow a farmer or a producer to determine the price he can sell his goods at different markets and to negotiate the best price without spending days making successive trips to different markets.

Mobile banking companies such as M-Pesa allows people to invest money for their future and to pay suppliers without a long journey to the bank whilst also eliminating the risks and costs of transporting physical money. Other apps such as EpiSurveyor help with disease monitoring: they allow physicians to monitor the spread of diseases in real-time without the delay introduced by sending and collating paper forms.

Mobile innovation

The potential to change the world and to make money in the world of mobile technology is unparalleled. The mobile application market is already worth \$15bn annually and is only set to continue growing exponentially. Globally, the number of people with a mobile phone is set to pass 4.5 billion by 2012. Many of the next one billion people to be connected to a mobile network will

reside in Asia, the Middle East or Africa – these are people who will be accessing the internet for the first time through their mobile phone.

As the UK struggles through our deepest recession to date, we should realise that long term economic growth only comes from making things that better other people's lives. If I can produce a product which is worth £10 to you but only costs me £2 to produce, I could sell it for £5 and it's a win-win situation. It's only by creating real value that we can build a sustainable economy: speculating on the markets in an investment bank doesn't provide this long term value and isn't a sustainable model for the UK economy. The mobile industry is one which has a huge positive social impact as well as huge potential for new ideas.

Whether you're an engineer or a scientist at Imperial, I believe the mobile industry provides a unique opportunity for you to develop the new products which benefit society with almost no cost and no risk to you. Take a look at the Android Developer website for example: it's free to anyone interested and there are countless tutorials to get you started. With no investment required apart from your time, there's little to lose.



Green Week - all next week! #icugreenweek

So I'm not going to talk about why you should save energy. I'm not going to tell you why you have to switch off the lights or eat less meat. I'll let the activists on page 22 do that... I'm here to cover something far more straightforward and yet something that even the cleverest of you lot seem incapable of understanding. Individual change. Students (and staff) at Imperial often stare at me blankly when I suggest making small changes to their daily lives that are neither especially inconvenient nor expensive, generally stating (often vehemently) that 'it won't make a difference'. If you'll indulge me, I'll walk you through exactly what we could do at Imperial, with minimal effort. All my figures come from <http://www.dothegreenthing.com/wiki>. Feel free to contact me for clarification.

An Imperial student wakes up in the morning and takes a shower seven minutes shorter than her usual fifteen. BANG, she saved 0.63kg Equivalent

CO₂ (CO₂e). She then gets dressed and goes to the kitchen where she grabs the jam and digs out the dregs stuck at the bottom of the jar before looking for a new one. BANG, by not throwing away the jar before it was really empty (and not throwing away old vegetables whenever fresh ones arrive) she has saved an average of 8.53kg CO₂e per week. On her way to lectures she passes by the JCR and refills her water bottle. BANG, 0.22kg CO₂e by not buying a new water bottle. She then runs up to her lecture in Pippard LT saving 0.5KgCO₂e each day by not taking the lift five floors. At lunch she picks the vegetarian option and saves 8.65kg CO₂e. At home that evening she has her shopping delivered (1.64KgCO₂e saved). Dinner is seasonal and organic (1.34 and 0.64KgCO₂e savings respectively). She then does her washing and dries her clothes on a rack in her room. (1.90 kg CO₂e saved per load).

You get the idea. Through ten simple and easy steps she has saved 5603Kg* CO₂e in a year. If that were multiplied out by 15000 (the population of Imperial – ish) it would save 84,000 tonnes of CO₂e emissions. Imperial's calculated carbon footprint for 2008/9 was 84,026 tCO₂ – for all campuses. I'm as surprised as you are. Small actions can make a difference. Go to <http://thedonation.org.uk/doers/icugreenweek/green-week> and pledge to Something. Anything. Let's blast through our 30 tonne target.

Check out <http://www3.imperial.ac.uk/sustainability/stepchange>. Become an ambassador.

*I appreciate that these are estimates and that 'a lift that has ten people in it might be more carbon efficient than ten people exercising up the stairs respirating'. These are estimates and means valid for the general case. The points stand.



your
SABBATICALS

Nicolas Massie
Deputy President (Welfare)
dpwelfare@imperial.ac.uk

Keep up-to-date with your Sabbaticals at:
imperialcollegeunion.org/sabbs

GREEN WEEK

Pledge your CO₂ savings online now

thedonation.org/doers/icugreenweek

Monday 21

Meat Free Monday!

All day, Across Campus
Meat consumption has a huge impact on our environmental impact, having one meat free day per week reduces our emissions more than having all of our food grown in our gardens!

Bike Maintenance workshop

By London Campaign for Cycling and Imperial Bike Users Group, 18:00 in Union Meeting Room 6

Bikes are amazing transport, no fossil fuels, free exercise and time saving in London. The only downside is that things do break and wear, come along and learn how to repair and maintain some basics of your bikes to keep you rolling.

Veg Soc Cooking meeting

By ICU Veg Soc, Meet at 18:00 in FiveSixEight.

Look for the carrot hat. Session on cooking more sustainably, be it using up leftovers or just handy tips on how to reduce throwing stuff out.

Tuesday 22

Clothes and book Drop

In FiveSixEight in the evening, during the day at Union Reception and Sherfield foyer. When you drop off your clothes for the clothes swap later in the week, get tokens that you can use in the clothes swap to get some lovely (not so) new (but great) clothes.

Green Week Union Quiz

FiveSixEight at 18:00
Come and test your green-grey-matter. Add in a bit about general quiz blurb but with a green slant to it.

Wednesday 23

Clothes and book swap

By Women in Science, Engineering and Technology. All day, Union Meeting Room 7. Come in with your tokens from earlier on in the week trade them in for lovely books and clothes.

Critical Mass - Cycling event!

By Imperial College Bike Users Group, meet outside of the Faculty Building bike park at 17:00, leaving at 17:15.

More of a celebration of cycling than a cycling protest. We will head over to the south bank and join vast numbers of cyclists taking to the streets. The general idea of critical mass is that the more people who cycle, the safer it gets, this is a celebration of cycling but also pointing out how fragile humans are compared to cars.

Felting Session

By Environmental Society, 16:00, Union Meeting Room 7
Do you have any old woolen clothes with holes in them/beyond repair? You can bring them new life by turning them into various felt works. You don't need to bring your own wool, but reusing clothes would be ideal.

Thursday 24

Composter visits

Meet at the Green Week Stand in Sherfield, 12:00-14:00.

20 minute tours of 10 people at a time, can sign up on the day for their session or just drop in and wait until the next slot. College is in the process of composting all of their food waste, this is just shy of 10% of their entire waste sent to landfill! Come and check

out how you convert raw and cooked food and wood pellets into lovely compost that is used around college to keep our green spaces fertile.

Friday 25

Clothes and book swap

By Women in Science, Engineering and Technology. All day, Union Meeting Room 7. Come in with your tokens from earlier on in the week trade them in for lovely books and clothes.

Chutney Session

By Waste Watch, 12:00 in Union Meeting Room 4.

After a discussion on our relationship to food, we will head up to the Union kitchens and cook up some delicious chutney that is free for all to take away.

Politics Editors: **Joseph Letts**
Rajat Jain

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POLITICS

Palestinian students visit Imperial

Exchange students reveal their thoughts on Palestine's struggle for recognition

Rajat Jain

On Tuesday, Imperial was visited by a group of six Palestinian university students spending eleven days in London as part of a cultural exchange. Felix took the opportunity to speak to them.

In particular, I spoke to **Haifa Ansari**, a final year law student and **Zacharia Zanoon**, a second year dentistry student. Both are from fairly similar backgrounds, part of the growing young well-educated Palestinian middle class and got on well with each other, seemingly holding a similar world view. Certainly, both have a sincere liking for the British people, despite seeing British policy as being partly responsible for the conflict. This reflects my own experience of the urban parts of the West Bank, where the locals were always excited to meet tourists (even if they had nothing to sell), and had a rather positive reaction to hearing we were British. It is also hard to find any Palestinians who would trust Israeli's from any faction to be true to their word. Israel has long resisted a Palestinian state out of legitimate concerns that the new state will need to be guaranteed to not be a threat to its national security. It is interesting to see that most Palestinians feel the same concern about Israel.

“Scratch the surface, and a clear line still emerges among the Palestinians.”

However, scratch the surface, and a clear line still emerges among the Palestinians. When asked about Israel, neither would recognise a 'right' to exist, but while Haifa would accept their existence, Zacharia would not. He also believed that force was absolutely necessary and the main measure by which Palestinian 'freedom' would be gained. Haifa, however, believed that diplomacy would be successful given enough time and peace was of the utmost importance. She also appeared to be rather more sceptical of governments (whether allies or enemies of Israel), and believed that pressure from people around the world would have a greater impact.

Although they are hardly representative of the whole of Palestinian society, the contrasting views of these two students reflects some of the key problems that will still face the Palestinian people, even if a more moderate Israeli government comes into power.



Haifa Ansari



Zacharia Zanoon

Palestine has taken the policy of turning to other countries for recognition of their state. Given their failure to gain UN membership, was this policy a waste of time?

H: No, I don't think it was. We were expecting the bid to fail. But it has led to membership of UNESCO and greater knowledge of the plight of the Palestinian people.

Z: It was not a waste; at least we tried to improve the situation. We must try every option available to us.

Given the failings of the diplomatic route, are the Palestinians likely to take more forceful action?

H: No, not necessarily. The majority of Palestinians are still peaceful and want peace. The membership to UNESCO is still a small step in the right direction. As long as there are small steps, Palestinians will remain hopeful.

Z: Of course forceful action will be necessary. If Israel uses violence against me, I will respond in the same way. What else can we do? Some of them [Israelis] believe that if you kill an Arab child, you will enter paradise! We do not: we only use violence because it is used against us.

Countries such as Iran and Syria claim to support the Palestinian people but focus more on being anti-Israeli. Do you consider them to be true allies? Does Palestine have any true allies?

H: We will take support from any country that gives it to us. But this does not mean we support their own internal politics. The Palestinian people will always gladly accept support from anyone who sincerely offers it. It is, however, people who can help us, not governments.

Z: Of course, any country who supports us is our ally and we shall accept their support.

Britain has been a strong ally of Israel and does not recognise Palestine. What is your view of the British and has it changed since you arrived? Is there anything British people who support the Palestinians can do?

H: The British people have shown their support for us. We do not see the government and the people as the same. There are a large number of organisations who you can visit to support us. I urge British people to come and visit Palestine and see the suffering of our people.

Z: The British left the Jews here in 1948 and are responsible for the situation we are in. But now, we have come here and got so much support. The British are now our friends. They understand our problems and support us. There are so many organisations in Britain, such as the one that brought us here, that are helping us.

Do you accept Israel's right to exist? Do you support a two state solution?

H: I do not accept the right of Israel to exist as they have taken our land. But, I can see that they view it as their home. If it would bring peace, I would accept the two states though. But, this would have to be a final peaceful state. I do not know if the Palestinians can trust Israel to be peaceful.

Z: Let me ask you: If someone comes and takes your land, everything you own, would you offer to share it with them? Israel does not have any right to this land. All the land is Palestine. There may be no peaceful solution. Even when the Oslo agreement was being signed, the Israeli prime minister was lying to us. The Zionists are liars- they cannot be trusted. The Jews here in London are peaceful. The Zionists are not. Let me tell you a story. A boy complains to his father that his bedroom is too small. His father tells him to get a cow and put it in his room. The boy does so and now complains it is even smaller. His father tells him to take two sheep and put them in. The boy does so and continues to complain. The father tells him to put five chickens in his room. The boy complains he can barely fit. The father says take the cow out. The boy says it feels bigger. Now the father says take a sheep out. The boy says the room now feels very large. This is what the Israelis are trying to convince us of!

Would you like to report on a political issue that means something to you?

Email us at: politics.felix@imperial.ac.uk

Rajat Jain



ICU President Scott Heath (third from left) and a few Imperial students posing with the students from Palestine

BUSINESS

Business Editors: **Beñat Gurrutxaga-Lerma**
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Letter from the Editors

Weatherforecasting during an Economic Climate Change

In the *Guardian* comment cartoon published this Monday, artist Martin Rowson depicts a repentant “St. Vince” Cable as a monk, exiled to the desert where he is camped outside a tent marked OCCUPY. It comes in response to an interview conducted over the BBC’s *The Politics Show* broadcast this Sunday in which Cable admitted he shared “sympathy with the emotions behind [the movement]”.

The interview marked a return to the spotlight for the current Business Secretary, who has been notably absent in the media (as from a previously held role in media policy) since last December when he publicly declared war on the Murdoch empire following their BSkyB takeover bid. However it seems already that this most recent interview is cementing the image of Cable as somewhat of a PR liability. In voicing empathy for the occupiers, Cable has simultaneously managed to go against David Cameron’s public line of scepticism – “protesting is something you, on the whole, should do on two feet, rather than lying down, in some cases in a fairly comatose state” – and anger those supporters of the movement who view his attempts to reconnect with public spirit as little short of hypocrisy following the perceived sell-out to the Conservatives over issues such as the austerity measures and raising of tuition fees.

But such political and judicial slip-ups shouldn’t undermine the reputation of the Business Secretary as economist. Also present in Rowson’s cartoon is the desert of the economic landscape: flat-lining growth figures of 0.7% for 2011 and 0.6% for 2012, and, on the horizon, the tornado that is the crisis in the eurozone. As the *Politics Show* highlighted, Cable has a knack for predicting these kinds of economic ‘weather systems’. Before stepping into office he urged caution over the austerity measures, warning that to cut too far too fast would impede growth. Now the man responsible for the UK’s growth strategy, Cable, will soon have the chance to improve it.

On November 29 the Government will issue its Autumn Statement. Cable has already stated that it will not contain any large tax cuts or increases in public spending, but with Bloomberg reporting possible legislation to limit executive pay, including options such as giving shareholders a binding vote on pay, and putting employees on company remuneration committees, it looks as though he may just have more to offer the protesters than a sympathetic ear.

– The Business Editors

Groupon: Is the social buying giant losing fuel?

By  Imperial Entrepreneurs

Annabelle Mayers

If you have found time to follow the news in between episodes of *Made in Chelsea* and *The X Factor*, then you will be aware that Groupon, considered the fastest growing company ever, has recently been valued at \$12.7bn. The company’s rapid global expansion and large valuation (the highest since Google was launched in 2004) imply it is a hugely successful business. However, investors question whether the company’s business model is sustainable, and suggest that internet giants Google and Facebook could prevent Groupon from dominating the social buying industry. So can Groupon maintain the position it has propelled itself into, or are its days in the spotlight over?

The idea behind Groupon is simple: bulk buying is cost effective. Groupon utilizes this truth by offering vouchers for services and products at a fraction of the retail price, providing that enough people purchase the deal. This is theoretically beneficial for all parties as the consumer saves money, the participating businesses gain new customers and Groupon generates profit by taking cuts of around 50%. It sounds ideal, but does it work in reality? Groupon has 115 million subscribers (August 2011) with 32.5 million vouchers purchased in the last quarter; the site seems popular with the public. But for small businesses, such as restaurants and beauty salons which Groupon depend heavily upon, the outcome is not always positive. Many small businesses have been overwhelmed by the influx of customers, running out of stock or not fitting in everybody’s appointments before the vouchers expired (tragic for those who absolutely need their fake tan by Friday!) On top of this, participation is not

always lucrative for businesses as discounts are so large, many of them suffer losses while bargain hunters seek the next giveaway ahead of becoming loyal repeat customers. Groupon is expected to generate \$1.7bn of revenue this year which, whilst sounding impressive, in fact equates to little more than breaking even.

There is a major lack of organisation within the company due to its rapid development in such a short space of time. Initially based in Chicago, Groupon now operates in 175 North American markets and has quickly spanned the globe entering into 47 countries so far. The number of employees has soared from 39 to over 10,000. Although these figures sound impressive, they are accompanied with internal chaos. Communications within the company have been criticised and employees have complained that people in managerial roles were friends of the founder and are now not experienced enough for their current role. The lack of organisation is not restricted to employees; there are numerous reports of vouchers being sold for a business which had since been closed down and customers not receiving a promised refund. Two Imperial students had first-hand experience of Groupon’s chaotic communications when they were offered internships in China, signed a contract and were told a few days before they were due to fly that the placement was no longer possible.

The most notorious of Groupon’s mistakes was simultaneously upsetting the Chinese and Tibetan populations when they released an advertisement which made a plea for the people of Tibet – “The people of Tibet are in trouble” – before jokingly adding “but they still whip up an amazing fish curry.” Complaints came in thick and fast over Groupon light heartedly using the suffering of Tibetans in order to promote their product.

In fact the story of Groupon’s attempt to enter the Chinese market is adorned with set-

backs. They stormed into a joint venture with Gaopeng in February, establishing themselves within a couple of months. China is notoriously hostile to international companies and Groupon is no exception. Now most of the international managers, oblivious to the Chinese culture, have since been removed and returned to their respective home countries. Just last week Groupon hit the rocks again for accidentally linking up with a company selling counterfeit luxury watches. Many speculate that Groupon are heading downhill in the direction of other internet giants such as Yahoo and Google who failed to break into the harsh Chinese market.

In 2010 Groupon famously rejected Google’s offer to buy the company for \$6bn. Fighting back from its rejection, Google has launched Google Offers – a site with a startling resemblance to Groupon. Competition is nothing new for Groupon (there are over 500 similar sites in America alone) but few pose such a significant threat to the social buying giant. Facebook has created their version which when fully established and implemented across the globe could see the end of Groupon’s time at the top. With such an extensive user base Facebook has the potential to knock Groupon off of the playing field and dominate social buying. Google and Facebook also have the advantage of not being the first to enter the market meaning they can steal the successful elements of Groupon whilst avoiding many of the mistakes.

In order to survive Groupon must be innovative. Launching ‘Groupon Now’ may have been a step in the right direction. This service harnesses the smartphone craze and opens an entirely new revenue stream. The simple interface consists of the two buttons, “I’m hungry” and “I’m bored” which use GPS to provide the user with deals for eateries and entertainment close to their location. This differs from the classic ‘daily deals’, which can be redeemed several months later, and provides an attractive option for businesses as they can increase sales during usually slow periods. Another new product, ‘Groupon Rewards,’ implemented in September in an attempt to increase customer loyalty. Customers who purchase multiple vouchers from a business which regularly offers Groupon deals will ‘unlock’ rewards which entitle them to further discounts. This will allow Groupon to accurately track how many people are repeat customers, how much individuals spend on average and should increase the number of purchases per user.

Groupon, one of the hottest internet startups, has wowed the world with its unprecedented rate of growth. Whether it will win the battle against Google and Facebook is yet to be determined. Only by addressing its fundamental errors, embracing new technologies and continuing down the innovative road they will they stand a chance in defying the odds and emerging as the rightful ruler of the Social Buying Empire.



Groupon must take on Google and Facebook if it is to triumph

www.imperialentrepreneurs.com

Thomas Young's Entrepreneurial Endeavours

Bernhardt Kreuzweg-Burghelm

It was perhaps due to the imperfect knowledge or absolute ignorance humankind had back then that true polymaths could still exist; nowadays, in the age of specialization, it seems almost impossible. But back in the old days, the same person, if gifted and lucky enough, could undertake forefront research in the most diverse areas and make enormous contributions, large enough for their names to be remembered. Thomas Young (1773-1890), a physician by training, was such a polymath.

Engineers will always remember his name through Young's modulus. Physicists, because he established (or unearthed) the wave theory of light. Physicians, because he explained colour perception and described astigmatism. Musicians, due to the Young temperament. Egyptologists, for his partial (and truly remarkable) decipherment of hieroglyphics. Capillarity, surface tension, haemodynamics, comparative philology, the double-slit experiment, the measurement of the speed of light, all of it was due to Thomas Young.

His interests being so wide, it comes almost to no surprise that Young did not only endeavour in all that, but became a successful businessman as well. It all was triggered by a huge economic crisis: the "Panic of 1825".

Following the Napoleonic invasion of the Iberian peninsula, the Kingdom of Spain, formerly the biggest colonial power in Europe, lost its grip in South America: one by one, all the countries from Mexico down to Chile and Argentina became independent, a process that finished in 1821 in Peru. The Spanish Empire had usually taken a protectionist stance and, even though a certain amount of smuggling had existed, trade between their American colonies and Europe had been restricted to Spaniards alone.

Therefore, when the independence process was complete, British financiers saw the newly former countries as a great chance of entering a hitherto forbidden market. They were the days following Napoleons defeat, when Britain had established itself as the dominant power. Little regulation existed on the banking sector, as little practice on financial markets existed. Thus, the initially alluring investments in Latin America rapidly attracted too many investors, and speculation followed.

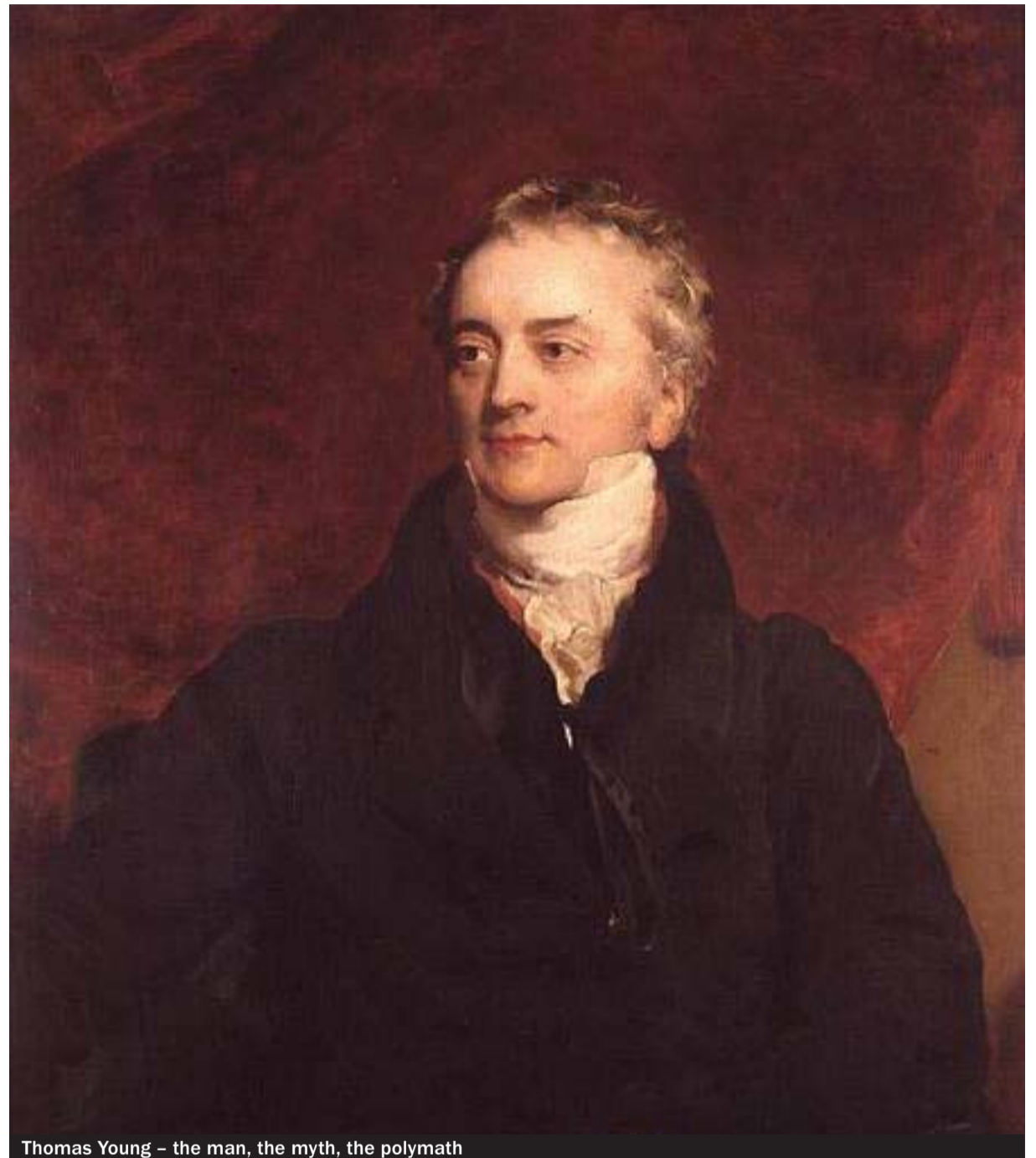
At the height of this speculative pro-

cess, fortunes could be made by investing in non-existent factories, by trading incredible amounts of Latin American public debt, or by buying and selling land titles in the middle of the jungle, where colonies were allegedly going to be built out of nowhere. Adventurers also entered the game: some Gregor MacGregor (1786-1845), who had formerly fought in the South American wars of independence, publicly proclaimed himself ruler of the fictitious Principality of Poyais, and successfully drew City investors and colonists into this fraudulent venture. Colonists would land in Panama only to discover Poyais did not exist, and that MacGregor, safely living in Caracas, had just taken the money and fled.

The madness of those days is hard to match, but not perhaps its sophistication, as the recent and ongoing crisis has shown. And, as it happened in 2007, the bubble could only burst. By 1825, industrial revolution in Europe had made some other investments rather attractive, too: suddenly, railroads, heavy machinery, coal mining, steelworks,... became obvious and more trustworthy investments. However, most City banks had their money placed on Latin American ventures; so, in order to finance the former, they simply decided sell off the latter. As it became obvious that no one really wanted the Latin American assets, panic grew and, inevitably, the London Stock Exchange crashed.

Banks, the main backers of the speculative investments, were the first and major victims of the crash. Sixty English banks, including six of the major ten, declared bankruptcy as panic spread; but the main survivor, and undoubtedly the biggest culprit, was the Bank of England, which back then was, essentially, a chartered yet private business that, as such, had heavily fuelled the bubble. Ironically, the British government had to allow the humiliating bail-out of the Bank of England by no other than the Banque de France, which infused its colleague with enough gold reserves to prevent its collapse. The crisis spread to the rest of Europe, and prompted a general default of Latin American debt. Governments worldwide promptly learnt the lesson: banks, left alone and unregulated, can cause great trouble. Thus, for the first time in history, banking policing and regulations were established.

The resulting business environment was, as it is nowadays, one of uncertainty and distrust. The bubble had



Thomas Young – the man, the myth, the polymath

shown quite clearly the need of assessing risk and of prudent expansion. That was how the Palladium Insurance Company, which had been founded amidst the general excitement of this period, felt in the aftermath. They saw the need of looking for ways of assessing the risk of the insurances they offered so that they could be priced accordingly, and money made in a certain and prudent way, rather than through adventurous games in the Stock Exchange.

However, at that time risk assessment and pricing were in its teens, and knowing of Thomas Young's fame and expertise, they thought he could be the most suitable person for a job consisting on, essentially, re-structuring the insurance business on scientific grounds. They attracted him in the most generous way; a big salary of £500 was offered to him, along with a considerable number of stock shares. However, Young apparently thought the deal was too good for him: he refused these liberal terms and, after some negotiations, accepted the job for £400 per annum alone.

Young was of an inquisitive and rigorous mind. Sometime earlier in his life he had proposed an empirical equation for calculating the value of life and, after working on the issue, came up with a formula calculating the joint value of any number of lives too. This method, although cold-hearted and rather imperfect, outperformed any other current practice. His analysis, based on statistical data on the number of yearly deaths of people of different social positions in different locations, allowed him for the first time to estimate individual life expectancy and, thus, to price life insurances based on the probability someone had to die in the near future. He kept adding factors into his formula, (diet, profession, family antecedents,...), to the point of making his method too complicated for anyone but himself. Nevertheless, being more thorough and serious in his analyses than anyone else, Young was quite successful and helped the Palladium Company make a great profit.

While working on these issues for the

Palladium Company, he realised that his scientific approach could be extended to some other areas of business. For instance, his centred his attention in the market of "annuities". For the layman, an annuity is a contract, usually between a pension fund holder and an insurance company, by virtue of which the pensioner hands over his pension fund – or, equivalently, a great deal of money – to the insurance company under the agreement that the insurance company will then pay the pensioner, for the remaining of his life, a certain income – the annuity. Annuity titles could be purchased and sold in the market, and obviously the risk was in the subject living too long for making the business not profitable. Young applied his methodology to this market too, and he was able to calculate annuities on single or joint lives and minimise the losses of the insurer.

By the time of his death (1829), his scientific insight into the insurance business had attracted enough attention to allow dubbing Young the father of modern insurancing.

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COMMENT

FELIX

Trust issues

The news that the management training company Coalescence Consulting has received payments of £39,570 this financial year may raise a few eyebrows. While Mark Davies, Chief Executive of the Imperial College Healthcare NHS Trust, has stated that, "On joining Imperial I rightly declared an interest in the company and resigned as a director of Coalescence to avoid any issues of a conflict of interest. I have had nothing to do with the commissioning of any work historic or ongoing," he remains a Senior Consultant and Executive Coach for the company, with his wife in the position of Managing Director.

Not only is the issue of conflicts of interest at best not entirely clear, but in the current economic climate and continuing financial instability, it is fair to ask whether it is appropriate for a company to continue to pay out large sums of money for what are described as "innovative, bespoke organisational development services for health and social care, to help you, your team and your organisation succeed" on the Coalescence website. The intrinsic value of such courses should be thoroughly determined and subsequently reviewed.

The Imperial College Healthcare NHS Trust is facing a budget deficit in excess of £35m and there have been strong allegations that St Mary's may close as part of a cost saving exercise, despite protestation from senior figures. It is therefore not entirely surprising that the news was picked up in varying degrees by the national media: *Private Eye*, *The Telegraph*, and *The Sunday Times* all covering the issue. Despite Mark Davies' attempts to clarify the allegations, the story is certain to at least cause a few blushes amongst senior staff.

In his email to the staff, Davies concludes that "At a time when it is very clear that we are facing very large operational and financial challenges, I would ask that they do not deter us from our absolute priority of providing the best possible care to our patients." While Felix actively supports his keenness to resolve the financial issues of the Trust, it does not preclude that until the matter of any wrongdoing is fully resolved the news will remain disquieting for staff, concerned not only for their own job security but for the wellbeing of the entire Trust in a week when figures showed unemployment rising by a further 129,000 to 2.62m in the last three months and the Bank of England cutting its forecasts for growth in 2011 and 2012 to approximately 1%. We sincerely hope that there will be a robust and proper investigation into the affair.

Car Sick: Why we need to reclaim our streets



Luke Sheldon

Our streets are currently being occupied by aggressive, murderous, polluting inhabitants: cars. They are effectively environmental squatters. Unfortunately, whereas the criminalisation of squatting, which was voted through the Commons the other week, will throw thousands of the most vulnerable in our society onto the street, it will do nothing to solve the environmental and social ills of cars. However, as it's Green Week and all, I'm taking this opportunity to explain why we don't need them (which hopefully won't be too difficult as west London is the most congested area of London I cycle through).

Simply put: our society is trapped in a dangerous car culture. As London students, it may not be an issue during term time, but a large proportion of us probably drive when we get home in the holidays. A quarter of journeys though are less than 2 miles; which for the majority of us can be easily substituted by walking, biking and/or taking the bus. The longer journeys can also regularly be replaced by train and coach. It's an interesting point from research that people tend to overestimate the length of time to undertake a journey by public transport but underestimate that same journey by car. We have actually warped the usefulness of cars in our minds, and the pseudo-freedom they promise us. Ask yourself: how free are you in traffic jams or stuck behind a tractor? This car obsession is damaging our planet, as nearly a fifth of our country's carbon dioxide emissions come out of their exhaust pipes.

Environmentally, cars are not just responsible for a large proportion of climate change, but also, in cities, pollute the air we breathe. A recent report of 17 European cities by German environmental groups ranked London as one of the worst for air



Bob Marley caused a smog on the M25 last week

pollution. This was attributed to the retraction of the congestion charge from West London, rises in public transport costs and a lack of investment in clean buses.

There is also a social justice issue in this pollution. The statistical geographer, Danny Dorling, found that the places with the highest poverty rates were the areas of greatest pollution, but that also the inhabitants of these areas emitted the least. Essentially, due to our road distribution, the most affluent – who are responsible for the majority of driving and polluting – are destroying the air quality where the poorest in our society live.

On top of the environmental factors, cars are too often overlooked as the murderers they are. You may think this is strong language, but when a terrorist attack, often provoked by imperialist wars, to everyone's regret kills 50 people we are up in arms. New laws are brought in, our civil liberties etched away and we go to war with two countries. However, this is minor compared to the deaths at the hands of cars, which we do nothing about as more people die every year.

Danny Dorling has done a lot of work on the deaths caused by cars. He showed that the ratio of men to women dying between the ages of 20 and 30 has hit an historical high. It is greater than the World Wars, and that this is a consequence of car deaths. Car deaths are the single biggest killer of the under 35s, and for people of undergraduate age, cars account for nearly half of the non-medical related deaths. These deaths are completely pointless and Danny Dorling refers to cars as the open sewers of

“We have actually warped the usefulness of cars in our minds, and the pseudo-freedom they promise us”

the 21st century, and that hopefully, like with open sewers, we will soon rid our streets of cars and the deaths they cause.

We have not let cars invade our lives without a fight. The 90s saw the anti-roads movement with the campaign to stop the Newbury bypass and 'Reclaim The Streets', shutting down roads and motorways for large parties, showing how fun life without roads can be. The anti-roads movement caused the most expensive eviction ever as a soon to be demolished street had a 70ft tower erected on top of a house to stop the motorway that was inevitably built in its place. Currently, monthly bike rides, called Critical Masses, of up to 1000 people swamp the streets of London bringing cars to a stand still as they regularly cycle to places where cyclists have been killed, paying their respects (South Bank of Waterloo Bridge, 7pm, last Friday of every month if you're interested). The ex-mayor of Bogota, Enrique Penalosa, remarked that you can have a "city friendly to cars, or a city friendly to people, not both". Let's make ours friendly to people and the environment.

Want to discuss something, but real life conversations are too difficult? Then go to: felixonline.co.uk

We're not going to patronise you by saying that the views expressed are the opinions of the authors, not Felix. Oh, wait, we are. Oops.

COMMENT

Cats and babies



Rhys Davies

The fact that I'm still alive is surprising to say the least. Every day, my life is a constant struggle against the innumerable dangers that surround me. Some are obvious; cycling to college focuses the sum hatred of all commuters on my little two wheels. My home is no safer; I actually pay for deadly substances like electricity and gas to be pumped through into my living space. At night, I sleep with a blanket and pillows. How I haven't smothered myself is a mystery.

But of all these dangers, there are two I am especially wary of. These nemeses are all the more dangerous because they are so often overlooked. They are commonly encountered by most people every day, in some shape or form. Most don't pay them a second thought but I pay them third and fourth thoughts. Even fifth thoughts when I'm feeling particularly paranoid. Knowing of the threat they pose is one way of protecting myself against them.

I'm talking about cats and babies. Don't laugh.

It is a criminal offence to carry a knife but there is no such crime for carrying a cat, despite having more than a dozen times the number of blades. I have personal evidence that a cat's claws can penetrate denim, corduroy, lead and human skin – in that order. Just as an offensive weapon cats are dangerous, but it is coupled with a cold and most supreme intelligence. The most benign expression I have ever read in a cat is

one of weary tolerance. Cats are more than capable of taking over the world. The only reason that they don't is that they would have to feed themselves afterwards, which would be the most tremendous bother. But conspiring to ruin my life and/or corduroy trousers is child's play for them.

Babies are even worse because they are even more innocuous. They just lie there all day, laughing and crying, eating and pooping. Not an obvious danger to anyone, providing they're wearing nose-clips at all times. They don't even seem to have the same otherworldly intelligence of cats – or do they? We talk nonsense to babies and suppose that they have all the smarts of a steamed pumpkin. I think these biases colour our views. Ask a baby about the missing works of Shakespeare or the Riemann hypothesis or string theory and you may be treated to some very sagely stares. But sadly we don't – instead, we dangle our keys in front of them.

This constant underestimation combined with a child-like image of justice can lead babies to be pretty vindictive. You make choo-choo sounds with a spoonful of mushy peas; the only fair retaliation is to vomit over the back of your fancy evening dress. If you happen to be wearing it at the time, that is just icing on the karmic cake.

A house with both a cat and baby is where angels fear to tread. Cold intelligence and tempered, pure, diapered vengeance is a match made in the darkest bowels of hell. There is nothing a cat

Lizzy Griffiths



and a baby cannot do and heaven help you if you have crossed them. For this reason, not only do I lock my doors at night – I also lock the cat-flap.

What terrifies me most is not cats and babies themselves – though awful in

their own right – but what they can become. Cats are only ten minutes down the road genetically, or two missed meals, away from the leopard, the most deadly of predators. And babies?

We all know what they grow up into.

I have personal evidence that a cat's claws can penetrate denim, corduroy, lead and human skin – in that order.

Calm down dear, it's only an opinion!

Felix's Deputy Editor on the perils of the Comment section



Charles Betts

Felix's key purpose is to act as a hub for students to express their creativity.

Silvio Berlusconi has proved himself a great salesman and a poor statesman. Sounds good, doesn't it? Has a certain panache. The only thing is, I didn't come up with it. The succinct, elegant sentence was written by Beppe Severgnini, the reputable Italian political commentator, in a recent *Financial Times* column. My opinions on Berlusconi's reign as Prime Minister of the eurozone's third largest economy are limited to what I have read in national media; I have never met an Italian politician, let alone voted in an Italian election. And herein lies the problem with student opinion pieces: they cannot be more than a regurgitation of other, professional, columnist's original thoughts.

A newspaper's prime objective is

to inform the reader. It is fair to ask how this can be achieved by voicing the opinions of students whose best source of information is *Question Time* and *Newsnight*. Arguably, the News section of Felix is the best place where the reader can find unique, researched journalism in this publication. Unlike Nick Robinson or Simon Jenkins, student columnists don't lurch with top brass politicians, patiently digging for the truth behind the headlines.

Yet, unlike national media, Felix's key purpose is to act as a hub for students to express their creativity. At a predominately science-based university, Felix holds a unique role in providing a much needed artistic outlet and puts to bed the misconception that Imperial students are all geeky, singularly focused boffins. The News sec-

tion is there to inform the reader, both students and staff, of college events in a similar vein to local town newspapers. The Comment section of Felix is debatably a more selfish place where students get to indulge in forming, at times ill-constructed (much like this piece), rationalised opinions on, primarily, current affairs.

This paper has, over recent weeks, published many articles on religion. It's encouraging to see that students take a keen interest in the issues, but if I want to form my own view on the subject I will read Dawkins' infamous book and speak to the College Chaplain personally. The same goes for the Jeremy Kyle debate; if I want to make a judgment, I'll watch the show for myself. And, more recently, if I wish to form an opinion on the Occupy Lon-

don movement, I'm better off going to St Paul's than reading an atrociously formed argument in Felix. In short, I'll resort to more robust, better-informed outlets.

As a result, if I disagree with someone's opinion in this paper, I am likely to turn a blind eye and move on. Nobody likes to be demonised by their peers for something they have written, especially when one has often meant the tone to be light hearted. Any single Comment piece in Felix merely reflects the thoughts of one student, some you'll agree with and others you won't; each has been written to entertain. Each has also been founded on incomplete subject knowledge, and as such should be taken, as per Mr Berlusconi's self-confessed sexual prowess, with a pinch of salt.

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COMMENT

Flogging a dead God



Kishan Manani

My unquestionable faith in the non-existence of an ineffable, unfathomable and utterly unintelligible being has been brought into question. “Aha! The fundamentalist atheist finally sees that the existence of the ultimate voyeur (as Sartre would put it...) is still very much up for debate.” What has brought about this paradigm shift?

The past couple of weeks have seen a hurricane of religious and at some points even rational debate. PhilSoc’s “Is there a rational proof for God” debate, a guest lecture from William Lane Craig and a flurry of Felix articles on related topics have raised the age old issue of God and religion again.

At this stage I must confess. As a fundamentalist, I have not changed my mind. My dogmatic faith in reason, evidence and rational thinking remain an obstacle. Brainwashed by Bertrand Russell I cannot see the utility of adopting beliefs which are untrue or at best unlikely. Thus, just as I have faith in the non-existence of unicorns, fairies and girls studying CompSci, I also believe, yes believe, that anything like the God of Abraham falls into this category. I would like to remind the reader that it would be impolite to pooh-pooh at my faith at this stage, as that would be disrespectful and cause offence. As we all know it is outrageous to dispute someone’s faith.

“My dogmatic faith in reason, evidence and rational thinking remain an obstacle”

I write this article in response to an article written two weeks ago entitled “There’s probably no Dawkins...” in which Joshua asks “why does Dawkins refuse to debate Craig?”. It appears that Joshua’s queries were answered when Dawkins himself wrote an article (20th October) in The Guardian entitled “Why I refuse to debate William Lane Craig.”... The only real question to ask is whether Dawkins’ reasons are legitimate. I shall not venture down such an alley and let the reader make up their own mind after reading Dawkins’ article. I’d rather get to the next point.

The closing remark of Joshua’s article was of most interest. The article claims that 4000 views of a YouTube video of Craig arguing for the existence of God indicates that this area is “still a hot topic...” and “very much open for debate”. Being a blind follower in the Cult of Dawkins I decided to examine the claims and use reason to come to a conclusion.

Fifty minutes of my life were thrown into the past as I watched the Craig lecture. Unsurprisingly, Craig was flogging a dead God. All of his arguments are at least 500 years old and have been thoroughly refuted (See Russell, Wikipedia, Kant, Google, Hume). Craig’s arguments included great classics such as: the ontological argument (where God is defined into existence), the cosmological argument (causality implies the Universe has a first unphysical cause, let’s label this



“You’re fired!” This is what Alan Sugar sees in his head in the boardroom

God and stop thinking), the teleological argument (the Universe appears to be made for our existence just like the puddle on the road thinks the pothole was made for its existence) and many, many more.

In Felix’s interview last month, Craig was asked whether his belief in God would be diminished if he found refutations (which he found convincing) to the arguments he presented. His response was “I would still have my belief, because my belief in God is not based on these arguments... I think my faith in God is based on the inner witness of God’s Spirit...”. The arguments are not strong enough even to convince himself. This and com-

ments in which he explicitly supports God’s instructions to commit a genocide are enough to bring into question the intellectual integrity of any such debater.

After hundreds of years of argument, there has been little progress concerning God’s existence. The debate is only “open” to the extent that we keep reiterating the same arguments and refutations time and time again. On all things concerning supernatural entities which transcend the understanding, we should take the advice of Ludwig Wittgenstein: “What we cannot [intelligibly] speak about (i.e. the ineffable) we must pass over in silence.”

I want an armistice



Samuel Furse

Last week, we marked the death of millions of soldiers. They had all died in action at some point in the last 93 years, since the start of the First World War. The eleventh day of the eleventh month has been marked in this way for years. In fact, only a handful of people currently alive today were also alive when it was not. You might think that as those who were there in WWI start to die, the seriousness would start to wane, that the idea would start to lose its punch. Even as children we were all acutely aware of the significance but also the distance from us. But have you noticed recently how the tone has changed?

When I first knew about it, it was an obviously reverential day called Remembrance Day that rarely fell on the 11th November, as it was binged over to the nearest Sunday. Some people

wore a poppy for the week or so up to that weekend, and not afterwards. By contrast, now, it seems to have regained its previous name, Armistice Day, and it really does happen on the 11th November. Almost everyone wears a poppy, and many people wear black arm bands or black ribbons as well. There is also a certain uniformity to it, with pretty much everyone doing it in the same way; many of my French colleagues also wore a poppy despite it being a symbol of a British charity. Inevitably some people managed to cock it up in a thoughtless and shy-making way. An American I know updated her Facebook status with “Happy 11th November”, proving that she has no idea what Armistice Day means. I tried to point this out gently but it turned out that all of her friends who bothered to comment thought the same as her, and as doctors, they do not even have the defence of being stupid. And the

nutters who choose to complain about wars fought half a millennium ago by burning large poppies are talked about at this sort of time, though their activities are fortunately no longer public.

So, we have a change of tone towards Armistice Day being taken much more seriously, at least in Europe. There is no upset about this; there is an in-built politeness to anyone in mourning that deflects negative criticism. But at any rate, this change seems at odds with the fact that WWI is a far distant memory. The last WWI combat veteran died earlier this year. My grandparents’ generation were amongst the youngest to fight in WWII and they are dying out at alarming speed. So where does it come from, this change in tone? It is obviously not a political or governmental thing. Even if the coalition did want to push national mourning, it would not work: people do not grieve if they do not want to.

The answer is that they do want to, and this is of course because of the wars in Iraq and Afghanistan. We have a new generation of mourners. The tone has changed because pretty much everybody knows someone, knows someone who knows someone, or knows someone who went out with someone who knows someone, that was killed in the Middle East. And that does include ‘both sides’ of the war. Realising that someone you either knew, or were not that far away from, was killed by an IED inevitably makes a day of remembrance much more personal. It makes you think about those in the trenches in WWI who met a similar fate, albeit a muddier and wetter one. It makes the Blackadder joke, about what happens when you step on a landmine, all the more poignant. And actually, shutting up and standing still for two minutes on a given day is a pretty small price to pay even if you disagree with it.

“...people do not grieve if they do not want to.”

COMMENT

This title doesn't fit, that's quite emba...



Tim Arbabzadah

I don't really know how to start this article. That's quite embarrassing. Then again, I think that's a recurring theme in my life. I always find a way to embarrass myself. In a way I'm like Bob Dylan. Except it's embarrassment's door that I'm knock knock knocking on. I then realise that I've actually got the wrong door, just as it's too late and the person who lives there is opening it.

I am a lightning rod for embarrassment. If there is a name of a person I've met too many times to forget, I'll forget. If there's a step to trip up on, I'll trip up on it. If there's a song that I can mutter when I'm walking down the street, I'll mutter away. I'll then notice the odd looks and try to decide if it's best to stop, or to just pretend I'm on the phone with someone. If I get in a lift, I'll end up turning round and looking at the mirror. Then someone gets in, sees me, and we have to have a silent two person lift ride. Of course, this is after I say 'which floor?'; only to realise that they had already pressed the button and my voice had just broken up an octave as if I'm 15.

If you ever see me walking into the library (that's just the kind of party animal lifestyle I lead) you will notice the doors decide to open at the very last moment. Or sometimes, just not at all. This means I end up walking very close to the doors, awkwardly pausing when I lose my nerve and think it's not going to open, turning

round, and then trying again. Throughout this process, I try and fail to look nonchalant. I could give more examples, but thinking of them is making me cringe, so for the rest of this I'll be a bit vague.

Occasionally, when I'm talking to someone, I'll say something a bit weird. Then I have to try to laugh it off and stammer through the conversation. Unfortunately, this is not in a charming Hugh Grant "Oh my gosh I really am rather mortified, erm, blimey, erm, terribly sorry" way, it's more of a "No, wait. I didn't mean... It was a joke... Stop walking away" kind of way.

Whenever I go out, especially if alcohol is involved, I'll inevitably wake up the next morning (more accurately late afternoon – for anyone that knows me well) feeling that familiar 'Oh shit, that actually happened didn't it, can I rewind time?' sensation. Usually, followed by a groan and that dreadful feeling that, at some point soon, I'm going to have to see the people I was out with the night before. This feeling is like Silvio Berlusconi to a woman: it just refuses to leave me alone. For the rest of the day I have to keep my mind actively occupied with every thought except what happened last night.

I like to think that I'm not alone in this pain. This torment. This mortally embarrassing coil. In fact, that's the point. You are not alone. Everyone feels this in some way; some are just better at hiding it than others. Once you realise that everyone is too busy worrying about what embarrass-



A man who knows how to awkwardly bumble his way through conversations still be charming. A true role model, except for the whole prostitute thing

ing thing they did to care about what you did, you are liberated. It's all really just in your head. The trick is just not letting it get to you. Unfortunately, that trick is like doing a backflip: you may how to do it theoretically, but actually pulling it off practically is the hard part. That was a bit of a contrived simile. I feel quite emb... ahhh, damn it, see how hard it is?

Okay, last night, after one too many, you may have danced like a bit of an idiot. Sure, at the time you felt like you were being a sleek suave Imperial version of James Bond when you were trying to get with that girl; but what's the worst that can really happen? She, and everyone who

noticed, will tell people. With 6 degrees of separation and all that everyone will know and sneer. Actually, that is pretty bad; I've forgotten what my point was going to be as I'm feeling your pain right now. Oh wait, it COULD have been worse. You could have done an inebriated Tweet (@girlthatsitarowinfrontofme You're well fit, seriously, like, I definitely would #up-forit). Then, the next morning you would have been confronted with the irrefutable evidence.

Whenever you feel that dread welling up inside, spare a thought for me. I legitimately could have written this article at any point in time over the last four years.

This feeling is like Silvio Berlusconi to a woman: it just refuses to leave me alone.

The real benefit cheats



Jakov Marelic

Welfare can be a controversial issue these days, invoking heated debate.

It is often said that the hard-working majority are forced to pay taxes for the idle few benefit-scroungers who don't pull their weight. In these economic times, many have wondered whether these payments should be cut.

Trouble is: that's not the situation we're actually in. Far from your taxes being spent mostly on the nation's poorest, more cash is actually handed out to the richest 1% through corporate welfare and tax dodging.

Last winter, the country was rocked by protests against tax avoidance. In particular the UK Uncut group were arguing against the alleged £6 billion unpaid tax bill of Vodafone, in what the investigative magazine *Private Eye* described as "an unbelievable cave-in" by Britain's top tax inspectors. To put this figure into perspective, the total cost of Jobseekers Allowance in 2010-

2011 was £4.9 billion.

An excellent graphic representing the total government expenditure for 2010-2011 can be found on *The Guardian* newspaper's website. Using that, and other sources, we can look at the numbers and decide whether it's right to blame the poor for runaway taxes on the majority, or whether it's really someone else leeching off our nation's collective wealth.

Apart from the already mentioned Jobseekers Allowance (£4.9 billion), other benefits perceived as unfair are incapacity benefit (£7.7 billion) which helps people too ill or disabled to work, council tax benefit (£4.9 billion), housing benefit (£21.6 billion) and income support (£7.8 billion). These figures are all benefit expenditure, honest or otherwise. Illegal benefit fraud accounts for a mere £1.1 billion.

Tax dodging comes in two flavours. Illegal tax evasion is where companies simply hide their profits from the authorities. Legal tax avoidance is the art of finding loopholes, using tax havens,

or otherwise "getting around" obligations. Like MPs cheating the expenses system, tax avoiders follow the letter but not the spirit of the law. As the former Chancellor Denis Healey wrote: "The difference between tax avoidance and tax evasion is the thickness of a prison wall".

Offshore tax havens are complicated and expensive to set up, often requiring entire teams of accountants, so they are usually used only by multinational corporations and the extremely wealthy. A prominent example of this was the retail giant Philip Green getting around his £285 million tax bill by paying all the profits to his wife who was registered as living in the Monaco tax haven.

HM Revenue & Customs own estimates say that £60 billion is lost every year through a combination of illegal tax evasion and legal tax avoidance. The TaxJustice pressure group estimates £120 billion.

The new breed of too-rich-to-pay-tax freeloaders is hollowing out our

tax base. They take the benefits of a working society, (police and fire protection, national security, public roads, utilities, the internet, publicly funded research and development, educated workers, etc.) but don't want to pay for them. The burden thus falls ever harder on the middle-class and the poor.

It should be pretty clear by now that the money lost to corporate tax dodging by the rich is even greater than the money spent on the working and unworking poor. Yet you'd never guess that reading most of the mainstream newspapers. (See my other article "The media's inevitable right-wing slant" in Felix 14.10.11 for why this happens.)

Rather than demonising the jobless, we should be focusing on closing the tax gap – the difference between the amount of tax which the law suggests should be paid in the UK and the amount actually paid. For the richest 1% to lead the criticism of welfare programmes for the poor is therefore hypocritical at best, and cynical propaganda at worst.

The new breed of too-rich-to-pay-tax freeloaders is hollowing out our tax base

GREEN WEEK

The Environmental Impact of Fashion

Whilst trawling through the latest collection in Topshop one rarely stops to consider the environmental impact of the fashion industry, but with the increasing trend of disposable fashion it's quickly becoming more of an issue than ever. From the pesticides used during the farming of cotton and the large quantity of water needed in the dying process to the carbon footprint of the transportation, every step of the product line causes harm to the environment. Landfill sites are also feeling the strain as people throw away bags full of unwanted pieces.

Of course there has always been some degree of harm to the environment, but modern day practices are worsening the problem. Only a couple of decades ago, the majority of clothes bought in England had actually been made in England from start to finish, but now we see even home favourites like Marks and Spencer outsourcing to less developed countries. Whilst this obviously brings up the issue of sweatshops and poor working conditions, the increased amount of air transportation has also had a significant impact on carbon pollution.

The introduction of shops like Primark and H&M have exacerbated the problem with their constantly evolving collections and cheap prices. Where, in past years, a girl might buy one new dress a month, she can now afford to buy five to keep on top of all of the latest trends. Rather than buying key investment pieces that, whilst costing more, are a better quality and will be worn for years to come, people are opting for quantity. The fast paced nature of the fashion industry means that what's 'in' is always changing, and shops like Primark mean that everyone can keep up.

But things need to change. Some shops have started to introduce eco-friendly designs, specifically made from raw organic materials, or sometimes even from recycling old clothes, but more can be done to lessen the problem. With vintage designs becoming increasingly popular, it has never been more in vogue to recycle unwanted clothes, and through charity shops, vintage stores and auction sites like eBay, it has never been easier.

Another craze sweeping the nation is clothes swapping parties. This is where a large group of (normally) women get together, bringing any unwanted clothes with the intention to swap them for something someone else has brought. Not only are they great for the environment, they're really sociable events and are ideal for the current financial climate.

For Green Week (Monday 21 November – Friday 25 November), Imperial's Women in SET are hosting a college wide clothes swap. So if you have any clothes you don't wear anymore, that don't fit, or that you're simply bored of, then this is the perfect opportunity to get rid of them and swap them for new ones. Every day during the start of Green Week you can drop your clothes off in the foyer Sherfield for Tokens, and on Tuesday evening in FiveSixEight (one of the union bars). The swap will happen on Wednesday (the 23rd) all day in the Union Meeting Room 7, where you come along and exchange your tokens for clothes. This is for both boys and girls so everyone can get involved!

Laura Johnston



Vegetarianism: Only for Hippies?

April Williamson

Why the hell would someone want to become a vegetarian – this is probably the general consensus for most of the UK population, am I right? You are destined to a world of tasteless, soya-bean filled non-existence, and you don't want to get grouped in with those dirty hippies.

So why do it?

Stepping away from vegan-freeganism ranting, even the odd carnivore is bound to be curious why vegetarianism has seen a rising trend in the last twenty years. And I'm not just talking about those bastard east-end hipsters being "trendy". I'm going to be honest, I'm a vegetarian – but don't get me wrong, meat is F**KING TASTY – I do not feel sick when someone eats a burger next to me, nor do I ask them to move. So let's give a couple reasons why I gave up my Nando's and BBQ steak.

Here there's going to be a lot of controversy, no doubt. We've heard about murdering defenseless ducklings and the cruelty – I know what you're thinking – 'it's nature, suck it up'. However, although I am inclined to agree with the circle of life, people need to understand the consequences of what they are eating.

If it were a chicken and I stuck on a desert island I would take him out before he tried to become friends with me, but we live in a society where the consumption of meat has become unhealthy. Back in the day when it was us, a spear and the wild, we worked for our food in a fair fight and we ate as much as we could catch that would sustain us.

We now live in a society where most animals that you buy on the high street are raised in an unnatural manner. Animals are often reared in poor conditions and treated totally inhumanly, despite the efforts of organizations such as the RSPCA, to satisfy our cravings. On average the British consume 1000 calories more than necessary – this and too much meat has been proven to cause long-term health problems. A lot of lives are going to waste over wanting to slap a chicken fillet on the grill without thinking about where it's sourced.

FUN FACTS! By replacing a manual process that involved copying invoices and sending and receiving approvals by internal mail, 240,000 pieces of paper a year have been saved. New software that enables switching off of computers has reduced energy consumption and will save £25 per annum per PC. College uses 100% recycled paper. College has spent over 1.2 million pounds on metering equipment. All furniture is FSC certified, i.e. from sustainable forests. All food is locally grown – College won a 'Good Egg award' for it! All catering food waste is composted. We have on-site combined heat and power generators that save us at least 1000 tonnes of CO₂ per year by being more efficient than the grid.

Students turned on by switching off

Stefan Piatek

Hey, remember that awful band 5ive? I've got a friend in Bristol who loves them. Anyway, they also did that horrible song 'When the Lights Go Out', something I'm glad I can't really recall. They did however hit a good point – that turning off unnecessary lights is pretty ace. This is what Student Switch Off is all about.

I should stress that choosing that song was not my choice, but energy saving aspirations will hopefully redeem me. The Student Switch Off is a campaign in halls of residence to save energy (queue pun about how you should 'get down' with energy-savvy actions).

Here's the deal, the hall that saves the most energy at the end of the year will get a massive party funded by Imperial. Last year Eastside dominated



You may not think that all animals are sentient, but if you have a pet who you know full well loves you, animals with the same level of intelligence are getting battery farmed into packaged meat. You want to be sure that they should have a good standard of life. Anyone out there who claims they love animals is ultimately hypocritical if they never take into consideration where their food is sourced – you can't pick and choose which animals deserve welfare.

This is where you find some of the most compelling arguments for vegetarianism, which are sadly not that well publicized. Hippie or not, for a sustainable future vegetarianism is not just speculative malarkey. The facts speak for themselves – the way we consume meat is unsustainable.

I am certainly not saying that vegetarianism is the way forward for everyone – I will never be one of those people to call another person wrong in this respect. However, the way in which we consume is inarguably flawed.

18% of CO₂ and 37% of methane emissions are attributable to livestock; that's more CO₂ than all transport put together. The resources pumped into livestock rearing are unbelievable – 70% of agricultural space is used up either in grazing animals or for growing food to raise them, so this crap about vegetables taking up more space is bunt.

One of the biggest issues we face is water consumption. It's been argued that our crops take the majority percentage of unsustainable global water use – and to some extent this is true. However, so much of what we grow goes on to feed our livestock that things are put into perspective – one kilo of meat uses up 6x more water than a kilo of wheat.

Finally, transport. There is the argument that with globalization we are increasingly getting vegetables that have come from the other side of the world. This is a dilemma – localized sourcing is al-

ways more sustainable, but cutting off trade means we are neglecting to use it as a way to bring people out of poverty. However, because of the amount of resources necessary to rear the amount of livestock we are consuming, it actually all the air miles from your vegetables actually add up to a lower environmental impact than eating the same amount of meat.

So you still don't want to be a vegetarian – what can you do?

Fair do's – not everyone can give up meat. I know how hard it is, I had to wean myself off meat, and fear meat relapses where I become an animalistic murderer. But there is still so much that can be done.

You can reduce our carbon footprint, become more ethical and save money by just cutting down. In the UK, meat makes up about 16% of the average diet – if everyone cut down to a quarter of this we would have cut down enough to meet all food based cuts to be reached by 2020. Also, stop wasting food at home – 30% of food goes to waste, which equates to a huge amount of cumulative resources.

Start off small – try cutting down a little bit at a time. You don't have to eat as much meat at every meal, or every day. Quitting on meat a couple times a week is not going to break your soul and willpower now – it's easy and you probably won't notice that much of a difference to your lifestyle.

If you want to cut down but aren't sure how, wow this sounds like an AA ad, you can always check out different meal plans with the Part-Time Carnivore Project. There are so many ways that you can organize your diet so that it is sustainable and incorporates your favorite foods: <http://www.parttimecarnivore.org/>

If you want to get your geek on, you can double-check all the horrific facts and figures: <http://pubs.acs.org/doi/full/10.1021/es702969f>

Interested in how food consumption effects the environment and check out what else you can do: http://www.wwf.org.uk/what_we_do/campaigning/food_campaign/livewell_2020/

the energy saving boards, so congrats to them.

To make things even more fun, there will be towers of

prizes throughout the year for energy-saving actions. Roughly every two weeks Ben & Jerry's ice cream, club tickets, NUS extra cards and more things than you can paint in a day. To hit it off, like the Facebook page 'Imperial College Student Switch Off' and while you're at it, slam yourself onto the mailing list so you know when you can win prizes like mad.

The idea behind this is that lots of little actions collectively make big differences. So you don't have to stop using technology or revert to a cave man diet. Switching things off when not in use, using a lid when cooking, filling the kettle to just the amount you need and using clothing in place



of heating is all we ask for. For added fun, you can check out the geeky videos on the website

These tiny actions, last year energy consumption in halls reduced by 3% compared to previous years. This prevented 26 tonnes of CO₂ from entering the atmosphere in just 4 months and is equivalent to the energy needed to either power an energy saving light bulb for 373 years, make 1,500,000 cups of tea, or fly from London to Manchester 588 times!

For more information and to 'show you what it's all about' please visit the website www.studentswitchoff.org.

You don't have to be a 90s pop enthusiast to take part, but it would be great if you could turn the lights off (and all the rest of it) when you're going out!

GREEN WEEK

Love is for Bicycles...

Jarvist Frost

When I was very young, I learnt to ride a bike at the same time as my big sister. We lived on the coast, and I still remember whizzing along the wide promenade with the grey channel on the left, the stabilisers digging in alternately as I threaded a wild S along the Tarmac. As a teenager cycling became a method of liberation, of visiting friends at the opposite end of town and in rural villages, without needing parents, without needing to drive, without the impossible cost of owning a car.

On coming to Imperial, my physical world shrank as my many options expanded. I always meant to get cycling again, but due to a combination of disorganisation and a dark underlying fear of the congested roads I lived in London without a bike for many years. I understood the city as these spheres of existence around tube stations and bus terminals. Of course I had an A-Z, and I sometimes set off on long walks but soon found myself tramping through the enormous wastelands that separate civilisation. The cost of travel limited how I spent my time, I lived within walking distance of college and deviating far from the corridor I trudged every day cost money and time. I lived in the largest city in Europe, but I may as well as lived in any large town, except for the lack of space and high rents.

I finally came back to cycling when I started living with a friend who seemed to live on his bike. Getting my own pair of wheels back was revolutionary. No more stifling tube in the winter, no more sitting amongst the grey people peering through steamed up bus windows at grey London outside. Instead of frittering away money on public transport, I started spending on things that I'd own. My bike became an extension of myself, something to own

and care about, the clicks and ticks and mechanical whirls as familiar as the throb of my heart.

All mechanical things break. And I have been truly exasperated when wheels have punctured and bearings seized at the worst possible time. But a bike is a simple a wheeled vehicle as it is possible to imagine, and almost anything can be fixed with a tiny set of tools and a bit of knowledge. I honestly think it's been more reliable commuting on my bike than the tube or bus. Cyclists help each other, and working on bikes is really quite fun, understanding and fixing them is a challenge but one that anyone is capable of.

The speed, to be honest, was a bit of a shock. I'm no Lance Armstrong, and it's clear that even buses travel faster than you do on the open straights. But congestion is porous when you're on such a narrow vehicle, and lots of back roads that are closed off or 'one way' to prevent abuse by cars are open for cyclists. Some even have Toucan crossings to whisk you across the main traffic flows. Racing the tube on a long journey is more difficult, but it is surprising how close cut it is.

Cycling around suddenly pooled all the disparate scraps of bits of London I knew into a rich tapestry. I slowly learned routes from place to place that encompassed the whole of London, a spiders web that means that no matter where you end up, point me in the direction of Centre Point & a few hundreds metres later I'll recognise where I am and thread my way home.

With no opportunity cost of stopping, and an infinite number of choices of routes from place to place, discovering new shops, bars and cafes became so much easier. I realised the wastelands that I'd dreaded trudging through were just a few short blocks long, a few minutes of peddling and then suddenly you were in another, slightly different, vision of London.

I used to stumble through the winter in a fog of drowsiness, getting chilled on the walks, then roasted in my heavy coat on public transport. Little light and everything felt submerged in sleep, concentrating in lectures made me feel like I was deep sea diving, struggling against an undertow. Now the winter coat stays in the cupboard, your body puts out so much heat cycling that you only need a thin layer for warmth and something windproof. The cold air is terrifying early on a winter morning, you drink fire and ice as you leave the house and spin up to speed. But it certainly wakes you up!

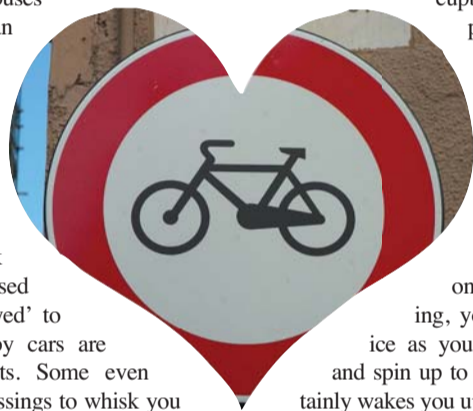
I never meant to exercise. The thought of sweating in a gym that reeks of other's exertions fills me with horror. I just used my bike to go from place to place. When I wanted to go faster (I was, and still am, eternally late for everything) or get warmer I would push on the pedals harder. But the more I rode, the faster I'd have to go before I got out of breath. I was more hungry than usual, which makes food taste nicer, yet my body just got leaner and more toned. Exercise regimes

are hard to keep to. Commuting regimes much less so, even if you're blowing off college for the day, there's always places to go and people to see. Without ever really intending to, I was suddenly doing an hour of exercise a day, with the inevitable repercussions. I first noticed that I'd done something fairly radical when I was lying idle in bed, listening to my watch tick and my heart beat. With some horror, I noticed that the seconds were ticking by faster than the blood was pumping.

My favourite cycle journey by far is the late night return from a party. In the summer, this is often in the first light of dawn, the city abandoned by its asleep humans but the buildings bathing the pink glow of a new sun. The quiet & empty streets are a joy to ride, a brief and transitory insight into what our city would be like with fewer motor vehicles, the air fresh and soot free before the lorries fire up their filthy diesels. So much of our built environment is structured around these inhuman metal boxes living on borrowed time and energy from a prehistoric sun.

So please, don't waste your time like me. Get a bike. Ride it. Don't fear the traffic, you will soon gain the confidence to cycle amongst it. Do it to get fit, do it to reduce your impact on the environment, to help construct the city and community that you want to live in, to enjoy the city, to be more happy, to meet other people, to whizz around a Velodrome, to cut wild swathes across the countryside at the weekend. It really doesn't matter. Just get some wheels.

Fat wheels, thin wheels, single speeds, hub gears, drop handlebars, dutch bikes, cargo bikes, mountain bikes, steel frames to carbon fibre Monocoques. Bikes are amazingly individual. Just find one that fits your body, budget and lifestyle and enjoy it.



A CHECKLIST FOR BIKE USERS

- Sheffield security sell mega-D-locks for only £28, less than half price!
- Always lock your bike frame with a decent (high quality D-lock) lock to an immovable object, lock the wheels up with something less hardcore.

- Register for the swipe card access parking - either under the faculty building or behind Huxley, just google "Imperial Bike Parking".

- Learn how to change a flat tyre, you can find this out anywhere and all bike shops should happily explain how you should do it.

- <http://union.ic.ac.uk/presidents/icbug/>

Food for thought on Thought For Food

Rodrigo Pracana

About 1 billion out of the world's 7 billion inhabitants do not have access to their basic nutritional needs. But what exactly is the problem? Not enough food being produced? Unfair distribution and waste? And

what can we do about it?

This is what the teams in the Thought For Food challenge were keen to answer. After two months of late-night reading every team came up with a solution to be put in practice at their local level.



A team decided to run around their campus dressed in chicken costumes to promote Meatless Monday. We at Imperial, decided to build an app, currently being developed, that will help reduce waste from leftovers. Best thing is, all the teams filmed the

whole process and presented their solution in a 5-minute video, which can be seen on Thought For Food's YouTube channel.

The challenge will be running again this year, and rumours say it will be going global. Maybe you want to participate with your Thought For Food?

Marathon Man

At the end of the summer, just as term was about to start again, I thought it was about time to attempt a new challenge. A few years ago I did the London Marathon for the first time; some years later I did it again, and, wanting to raise more money, I did it alongside the Paris Marathon which was two weeks before. This time, wanting to carry on exponentially up the 'slightly mental' ladder, the concept of doing 5 marathons in 5 weeks came and wouldn't go away. The chance also came to raise money for The Outward Bound Trust, one of the best youth development charities in the UK, and I couldn't resist. They got me the place in the London Marathon, and it wasn't hard to find 4 other marathons surrounding it to complete the set.

It was soon after embarking on training that I was approached about a totally new concept in sponsorship, and, though I also do need to raise money, I decided to accept the Do Nation challenge and get people to sponsor me by cutting their carbon. There's no cost involved, merely a pledge to change something in your life for a while and lessen your affect on the environment. The ways to do this are surprisingly simple - eat less meat, air dry your clothes, cycle to work, and many more - all things we hear about all the time but sometimes are just too much effort to bother with. The beauty of the Do Nation idea is that by sponsoring someone and saying you are going to do something, you have a reason, something to work towards when you are trying to save carbon. After all, running several marathons has got to be harder than air drying your clothes, right?!

Of course, I hope people will sponsor me not just in carbon but in cash, but there's no reason not to do both. Even if you don't know anyone who is trying to get sponsorship it's worth searching the site and sponsoring someone you don't know. And if you're already pretty green and want to show it, why not show off! I'm hopefully going to write something more about this challenge later next year when intense training has begun, but for now please check out my sponsorship site at <http://bit.ly/tFlybN> and my Do Nation site at <http://bit.ly/sjy2IR>

Alex Kendall



Some things never go out of *style*



**Movember is raising money for Prostate Cancer Research.
To find out more, or to donate to our team, visit <http://goo.gl/JMPyF>
or scan the adjacent QR code!**



ARTS

Arts Editor: **Eva Rosenthal**
Will Prince

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The Poet's Column**Vagabonds**by **Michael A. Anderson Burley**

We wander long, We vagabonds
in dream begotten tales.
Such trails as weave like filigree upon
this earthly sphere. Trod misty vales,
having slipped free those surly bonds.
Still, under storm-crowned sails
the myriad coursings are begun
before the cloud-veiled summit breach
towards the freshly risen sun.

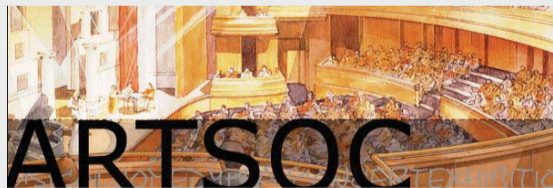
Felix Arts is constantly looking for new poets. If you want to see your work appearing here, do get in touch. Additionally, those interested in joining Poetry Society, contact Osas Omoigade, at oo2409@imperial.ac.uk.

Message from Marilyn:

"ICSM Drama's Main Play returns this March with an adaptation of Billy Wilder's classic film 'Some Like it Hot'. Ladies, if you reckon you're the next me? Gentleman, do you have an inner gangster to let out? Come and be part of the most hilarious, scandalous and glamorous play in Imperial's (venerated) history!"



Auditions start next month - keep your eyes peeled here and around campus in the coming weeks for more details!"



ARTSOC have the pleasure to present you all with very special offers of discounted musical tickets!

Dec 1	Million Dollar Quartet	£15.00
Dec 6	Wizard of Oz	£25.00

Tickets of the shows above will be sold at the ARTSOC meeting.
Date: 23 November 2011 (Wednesday)
Time: 12:30pm – 1:30pm
Venue: G65 SAF Building

13: Unlucky for most?

Fresh from the successes of *Earthquakes in London*, Mike Bartlett's new play takes a new angle of government, protest and personal responsibility



The play gets its title from its opening week box office takings

Umar Nasser

The lights dimmed, an enigmatic black cube began to descend from the ceiling, and a voice whispered unsettlingly, "You know when you're in that deep sleep..." At this point, the production Felix saw suddenly halted – a technical glitch we were told that would be swiftly resolved. Whilst the superstitious amongst us would have us believe that something like this was inevitable, given the name of the National Theatre's new play *13*, once restarted the play rarely faltered, and proved hypnotising throughout. Playwright Mike Bartlett's newest endeavour is an ambitious one, at once attempting to interweave social commentary with real human drama, profound philosophising with blockbuster staging, whilst all the while trying to hold it together with a narrative that actually makes sense. And against all the odds, it largely succeeds.

In a parallel but all too familiar London, people from all walks of life have been having the same nightmare – one with monsters, chaos and explosions. They can't sleep. In this atmosphere of unrest and disquiet director Thea Sharrock introduces us to a slew of characters that paint the picture of a deeply unhappy London. 'Britain's ugly' quips an American child as she visits for the first time, a sentiment echoed by its inhabitants throughout the play. But the discontent isn't limited to our four shores – Iran's the same, and elements in Westminster and Washington quite fancy a war there – apparently afraid of the prospect of a nuclear armed Tehran. In the midst of a public that is largely 'unemployed and pissed

off,' (not to mention – very sleep deprived) there comes an unassuming people's prophet: 'John in the Park.' As the play progresses we watch to see whether this generation really can affect a change, or whether they'll once again resign themselves to the will of the controlling powers.

Though occasionally teetering on juggling too many character arcs, the play is by and large quite engaging – aided by seamless transitions, short and snappy scenes, and a rather unique set. Said 'set' is really just a massive black box that rotates according to the setting – bringing new characters on and off in a silent whirl, and giving a contextual but sparse backdrop to scenes that demand it. It is never overbearing nor gimmicky, but serves to streamline what is actually quite a long play at two and a half hours. However the play only rarely drags with fast paced set pieces like the club-dance number, and the rather hilarious rendition of Rihanna's 'Only Girl in the World.' The acting too is universally good, with perhaps one exception, that of Kirsty Bushell's rather pre-emptive 'Rachel'. Instead of acting well, she decided to spend her time onstage experimenting with 'inTEReSTing'

"With disarmingly frank discussions on God and religion, it's far more thought provoking than your average drama"

intonation. The standout performer however was Adam James; at once effortlessly convincing, utterly compelling and genuinely moving – even without a sympathetic role. This is an actor at the top of his game.

The play is not flawless though. Since it serves both as a character-based drama, and a philosophically-minded social commentator, it cannot fulfil either role to its utmost. As well as this there are characters who, whilst well acted and entertaining don't really add to the narrative in any meaningful way. But in a sense its 'weaknesses' are also its greatest strengths. The surplus of characters ensure that the play never becomes humourless, and with disarmingly frank discussions on God and religion, it is inevitably far more thought provoking than the average drama, whilst giving a human heart to well reasoned discussions. The real danger lay in the possibility that it would become preachy and moralising, especially in the second half, which was largely a debate between two opposing ideologies. But the two viewpoints are so well represented that one can't really fault it, as well as helpfully delivered by characters that you actually believe in. With a spine chilling and all too realistic climax, the play ends with the same excitement that defined its best moments. Having drawn you into a superbly well crafted human drama, Mike Bartlett's *13* leaves you debating the questions raised for the entire journey home. Not perfect, but very good, and highly recommended.

13 runs at the National Theatre until January 8 2012, tickets from £5

Yerma-d not to see this!

Will Prince

I imagine all of us know a 'Yerma' character – that girl who arrives as an innocent and pure fresher only to then link up with a guy in the first few weeks. He ensnares her despite his inability to satisfy her physical needs and provide her with children, all the while using her own naivety to convince her she is the source of her own problems, eventually driving her to despair in her childlessness and visit a crazy voodoo lady who lives under a tree in search of a solution. Hmm. Actually, on reflection, maybe not. But it's this transformation from darling bud to withered flower that forms the spine of Lorca's tragic play *Yerma* and whilst her character at the end may be pretty far from anyone you know, the character at the start is very familiar.

Brought this week to the Gate Theatre in conjunction with the Hull Truck, a cast of five present a new stripped down production of one of Lorca's most incendiary plays. *Yerma* tells of a doting young girl's desperate efforts to have children in the face of her uninterested (presumably arranged) husband Juan. Married off young with little worldly wisdom and living in the barren Spanish outback, *Yerma's* life consists of little more than wifely duties and banal conversations with neighbour, Maria. Even these sour as Maria herself becomes a mother and the still childless

Yerma a bad omen according to local superstition. Torn between her irrepressible maternal desires and the need to socially conform, *Yerma* is finally driven to clandestine means of impregnation and, when revelations surface regarding her husband and an amorous childhood friendship, she driven to unspeakable acts.

"The gradual turning of the screws layers the plot with a polished finesse"

It says a great deal of our modern sensibilities that the two main objections to Lorca's play on its publishing seventy years ago – namely its negative portrayal of Catholicism and discussion of homosexuality – would today cause hardly a murmur of discontent. All this commends the efforts of the production to modernize the piece. In reducing the piece down, a stark intensity is brought to the mundane conversation that constitutes the most revealing parts of the play. Played with a gentle innocence by Ty Glaser, *Yerma's* tragedy is all the more painful and her unworldly nature emphasized opposite Alison O'Donnell's earthy humour in the role



Tensions come to a head when she confessed to wiping Top Gear off the Sky+ box

of Maria.

The beauty of tragedy lies in the descent – the slow and unavoidable downfall of the tragic hero, whether it be Macbeth or Phaedra or *Yerma*. This production crafted theirs well, the gradual turning of the screws layering the plot with a polished finesse. Clearly

the investment in the Jerwood Young Designers project is paying off – creating a set that is both visual appealing and economical is no mean feat and this production achieves both. Whilst the play provides intriguing parallels, most markedly with that of Lorca's rumoured homosexual liaison with Dali,

it lacks the tapestry that distinguishes more complete works of tragedy. For this reviewer, that is a tragedy in itself, as the able cast would be more than up to the task of something a little meatier.

Yerma runs at the Gate Theatre, Notting Hill, until December 17

Tales of the absurd

Saunders' absurdist play *Next Time I'll Sing To You* gets an airing at Richmond's Orange Tree Theatre

Alex Roocroft

Next time I'll Sing to You is currently being staged at the Orange Tree Theatre in Richmond until the 10 December. Written by James Saunders in 1962 it has recently been revived by the theatre he had such a close involvement during his career. It is remembered mostly today as the play which saw Michael Caine's West End debut as Meff when it was first staged at the Arts Theatre. As a story it, it is based around five characters planning a play about the real life story of a hermit who spent the last 36 years of his life in isolation before dying in 1942. As well as loosely telling the story of Alexander James Mason, the Great Cranfield Hermit, it involves the 5 characters bouncing

around various topics covering questions of death, identity and their own existence; mostly with irony and humour. In particular, whether, as the hermit had not been seen for such a long period of time, it can be said he really existed at all.

Its plot is deeply absurdist, the flow of which is not the easiest to follow to begin with, but it utilises the divergences from the background storyline to articulate the major existentialist themes very well. Despite its age, the skilfully crafted dialogue and blend of surreal humour with philosophical crisis stands up well to time. Only on occasions does it come across as dated, oddly in the parts where there is an obvious attempt to update the dialogue for the modern audience, such as the reference to *Strictly Come Dancing* which

didn't really fit. The delivery of the play was very good, with all the actors playing their parts impeccably resulting in a production that captivated the audience as it progressed. In particular, I liked the performances Jamie Newall put in as the actor playing the Hermit and Holly Elmes as the ditzy Lizzie. As a venue, the Orange Tree Theatre is small and cosy with the audience on all four sides of the stage, a set-up which works well and creates an absorbing experience.

All in all, it is in parts a challenging, weird play but one which is ultimately invigorating, enjoyable and good fun.

Next Time I'll Sing To You runs at the Orange Tree Theatre until December 10



Putting superglue on his hand was bad, but the fly swat was too far

MUSIC

Music Editors: **Íñigo Martínez de Rituerto**
Stephen Smith

music.felix@gmail.com

Kadhim's totally hot album of the week



A\$AP Rocky
LiveLoveA\$AP
 Tri Angle
 2011

I recently told my friend that I couldn't understand the hype surrounding **A\$AP Rocky**. In a completely unrelated incident, I was called "a fucking cod-piece" on Twitter by Felix Music Night headliner **Mikill Pane** (we've since patched things up). He didn't think any of my questions in an email interview were any good. In particular, one question about why he didn't rap about "guns and bitches" received this put down: "I'll pretend you didn't ask that..."

I learnt the hard way that rappers who pride themselves on the intelligence of their lyrical content get pretty exasperated at constantly being asked why they don't rap about "guns and bitches". By contrast, rappers like A\$AP Rocky are riding on the fact the flow and twists of their raps sound fucking swag, rather than anyone thinking they're saying anything profound.

This is what I didn't understand. The first few times I listened to A\$AP Rocky's mixtape *LiveLoveA\$AP* (partly produced by **Clams Casino**) I was constantly put off by the obnoxious predictability of his lyrical content, which can be summarized thus: "I'm high, I've got a big dick, I'm hitting on bitches, nigga yeah I'm the shit". But, and this is a pretty big 'but', if you stuck those frankly awful lyrics that I just wrote together with A\$AP's cheeky intonations and Clams Casino's bass-heavy, weed-ready production you might just find yourself saying, "This shit is fucking real". (Ok, maybe not quite, but you get my point).

Ignore what he's saying and just hear how it sounds and you'll understand why some people are saying that A\$AP Rocky is what hip-hop will sound like in 2012.

If you agree that my mini-rap was god-awful, tweet me @kadhimshubber and call me a "fucking cod-piece". If, on the other hand, you think it was pretty good, tweet @_ASAProcky and tell him to check out "this sweet underground rapper from London".

Be sure not to miss...

Oneohtrix Pointer Never

St Giles Church
 Thursday 24, November

Never has the analogue synthesizer produced such soul-rippling and heart-wrenching sounds. OPN's deeply personal voice can be uniquely attributed to Lopatin's baby, a Roland Juno 60 synth inherited from his father, with which he channels emotions from far beyond the uncanny valley. His new record *Replica* sees him experimenting with samplers, after his "echo jam" experiments of slowed down and looped 80's pop ballads. The sound of R2D2's teenage heartbreaks. **Íñigo Martínez De Rituerto**

Reports from a sick night in Metric... no, seriously

Kadhim Shubber reports from KABLAAM

Don't let anyone convince you to put on a music event. It'll stress you out, distract you from your degree, and worst of all, when it comes off, the feeling of satisfaction will make you forget all the shit and make you think about doing it all again.

Last Saturday was *KABLAAM*, the first Felix Music Night of the year. The idea of bringing **Felix, Jazz & Rock** and **Music Tech** together to take advantage of Metric's uber-expensive sound system was concocted by Imperial graduate Greg Power, last year. When he left, he looked in me in the eye and said, "Kadhim, you must now carry the flame. Bring music to the people." (Ok, he may not have used those exact words, but you get the gist). What he didn't say, however, is, "Kadhim, you'll be so worried about the night being a total flop that your balls are going to crawl back up inside you and start punching you in the gut".

Which brings us to around 7:30 on Saturday night. **lo. batt. / algo ritmico** is still sound checking even though **SMB** was meant to have started DJing 30 minutes ago (algo ritmico is dragging on so much I'm beginning to suspect that he's just playing his set. Oh god, he is...) I'm already three beers and one straight spiced rum down and only about 30 people have shown up; I'm going to need another beer.

I head to the door to check ticket sales: 35 people... I walk back into Metric. It's almost 8pm and **SMB** has finally got started. He's playing chilled out, groovy house music. He's obscenely good but people are avoiding the dance floor like Greeks avoid taxes. This is going to change: I drag a friend onto the dance-floor and start chatting to her, casually dancing. Set an example, I tell myself, everyone else will follow... This isn't working, I walk back out of Metric, I'm just walking around for the sake of it at this point; I'm going to need another beer.

8:20pm. **lo. batt. / algo ritmico** is back on stage for his set. There's a bit of a crowd now, ok, cool. Is that his mum filming? ... His music is dreamy and spaced out in a completely surreal way. Kind of like listening to alien beeps coming from outer space. He's got a laptop, a guitar, a delay pedal and... an ironing board? I'm going to need another beer.

About half an hour later, **Black Sands** are on stage; we're back on schedule. I relax a little bit; well, either I'm relaxing or I'm too drunk to care any more. Oh shit, I have to go introduce them. I've got no idea what to say and end up doing a boxing announcer-style, "BLACK. SAAAAAANDS!" People cheer, ok that didn't go too badly. There's a decent number of people dancing along to them. They play pretty straightforward indie music but they do it bloody well.

I ask the lovely chaps on the door what our ticket sales are like. We're edging slowly towards 100. We're out of disaster territory but



Read this article on felixonline.co.uk to see a video of the night by Jeremiah Vocaturo

not quite into success territory yet.

Operation Midnight Climax up next. I clamber on stage again and, in addition to my boxing announcer-style, "OPERATION MIDNIGHT CLIMAAAAAAX", I also crack a few jokes; I think I heard a bit of laughter, but it may just be the beer. They turn up the rock a few notches and blow a few minds with their cover of **t.A.T.u.** 'All the Things She Said'. It's getting towards ten and the headliner **Mikill Pane** should be arriving soon. Metric is rapidly filling up and though the guys at the door have lost count, they reckon there are another 30/40 people now.

When Mikill Pane arrives at the union I go into full-blown happy butler mode. "Hi there, how you doing? Yep come this way, certainly, ok, cool. Yep a couple of drinks, ok, one second ... *sprint to the bar *sprint back with drinks ... here you go." He's at least 6ft 4 and towers over me, and he's got an entourage – I wish I had an entourage – including a Pete Doherty lookalike with little brown hat with a huge wide brim.

Operation Midnight Climax finish their set. The equipment is cleared away and for about 40 minutes the plug for the mixer screws with the sound and I'm running back and forth apologizing for the delay; several more beers follow.

But finally, I get on stage to announce Mikill Pane. I can see people streaming through the door as I speak and Metric's looking pretty packed now. I retreat to the bar and when Mikill Pane gets on the mic, everyone cheers and my balls finally stop punching me in the gut. His DJ is mashing together classic hip-hop dancefloor tunes to get everyone warmed up; everyone's getting down so it seems to be working. Mikill Pane knows how to work the crowd. He's got everyone chanting "FUCK!" in time with the music every few rhymes and

for the whole of his 45 minute set, he's got the crowd dancing and bouncing. I ask the chaps at the door to count the takings and see how many people have turned up; it's around 200.

The rest of the night was a bit of a blur. **Monsk** and **Niceberg** DJed out the night until 1am, but I was a bit far gone and forgot to introduce them (sorry guys!) Looking back at the photos, I realised that Mikill Pane had posed for photos with a big crowd of people; respect for that. As everyone filtered out at 1am, and we sorted out the money and concluded that it had been a success, **lo. batt. / algo ritmico** (a.k.a Íñigo the Felix Music Editor) comes up to me and says, "Cool, shall we start organizing the next one?"

I just want to say thanks to all the acts who performed and to Will, Chrissy, Íñigo, Greg, Luke, and Deepka for their help organising the night.

Do you have a band? Do you DJ?

If you want to play at the next Felix Music Night in the Spring term, let us know! We want to give our own student bands and DJs exposure and experience on home turf, and most importantly keep the scene alive and thriving.

Send us a demo, a link to your Bandcamp, SoundCloud or whatever works.

We're open to anything. Whether you're into hypnagogic pop, brutal death metal or sly techno, email your interest to music.felix@gmail.com

MUSIC

Now, not then, JCQ

George Jeffery on golfing pros, bitches and hoes

This week I'm going back straight back to the UK post-punk/hardcore scene by way of a review of the debut full-length album of **The James Cleaver Quintet (JCQ)**, *That Was Then, This Is Now*. Nearly two years ago the JCQ released their first and only EP *Ten Stages of a Make Up* to massive critical acclaim. Fans have been eagerly awaiting another release and on Halloween this year, they were given what they wanted.

If you read my review of **&U&I's** album *Light Bearer* two weeks ago then you will know that I like my music one way and one way only: mental. *That Was Then, This Is Now* fits perfectly into this category. The album opens with a track titled 'Golfing Pros, Bitches and Hoes'. This track starts off with an eerie tune, reminiscent of something you would hear at a fairground, but after only 15 seconds, shit gets real.

Their sound is completely unique, if I could describe it in any way it would be a divine combination of garage post-punk and hardcore. Punkcore? Garage post-hunk? No, that's too weird. Sounds like a lost member of the Village People. But listen to the album and you'll know what I mean.

The songs are fast-paced, with massive riffs and breakdowns. In terms of the singing involved, there is certainly an element of signature hardcore roaring but a lot of the vocals are melodic and extremely catchy. Every song has a chorus that I can guarantee will be stuck in your head at some point, which is uncommon for a post-punk/hardcore album and definitely a breath of fresh air. Vocalist Jack Saunders has



That awkward moment when someone takes the last piece of cake... or the cake.

a distinctive style, with an almost pop-punk sound in the less wild sections of the songs.

The tracks themselves are diverse, some of them being heavily post-punk without much of a hardcore element, and some of them being utter skull-crushing noise (in a good way). A couple of the tracks also have a definite blues feel with one of them, titled 'The JCWho?' being a full on jazz number until a hardcore breakdown mid-song.

If you have been to one of their shows, you will know of their unmistakably punk attitude, indicated by the fact that by the end of each

show there is always some blood coming from somewhere (usually the bassist's face). This definitely comes across on the album and from start to finish you feel like you're in the presence of this amazing band.

Ten Stages of a Make-Up was an incredible EP and I wasn't sure if they would be able to top it but they have had a bloody good go. They currently have a free download (available on their Facebook page) of an awesome track from the album if you're interested. If you're reading this in a lecture then I have only one thing to say to you: f**k lectures, go and listen to this album!

Apocalypse at the Union

Íñigo Martínez de Rituerto prophesies the End Times with Music Tech

Following the interlude at the *Felix Music Night* last weekend, **Music Tech Society** return to Metric next Saturday 26 November with their first We Are Metric night of the year. Given the Union's new policy on clubs & societies requiring a special theme in order to host a night, what better way to welcome 2012 than naming it after one of the most widely misinterpreted biblical events of all time A.D.? Perhaps painting a van with slogans prophesying the End Times? (With stupid subwoofers in the boot perhaps?)

The Greek word apokálypsis literally means "lifting of the veil" or "revelation", referring to the disclosure of something previously hidden in an age of deception. With the kind of music blaring through the radio and pummeling dancefloors at student nights nationwide, such a revelation

in dance music is long overdue.

The night kicks off in left field with a psychotropic blend of experimental hip hop courtesy of **Not Indigo**, followed by **SMB's** deep vibes. A variety of society members will hone their skills behind the turntables, with the intent of making you dance like it's the end of the world. Livers and ears alike will teeter the abyss as the clock approaches the eleventh hour and the thunderous duo of **Snatch DJs** (recently spotted at the Summer Ball after party) take the floor, followed by the chunky swagger of Milkshake-resident **Nick Thorne**. Ministry of Sound veterans **DJ Andy & Martin2Smooove** crack the void at midnight and flip the switch.

Entry is a shabby £3 in advance or £4 on the door, discounted for members of Music Tech or anybody dressed like it's the end of the world. That should be interesting.



Punk Planet by Douglas Heaven

This week: **High Dependency Unit**



You can't go much further than Dunedin, New Zealand, before you're on the way back again. Nearly 20,000 kilometres away, give or take, it's probably the remotest city in the world.

Wherever you go, though, it's usually only the little things that change. A good friend who moved to New Zealand was struck most by the habits of barefoot supermarket shopping and thanking bus drivers. But as you stand there reflecting on how everything's more or less the same on the other side of the world, you suddenly notice they have a different sky.

So it is with the Dunedin band **High Dependency Unit (HDU)**, whose claims to fame include touring with **Shellac** and exciting John Peel enough to call them "one of the 10 best bands in the world you've never heard of".

Starting off on the Christchurch-based independent label **Flying Nun Records** with *Abstinence: Acrimony* (1995), HDU have released 6 or 7 records (depending how you count) and a bunch of EPs of dirty psychedelic punk. This isn't punk played with pace: HDU take their time, the songs building up to what for most bands would be a starting point. The vocals are the slow slur of a drunk proclaiming happily to a world hurrying by. Their sound has become even more drawn out, more ambient as they've aged.

You could argue that the ethereal soundscapes of their latest release, *Metamathics* (2008) – which drummer Dino Karlis pointed out was "the first album where we've used hand-claps, the first where we've used saxophone and the first where we've used piano" – aren't punk at all, but I'm not going to. HDU just do things at a distance. Familiar enough to be uncanny; same bedrock, different sky.

The local New Zealand scene even has a name – the "Dunedin sound" – which is helpfully characterised by one well-known Internet source as "jingly jangly". Indeed, Flying Nun Records was also a home to the Californian band **Pavement** who made up for not being local by being the jingliest jangliest band of the lot. If you wanted a more upbeat variety of Dunedin punk, check out the similarly psychedelic but far more bouncy **Die Die Die!** who share a split 7" with HDU.

All of HDU's releases can be streamed by turning on the tap at highdependencyunit.bandcamp.com – but don't rush things. Let it drip drip drip. If you need a chaser you can stream one song from *Die Die Die!*'s latest *We Built Our Own Oppressors* (2010) at diediedie.bandcamp.com.

Music Editors: **Iñigo Martínez de Rituerto**
Stephen Smith

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MUSIC

KABLAAM

Felix Music night

Photos by Gordan Kam



Unfortunately the audience members forgot to bring their caps...



Black Sands is three guitarists, a drummer, and one headless mannequin

The smile says, "Don't worry, he won't hurt anyone. I promise".

MUSIC



Holy fucking awesome – the light board behind Mikill Pane plays Pacman...

Photo by Paz de Troya



After three years at uni, algo ritmico finally puts his ironing board to use...



Someone's putting on their, "screaming little girl", hat... Incidentally, this hat is popular with [Don't you dare – Ed]



SMB doing his best, "I am Tiesto" face



Kids these days are finding new and easy ways to become single parents

Television Editors: **Matt Allinson**
George Barnett
James Simpson
 tv.felix@imperial.ac.uk

TELEVISION

This week on Twitter

Some top tweets from Felix TV's followers and followees



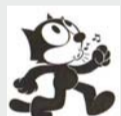
@Lowenaffchen
 @FelixTelevision you are a piece of shit



@RadioTimes
 Good canapes! If one were, for instance, to be a non-meat eater, one would be extremely impressed by the vegetarian quail Scotch eggs.



@bbcpress
 Victoria Wood, Christopher Eccleston & @stephenfry star in *The Borrowers* on #BBC1 this Xmas



@FelixTelevision
 A review copy of Michael Portillo's *Great British Railway Journeys* (Series 2) is on its way! Oh the excitement!



@ProfBrianCox
 That's the first time I've seen @jonculshaw do me. Bloody good!

Jeremy of the week



(Pick of the week's TV? No? Whatever – Ed)

Time to deal, innit bruv



We're posing on the top floor of a multi-storey car park. No. We don't know why either

Marie-Laure Hicks

Welcome to Summerhouse, fam. Here, food (the kind you smoke) is sold on the streets by 10-year olds, snakes (traitors) get stabbed and adults run farms (not the kind that grow fruit and veg). In the shadow of the mighty Canary Wharf, this Hackney estate is the centre of Dushane and Sully's drug dealing business. And they are expanding. Ra'Nell is a local 13-year old who has to live alone and fend for himself whilst his mother is in a mental hospital. With his friend Gem, they get sucked into the gangs and violence of the streets.

Written by Ronan Bennett, *Top Boy* can basically be described as *The Wire* meets *Weeds* meets *Skins*. This Channel 4 drama attempts to give an accurate portrayal of life on the East London estates. It touches on themes such as single parenthood, gangs, drugs and violence, temptation and the desire to make something of

yourself. This depiction is a little too dramatized and oversold when crime has been reduced massively in Hackney. The police (the mighty feds) are mentioned but are mostly absent and no one gets arrested, slightly unbelievable when a large part of the storyline consists of rude boys deal-

“a large part of the storyline consists of rude boys dealing or killing people”

ing or killing people. You would also expect the characters to show some common sense which clearly isn't always the case. Some of them seem to forget the existence of their mobile phones,

especially in desperate situations. But I guess that's mainly for dramatic effect. The show, however, does give some insight to outsiders, with the kids working on the streets and broken families.

Top Boy, luckily, isn't all seriousness. By the end of the four episodes, you will be fluent in gang slang and understand the ins and outs of running a drug dealing business. Don't get too inspired. Amidst the tragedy, comedy is always around the corner, for example watching 13-year olds trying out their flirting skills. The characters are either endearing or on the brink of psychopathic madness. The camera work is brilliant, showing stunning views of London and maintaining an intimate vibe throughout. In addition, the music is simply incredible. There is no other way of describing it. The show is worth watching if only to listen to the soundtrack. So go for a trip into the dark dealings of East London and watch *Top Boy*, it comes highly recommended.

Feeling under the weather? This'll make you right as rain

George Barnett

Watching this week's *BBC Weather*, the viewer is immediately gifted with the presence of the pride of the meteorological arena: Alex Deakin. A physics graduate (thanked, apparently, in S. F. Heldon and T. J. Ponman's paper "The intragroup medium in loose groups of galaxies") turned Met Office employee turned BBC hyperstar-idol-to-the-masses-weatherman. We're even treated to the mandatory abomination of a floral tie.

This particular episode was Tuesday evening's national edition (the 10:32 PM broadcast if we're getting the facts in). It, as one would hope, detailed the expected weather for the succeeding day: a cloudy night followed by a dreary grey start with the possibility of it brightening up in the South East. Other parts of the United Kingdom

– Wales and Cornwall – would be subject to rain whilst there existed a high chance that the North of the country would be enveloped by gloominess.

Accuracy, succinctness and presentation are what the discerning viewer looks for in a weather forecast. Which would have been the exact experience befallen upon you had you viewed this specific episode. Alex Deakin delivered on all grounds – hand gestures correlated to adjectives with great fluidity whilst diction was well chosen and laconic. The greatest question, however, is should one watch the BBC weather broadcast? It depends. Can you be bothered to look out of the window?

In case you haven't noticed we need writers. Desperately. Email tv.felix@ic.ac.uk



Yes, I do look insufferably smug here

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FILM

In brief

The new 007 is a go



MGM's financial woes, be gone! After months of speculation on whether England's iconic, bed-hopping, ass-kicking agent will return or not after its production company decided to declare bankruptcy, Daniel Craig's third outing as James Bond was finally given the green-light last week, along with its title, a couple of Bond girls for Craig to no doubt shag, and an official confirmation on the rest of its cast to put all sorts of internet rumours to rest.

The title – *Skyfall*: an improvement from its predecessor *Quantum of Solace* for sure, but perhaps not quite as slick and stylish as *Casino Royale*. Craig wasn't allowed to expand too much on what the title is referring to, but producer Barbara Broccoli briefly stated that it may have "some emotional context which will be revealed in the film." Just what emotion the word *Skyfall* may be referring to is not clear at this point, but it appears we need to wait a whole another year to find out what is going on, with the film's release date set for Friday 26 October 2012 including a London premiere that will no doubt take over the redecorated Leicester Square.

More often than not, especially among certain individuals down here in the Felix office, the casting of Bond girls generates more interest than anything else, and so the news of Naomie Harris and French actress Bérénice Marlohe (pictured above) landing the two crucial roles is a welcome one. This will be Marlohe's Hollywood debut, in which she will play a "glamorous and enigmatic" character, whereas Harris, who was once rumoured to be playing Miss Money Penny, landed the role of a "field agent." In addition, Judi Dench will be reprising her role as M for the seventh time in a row, with Javier Bardem, who once ferociously portrayed an unforgettable villain in the Coen brothers' *No Country for Old Men*, will play the film's main antagonist. Prominent Brit names are also appearing in yet-unspecified roles, with Ralph Fiennes, Albert Finney, Helen McCrory and Ben Whishaw also on board.

Filming has already begun, with the Academy Award winning Sam Mendes directing. The official James Bond twitter reads "8.45am, 07/11/11: 'Action!' was called for the first time on the 23rd James Bond movie, *Skyfall*. We are officially go!" It is certainly nice to have you back Bond.

Time is money in the new sci-fi *In Time*

In Time

Director Andrew Niccol
Screenwriter Andrew Niccol
Cast Justin Timberlake, Amanda Seyfried

Tim Davies

The premise: humans are engineered to die at 25, beyond this age you can only live if you have "time" on your clock. How do you accrue more time? If you are one of throng of the proletariat, by working for it, if you happen to be one of the rich, by doing evil capitalist stuff like exploiting the poor, owning banks etc. In this dystopian world you pay for everything with time, from buying a coffee to paying for your bus fare. Poor people struggling to accrue time face increases in the cost of living which drains their clock and potentially brings about their early death. To separate the haves and the have-nots, ghettos have sprung up. These are crime ridden slums where people steal time from each other. In these districts people will "murder you for a week." Contrasting this is New Greenwich, a bastion for the rich where people are rendered practically immortal by the thousands of years they possess.

So *In Time* is a not-so thinly veiled metaphor for the inevitable inequality which arises as a result of unrestrained capitalism. It is a prudent metaphor then, at a time of economic stagnation and financial uncertainty. A time when, if the Occupy Wall Street movement is anything to go by, America seems to be waking up to the



Gimme Gimme Gimme some time (feat. Justin Timberlake)

fact that the unfettered dominance of corporations in its society has a largely negative impact on the majority its population, or at least if they were already aware they are no longer willing to put up with it.

The messages that the film tries to get across are admirable, but where the film falls down is that the cast come across largely as caricatures. The rich spout ideas about social Darwinism and the necessity of a downtrodden underclass whilst carelessly gambling away thousands of years of life. The "timekeepers" (*In Time* punspeak for policemen) wax lyrical about the necessity of maintaining the status quo and how too much time in the hands of the poor would "crash the system." The film rams home the

points it makes with the subtlety of a sledgehammer and as a result, leaves the characters feeling distinctly one dimensional. Add to that the fact that the later scenes descend into a series of action movie clichés and you are ultimately left with the feeling that a potentially decent premise has been squandered. Justin Timberlake does an admirable job in the lead but the supporting cast are merely serviceable due mainly to the flat characters they are asked to portray.

Niccol writes and directs a film very similar to his previous work *Gattaca*, but one which doesn't reach the same heights due to a lack of well rounded characters and clunking lack of subtlety in deliverance of its core messages.

Brett Ratner resigns as Oscar Producer

Lucy Wiles

The American producer/director Brett Ratner, known for such films as *Rush Hour*, *Red Dragon* and newly-released *Tower Heist*, has stepped down from his prominent position as producer of the 2012 Oscars.

His resignation follows a string of inappropriate comments in a number of recent media appearances, most notably for using an offensive term in an interview while promoting his new film *Tower Heist*, and a very strange telephone interview on Howard Stern's radio show, during which he gave explicit details of his sex life.

In a letter of resignation, 42-year-old Ratner said that he had "gotten a well-deserved earful from many of the people I admire most in this industry expressing their outrage and disappointment over the hurtful and stupid things I said in a number of recent media appearances. To them, and to everyone I've hurt and offended, I'd like to apologise publicly and unreservedly."

Ratner's first blunder was made during a promotional interview for his *Tower Heist* two weeks ago. A member of the studio audience asked whether he had found it hard handling rehearsals for a group of such actors as Eddie Murphy, Ben Stiller, Casey Affleck and

Gabourey Sidibe, to which Ratner's response was: "Rehearsal? What's that? Rehearsals for fags." This comment caused outrage, despite the Academy of Motion Pictures, Arts and Sciences (who run the Oscars) making an official apology condemning Ratner.

The filmmaker then made the decision to give a telephone interview on the Stern radio show, which was supposed to be to apologise for previously implying a sexual relationship between himself and *Iron Man 2* actress Olivia Munn. Instead of the expected apology, however, Ratner chose instead to regale the listeners with tales of his past sexual conquests, his oral sex skills, the size of his balls, his masturbation techniques, his disdain for condoms...and much more. Needless to say, this did not go down too well on national radio, despite the fact that Ratner was being encouraged to spill the beans by the show's host.

Following the resignation last week, the president of the Academy, Tom Sherak, was quoted as saying that Ratner had "done the right thing for the Academy, and for himself." He added: "Brett is a good person, but his comments were unacceptable."

Ratner has now been replaced by Brian Grazer, the Oscar-winning producer of *A Beautiful Mind*. "Brian Grazer is a renowned

filmmaker who over the past 25 years has produced a diverse and extraordinary body of work," said Sherak. "He will certainly bring his tremendous talent, creativity and relationships to the Oscars."

In light of Ratner's resignation, his friend Eddie Murphy has also quit his role as the presenter of the 2012 Oscars show. The comedian/actor was hired by Ratner to rejuvenate the show after its lacklustre ceremony last year; Murphy's appointment was an attempt to return to the programme's original winning formula of having a comedian presenting. After his resignation, Murphy said: "I was truly looking forward to being a part of the show that our production team and writers were just starting to develop, but I'm sure that the new production team and host will do an equally great job."

Despite an online campaign for the Muppets to take over from Murphy gaining popularity last week, the Academy has announced that Billy Crystal will be filling the role. The 63-year-old actor has previously hosted the Oscars nine times, most recently in 2004. "Some of the best moments of my career have happened on the Oscar stage," he said.

The 84th Academy Awards ceremony is due to take place at the Kodak Theatre in Los Angeles on Sunday 26 February 2012.

Film Editors: **John Park**
Lucy Wiles

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To believe or not to believe?

Anonymous

Director Roland Emmerich
Screenwriters Jon Orloff
Cast Rhys Ifans, Vanessa Redgrave, Joely Richardson, Rafe Spall, Sebastian Armesto

John Park

Was Shakespeare a fraud? The generally accepted answer is “no” but the debate will go on, new evidence will be found, and the sceptics will always find holes in the already laid-out, widely known historical events. It’s an interesting notion though, something that shouldn’t possibly be immediately dismissed. If there is compelling reason to actually doubt the authorship of William Shakespeare, the man who has been the icon of English literature for centuries, then bring it on, which is what the brave Emmerich sets out to do.

Yes, the man who loves destroying our beloved planet (*Independence Day*, *The Day After Tomorrow*) is the man directing a thought-provoking, “what-if” period piece. A change in genre for sure, but Emmerich’s *Anonymous* is just as intense as when he spends millions of dollars sucking every last breath out of the human race. Set in Elizabethan England, London is transformed into a grim, damp place of greed, betrayal, jealousy, and a whole load of back-stabbing. This moral corruption extends to people of all social classes, from the grey streets of the English capital, to the colourful royal courts where the ageing Elizabeth I (Vanessa Redgrave) rules her country



Oh my god...you've been tangoed!

with her humongous dresses and frightening make-up.

A firm prologue, delivered with conviction by Derek Jacobi, sets the tone – that William Shakespeare never wrote a single word of “his” work. How is this possible? First, there’s Edward de Vere, Earl of Oxford (Rhys Ifans), whose brilliance with his words and prose came to life even at a young age. Playing Puck from *A Midsummer Night’s Dream* at the age of ten, he even enchanted the then-young Elizabeth I (Vanessa Redgrave’s daughter Joely Richardson). But writing plays is no job for an Earl, especially when his father-in-law, William Cecil (David Thewlis), a close advisor to the Queen, vehemently protests anything involving art or theatre. He claims that theatre is the satanic product of worshipping false idols.

One day however, he stumbles on something extraordinary. A crowd of two thousand being moved and united through one play alone. With his own plays, he predicts that he could bring the house down. He approaches Ben

Jonson (Sebastian Armesto), a virtually unknown playwright, to stage his plays for him. For years, de Vere has spent hours putting ink to paper, producing works such as *Macbeth*, *Hamlet*, and *Julius Caesar*. By complete accident however, the good-for-nothing drunk actor Will Shakespeare (Rafe Spall) ends up taking the writer’s credit. He’s illiterate too, but the crowd doesn’t know that. They embrace him, and are moved by his words.

Success and money corrupt Shakespeare and his obnoxious behaviour starts to get on Jonson’s nerves. Spall is fantastic as the slimy yet hilariously stupid Shakespeare, a horrifying portrayal for anyone who respects the man, but this unique depiction is a welcome change, and Spall is an invaluable presence. Our sympathy goes out to Jonson more than to anyone else, and Armesto plays the frustrations of a wronged man with enough intensity and anger.

Flashbacks that are comprehensibly edited in reveal more than expected, diving into the intimate sides of de Vere and Elizabeth. Disturbing twists

and turns are presented, with dirty secrets that have been buried for years starting to surface. The subplots hardly ever have happy endings, and the brutal fight for power is a good fun romp, with numerous seedy characters pitching in for unpredictable developments. The harsh palace life with unstable dynamic is boosted by the dark scenery made even more sinister by plenty of shadows coming from hundreds of candles.

Ifans is effortlessly convincing in the role of a literary genius, and no matter how hard it may be to believe that he can whip out a stirring play in a matter of days, the struggles of an oppressed genius, trapped in a society of strict boundaries is shown well in his character’s genuine passion for theatre. The mother-daughter casting for Queen Elizabeth works brilliantly here, as hints of Richardson in Elizabeth’s youth can be seen later in Redgrave, both of whom are magnetic their pivotal roles; they hold so much power. This makes her the perfect target for snarky “advisors” to poison with their venomous lies, adding another layer of treacherous palace drama to the already packed narrative.

Whether you believe in this alternate theory is obviously up to you. But *Anonymous* is a confident spin on what was thought to be a well-known tale. It would serve well as a period thriller even for those who are fans of Shakespeare and his works. Emmerich shows plenty of promise in directing films outside his usual disaster-film genre, and he has managed to create one of the most exciting guilty pleasures of this year.

Top 10 Box Office films in the UK this week



1) Immortals - 15 - Henry Cavill, Freida Pinto, Mickey Rourke, Luke Evans

2) Arthur Christmas - U - James McAvoy, Jim Broadbent, Bill Nighy

3) The Adventures of Tintin: The Secret of the Unicorn - PG - Jamie Bell, Andy Serkis, Daniel Craig

4) In Time - 12A - Justin Timberlake, Amanda Seyfried

5) Tower Heist - 12A - Ben Stiller, Eddie Murphy, Casey Affleck

6) The Rum Diary - 15 - Johnny Depp, Giovanni Ribisi, Aaron Eckhart

7) Johnny English Reborn - PG - Rowan Atkinson, Dominic West, Gillian Anderson

8) The Help - 12A - Viola Davis, Octavia Spencer, Emma Stone

9) Paranormal Activity 3 - 15 - Chloe Csenegery, Jessica Tyler Brown, Christopher Nicholas Smith

10) The Ides of March - 15 - George Clooney, Ryan Gosling, Marisa Tomei, Evan Rachel Wood

Let’s talk about mummy’s little monster

We Need to Talk About Kevin

Director Lynne Ramsay
Screenwriters Lynne Ramsay, Rory Kinnear, Lionel Shriver (novel)
Cast Tilda Swinton, Ezra Miller, John C. Reilly

Henry Turner-Chambers

I can’t say that I walked into *We Need to Talk About Kevin* expecting a trippy, synaesthetic nightmare. But that’s what I got, and it was very good with it too. The film is intensely visual – sparse on dialogue and filled with kaleidoscopic and non-chronological sequences, particularly in the first half. The linearity of the closing scenes is less impressive in many ways, in spite of Ezra Miller’s hypnotically ugly and malevolent presence as the teenage Kevin.

Every scene contains a strong undercurrent of violence, from Kevin’s traumatic birth through to the mass-murder which is the culmination of his life. There is extensive use of bright colour – most obviously red, which symbolises first the threat and later the paralysing guilt of Kevin’s traumatised mother. The camera focuses on awkward and anxious movements of hands, feet and mouths. A shot involving the consumption of a lychee is particularly vile.

The film opts out somewhat from the discussion of nature/nurture that was so prevalent in the book, exchanging realist interactions with an oppressive and immediate sense of doom. In this it has much more in common with paranoid horror films like *Rosemary’s Baby* than the kitchen-sink mundane school of nastiness. While Kevin’s mother Eva and father Franklin are not the best parents, it is impossible to establish a

moment at which they clearly become responsible for Kevin’s evil. He appears to have made it his mission to destroy his mother’s life before he is even born – at least from her perspective. Their behaviour towards one another is self-perpetuating and fascinating to watch. Eva certainly considers it to be her fault, whilst being manipulated by her son into apathy as he mutilates his little sister.

Tilda Swinton’s portrayal of Eva is masterful. By the (chronologically) later scenes her life has been destroyed so utterly that the viewer is left unable to empathise with the strange shell that has been left. After losing her family and business (exactly how she loses her money is not really explained – one of the film’s few narrative slips) and gaining the almost universal hatred of the townspeople she is left completely alienated and alone. Kevin is all she



Where the hell’s the tomato soup?!

has left. Since his infancy, each has been the only one to truly understand the other. Their love, written in hatred as it is, is the only survivor of Kevin’s massacre. As individuals, neither made it out alive.

Incidentally, who should sit next to me in the cinema but Simon Amstell! In retrospect I probably should have asked him what he thought.

Games Editor: Laurence Pope

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GAMES

Brained by a purple dildo

Jonathan Wang talks about Volition Inc.'s latest offering *Saints Row: The Third's* attempts to not just eclipse the GTA franchise, but to beat it into the dust. With a dildo bat

To someone who has never heard of *Saints Row* before, there's only one comparison you can make, so I'll get it out of the way: it's like *Grand Theft Auto*. The behemoth that is Rockstar Studios' third-person, driving-shooting free-roam franchise single-handedly created a new genre and also influenced a whole slew of games over the last decade. However, whilst rival studios were taking note and adopting some of the successful elements of *GTA*, whether it's the driving or the shooting or the open city, Volition was taking notes. Like scientists citing and Kanye sampling, Volition knew that the better the original source, the more you should put in.

Of course, Volition didn't just copy the ingredients – they also improved the recipe. *Saints Row: The Third* is like *GTA IV*. On acid. This genre requires two important things done right: combat and vehicles. *Saints Row* doesn't just do them right, it does them fun.

To start, you're given the standard controls: left and right shoulder buttons for punches, one button pulls out your gun menu, and an every button which ranges from grabbing people to use as human shields, to commandeering cars by diving through their windows.

There is already a lot of havoc that can be wrecked on foot. Running up to people and pressing punch pulls off a variety of wince-worthy violence. The standard bare-fisted attack is a punch or a kick to the groin. It gets worse (or should that be better?) from there. Giant fists that make punched people explode into a fine red mist, farts in a jar used as gas grenades, and most infamously of all, the Penetrator: a giant, purple, rubber phallus stuck over a baseball bat that swings about limply, are all available to be picked up. Other ridiculous methods of bringing death to your enemies include calling in airstrikes and launching them from manapults. There's even a rocket launcher that makes enemies dance like Michael Jackson before they spontaneously combust.

“Farts in a jar used as gas grenades”

Naturally, the designs are just as ludicrous when it comes to vehicles. Fighter jets with heat seeking missiles are casually parked in allotments and, at some point, you can drive a moon buggy through the streets. However, my favourite has to be the Specter: flashy, high-speed hover bikes with machine guns that can barrel roll, a Godsend in such a large setting. The vehicles are also much sturdier than their *GTA* counterparts, encouraging a more aggressive driving style. Whilst there are occasional traction issues the overall handling is tight and easy to pick up.



The insane amount of character customisation is also on show. Enter a plastic surgery parlour and it's possible to change every part of your body and clothing, with the character models good enough to make this exercise worthwhile. In addition, choosing to wear outlandish costumes can earn you Respect, the game's XP equivalent.

After having fun, earning Respect and money is

the next priority. The former can be spent on upgrading your skills, the latter on purchasing property, weapons and character modifiers. Both can be earned through completing various Activities and Diversions, which number one fewer than Heinz has varieties, guaranteeing that the chances of getting bored is slim. Respect can also be earned by doing what you like; yes, running down pedestri-

ans on your hover bike is commended.

The setting this time is Steelport, a fictional city based on Chicago and Detroit, where the Saints are top of the food chain: they even having their own mascots and a line of energy drinks. This fame allows the player to get away with all sorts of hijinks. In fact, this unconventional initial scenario is an excuse for making a lot of items and, by implication, fun, accessible before completing missions.

We also meet our primary antagonists, The Syndicate, a multinational conglomerate of gangs, when the Saints inadvertently raid a Syndicate bank in mission one. Cue the first insane set piece. You're thrown out of the back of the plane, and, whilst falling, fighting off skydiving gangsters and dodging debris and the plane, you also rescue your girlfriend. If that doesn't make you want to play the game I don't know what will.

The GPS system, which directs you along the shortest route on your mini map, makes a successful return, as does the ability to restart failed missions immediately after failing. The Notoriety system is also much more forgiving than *GTA's* Wanted system, exchanging realism for the freedom to do what you want.

“Saints Row: The Third exchanges realism for the freedom to do what you want”

Nevertheless, it's not all good news. There are some minor criticisms of the game, one of which is the dialogue. Voice acting can be occasionally flat and the humour can at times come across as immature or a little forced. The enemies are also not particularly smart, forgoing cover and embracing rush tactics. These are the only foibles I've come across in the short time I've been playing, but they don't detract from my recommendation.

Multiplayer modes from earlier games have also been dropped in favour of a more polished single player, but the co-op mode remains: a friend can drop into any point in your story to help you out.

I don't know many many times I've reiterated this, but *SR:TT* is FUN. The sandbox setting means you choose how, where, and when you have fun, and who with. In a game world where even the skyline can be altered, the choices and possibilities seem endless.

Saints Row: The Third sets itself apart by allowing you to offend your own sensibilities in every way you can imagine. It's a game full of bright colours and Tarantino violence, a world of Luchadores gangs and dildo bats. It's immensely immature, terribly unsubtle, and totally over the top but, nonetheless, it's fun in its purest form.



Looks like someone forgot the safeword

‘Cringe-inducing football pun goes here’

Simon Carnochan kicks about some of his thoughts on Sports Interactive’s latest product, *Football Manager 2012*

Football Manager, undeniably the best football management game on Earth, is back again. My addictive relationship with the game began at the tender age of seven and I’ve been hooked ever since, even turning up fifteen minutes late to my GCSE Religious Studies exam due to an FA Cup semi-final with Hull running into extra-time. Anyone who claims to be a football fan but has never owned a copy of this game is clearly lying – the two are mutually exclusive. Rugby fans (wrong ball), Americans (can’t even name the sport right) and girls (computer game plus football equals unfortunate sausagefest) have never understood the joys of playing *Football Manager*, and although a full tutorial for novices has been included in the game for the first time, this article may have little relevance to those who have never played the series before.

“Wives and girlfriends of those who play are known as ‘Football Manager Widows’ for good reason”

To those unfamiliar with *Football Manager*, the simple premise is to give armchair fans a chance to become real-life managers in a way no normal fantasy football game can, with almost every possible aspect of running a team available for tinkering. The game is seriously addictive; wives and girlfriends of those that play are commonly known as ‘Football Manager Widows’ for good reason. After only a week of playing the new release, I can confirm that time flies just as quickly as in previous years, and hours spent fiddling with tactics and making moves in the transfer market pass by within the blink of an eye. In fact, every full stop in this article not only indicates the end of a sentence, but also the immediate minimizing of this document and another twenty minutes spent taking the mighty Dagenham & Redbridge back into the Premier League. Whilst the continuity and quality of this article may suffer as a result of my poor attention span, with a Carling Cup tie against Arsenal just round the corner and my team sitting outside the playoffs, this piece just has no real significance in comparison.

Each annual release of *FM* is fundamentally a slight variation on the previous, yet minor improvements in gameplay and an updated database force thousands of fans to splash the cash on an annual basis. This year is no different, with numerous



new features tempting us addicts like a free beer festival for alcoholics. Each new database over the years has offered their own quirks and anomalies, including various overrated players, but the joy in finding those hidden wonderkids in the depths of the Slovakian lower leagues and fielding a team including the likes of Stefan Kuntz, Yo-Suk Bum, Argel Fucks and Wan King make up for Jermaine Pennant bizarrely starting for England. Making magical transfer moves (my personal favourite was bringing Roberto Baggio to Watford in 2004) has become that little bit easier, as you can now offer loyalty bonuses to players and are able to ‘lock’ certain areas of your contract negotiations, meaning there are no more frustrating “David N’Gog demands an increase of £300 to his contract” moments. Another new feature perfect for those hoping to replicate the wild career paths of Roy Hodgson and Sven-Göran Eriksson is the ability to add additional foreign leagues to your save game at any point. As soon as your season in the Premier League or La Liga gets a bit frustrating then the opportunity to pack your bags and head to the lowly Finnish Third Division has never been so easy, and the convenience of not having to choose which nations are playable at the start of your career means the game can process at a far quicker speed (“I know my game is loading slower than Emile Heskey, but one day I might want to manage in the Indonesian Premier Division!”)

Up until recently the idea of interacting with players scared many users (“a distraction from

proper football,” they claimed), yet the feature is improved upon yet again with the ability to take on a persona during team talks, and a range of ‘tones’ allows even more customization of your management style. Whether it be a bit of the ol’ Fergie ‘hairdryer’ treatment or playing it cool like Mourinho, the instant player feedback highlights the impact of your words, giving a more conversational feel to the dressing room – although there doesn’t appear to be an ‘offer your team shit advice in your poorly pronounced Italian-English’ option, à la Fabio Capello. Be careful though – when the mid-season rut of poor results dampen your season’s hopes, your players’ moral takes on even more importance and the way in which you verbally rape your players after that 0-0 draw with Swansea can have devastating, and perhaps exaggerated, effects.

Whilst the new ‘Intelligent Interface’ may at first appear a bit crowded and overwhelming, once you have grown used to the extra information crammed into your screen you begin to wonder how you ever used to stay up till 3am playing without it. However, I have never liked the interactive media conferences and they remain as hopeless as ever with reactions from your players and the media either confusing or overdramatic, and although the novelty of storming out of a press conference for no apparent reason never ceases to amuse, this aspect of the game remains an unnecessary disruption between match days. Similarly, whilst the 3D graphics engine during matches has improved some-

what, I’ve never been convinced by it and couldn’t really care less if I can see Titus Bramble concede an own goal in improved animation. Call me old-fashioned, but I remember the days when I got by with commentary text only and the (epileptic fit inducing) flashing text of “GOAL FOR LAZIO!!!!!!” sent me into howls of excitement. Whilst the 2D match engine was a revolutionary feature in FM05, the 3D view stills has the quality of a crappy 90’s PS1 game and needs a bit of attention.

There are those who simply skim through a season in a day, only ever distracted from match days with the occasional headline transfer, yet this type of user does the game a disservice and fails to experience the microscopic depth of control available as the most acute details can make or break a season. It is not until you fully immerse yourself into the game and begin organising your team’s training schedule, choreographing your team’s set-pieces and start buying unknown Brazilian seventeen year olds, that you can truly experience *FM* at its best. Some say that this sort management sim is nothing more than dull spreadsheets and numbers, but these morons have no imagination and can fuck off back to playing *Mario Kart*. Where *Football Manager* succeeds is that unlike almost every other game there are an infinite amount of



I was told this guy has something to do with football

career paths and gameplay is not bound by specific missions or tasks – in *FM* you are completely free to roam the football world as you please. Whether it be showing Mourinho how it is done at Real Madrid; overhauling the likes of Yeovil Town with a bunch of skinny Romanian under-21s, or emigrating to Jamaica and bringing the World Cup trophy to the Caribbean, life as a *Football Manager* addict looks set to continue.

I’ll give myself until Christmas before I pack it in and retire from the world of management, as the potential impact on my education is so great even another season of Champions League football with Tottenham Hotspur wouldn’t make for it.

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GAMES

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Grow beard; Kill dragons

Douglas Heaven on *The Elder Scrolls V: Skyrim* and incredible manliness

Skyrim is a foreign country: they do things differently there. I've been trekking its sunny snow-packed hills and alpine meadows for seven days now, but apart from an incredible beard I've little to show for it. I know I ought to be more dependable; I know there's a lot at stake. I know that dragons have suddenly returned to the world, and I know that, as one of the Dragonborn, it'll probably turn out to be my problem. But with so many rabbits to chase, flowers to pick and butterflies to eat I'm finding it hard to concentrate on any of the many tasks at hand.

It went wrong from the start. I emerged into the vast open world with a companion who bid me join him in the next town – there was a main quest to be played. But this is an Elder Scrolls game, and there's side-quest gold to be found in them hills. I waited until my companion turned a corner in the road and then I ran in the opposite direction.

I've found adventure and moderate riches, but no glory – not yet anyway. I came upon an abandoned fort in the mountains and rid it of skeletons. But its current owner turned out to be a vampire master who refused to fall over even after a dozen reloads – I ran away. I made friends with a werewolf, delivered a love letter, stole vegetables from the shelves of a shop and sold them back to the shopkeeper. I bought a fat horse who occasionally disappears when I'm riding it, killed twenty bandits and ran away from a bandit thug.

I met a bard crossing a plain one night and paid him twenty-five gold pieces to stand and sing for me; he was still singing when he went out of earshot. I walked alongside a mute giant for a mile or more, but I'm not sure he knew I was there.



New research has shown that dragons make everything 110% more badass

I've become pretty good at picking locks but not at sneaking, which has left me in several embarrassing situations in other people's houses late at night. I've seen mammoths, sabre-toothed tigers and bears and run away from all of them.

I don't know what came over me when I finally arrived at my original companion's village. I saw a chicken scratching in the street in front of me, took out my bow and shot it. As it flopped over sideways, a woman ran at me, shouting, "That's a valuable animal!" She was followed by the entire village, who came at me with axes and sticks. When I reloaded I gave that chicken a wide berth.

After a while I acquired a servant of sorts – a house carl, though I'm a long way from having a house – who diligently carries my heavier items and picks off mudcrabs I can't be bothered with.

She's obedient but violent: she'll pick up anything I tell her to and sit where I point, but when it comes to my horse the only thing she's willing to do is attack it.

But you probably want to know about the dragons. Bethesda's announcement a year ago that *The Elder Scrolls V: Skyrim* would feature dragons set the tone for the marketing hype that followed. We're not talking some dragons, either, but unlimited dragons, randomly encountered, flapping out of the sky with a scream and a shadow. However, other than during a couple of scripted introductory encounters, I've so far seen only one. It was a long way off, minding its own business, majestically circling a cold grey peak; I turned and ran back the way I'd come.

Running is such a simple joy in this game. The

world in *Oblivion*, *Skyrim*'s predecessor, was undoubtedly beautiful, but ultimately bland and soulless. The astonishing detail is there again – maybe you'll only notice that daytime shadows move with the sun or that the stars edge across the night sky if you put the controller aside and let the game idle for a bit – but *Skyrim* feels more fully realised, more varied – you get the impression that each vignette of water-splashed rocks or shade-dappled spinney have been shaped by artists' hands and not procedural generation alone. And it's not just the landscape: this time the people have more than three voices to share between them and background conversations are less inane. Everyone's also a lot less ugly – except for elves, who for some reason now all look like angry aliens.

There's also a lot more to your interactions with the world: crafting now encompasses tanning, smithing and cooking, as well as enchanting and alchemy. Fighting has been made more strategic with the option to wield what you like in either hand, be it weapon, shield or spell. And you can shout at things. Shouts are learned from defeated dragons – I've just learnt my first one and it seems most effective at mildly stunning my horse. A piece of loading-screen lore, however, has informed me that a king of *Skyrim* was once "shouted to pieces". Levelling up appears to work in much the same way as it did in *Fallout 3* and *Fallout: New Vegas*, with each level giving you a point to spend on perks. But it's easy to forget about the levelling – none of these Bethesda games are RPGs in the traditional sense, like *Baldur's Gate*, say, or even *Dragon Age*. Let's instead call them action RPGs, or choose-your-own FPSs, or FPSs-with-conversations.

An ode to the beauty of Minecraft

Keir Little

Happy birthday, *Minecraft*, my sweetling. You've been like my own child all these years, but you're all grown-up now, your features well formed and bug-free; yet you're worth only a modest €20. It wasn't always this way, you know. Oh yes – I remember before you were born.

Spring, 2009, what a fine season that was. I remember playing with Notch, your father, on the game *Infiniminer*, with its 3D world made up of cubes, all of us playing together, mining and building blocks. Sound familiar? "Oh, it has *Infiniminer*'s look," we cooed when you were born, and "it's like a 3D *Dwarf Fortress*!" Back then you were a simple, precious thing: your grass all one colour, always sunny, so few block types.

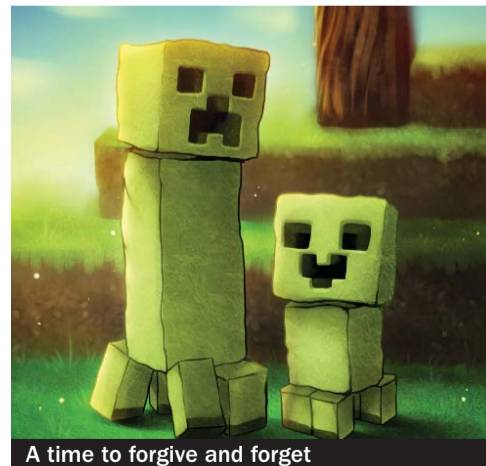
You've been told this time and time before, I bet, but you really are quite like Lego. At least, back then you were: you've definitely matured since then (and are doing so much better for it). When we first heard about your 'survival' mode, we were



Rolling hills and sweeping valleys compose the pristine landscape

so thrilled. I watched with glee as you developed monsters, crafting, day and night cycles, so much more!

You were quickly becoming what we all want-



A time to forgive and forget

ed: creative, yet challenging; stimulating, satisfying, and sometimes scary. When you grew infinite worlds, I saw that your father had something to be truly proud of. That's when I handed over my mon-

ey, to make sure he'd raise you well. Of course, you were worth only €10 back then.

You grew so quickly over the next year, and I was with you every step of the way. You flourished, taunting me over exam time, rewarding me during boring summer days. You stretched my creativity, my spirit for adventure, and together we explored deep, dark caves for their treasures, and made beautiful creations.

I was so happy for you last year when you got to your beta stage. You earned so many new friends then! But you began to grow away from me. So many new features, and it became hard to keep up: I felt like an old man bewildered by a computer when you showed me your redstone, yet your new pals raced ahead with using it.

I know I've not had much time for you recently, *Minecraft*, and I've not been staying up-to-date with everything you wanted to show me, but you'll always have a place in my heart. Happy birthday, *Minecraft*, and here's to many years of exploring all that you've got to offer.

APOCALYPSE

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FOOD

Expert's View



Frankie says RELAX!

Variety is queen, and the **Queens Tower Restaurant** appears to be worthy of its royal name. At a university as international as ours, a mixed plate is a necessity, and our restaurant seems to provide just that. The Chinese noodles, for instance, are a must-try for those who have not yet had the fortune of tasting culinary masterpieces from the East. With curries served daily and Italian meals also regularly in the mix, the restaurant has an international feel that makes it an indispensable part of every student's lunch time. To top it off, the classic meal deal – a drink, main dish, and soup or dessert – makes it an affordable lunch.

7/10

During irregular hours, our pseudo around-the-clock **Library Café** can be a life saver. Whether it's shortly before morning lectures and you just want to grab a quick coffee, or late in the evening after long hours in labs, the café gives you just what you need: quick food. But beware: while service is swift during off-peak hours, the queues that form during lunch time or exam season can be a frustrating experience. Thankfully the café seems to have acknowledged this and now has opened a new third till.

5/10

Fresh Deli. Fried chicken. Burgers. Pancakes. It's a complete assortment that you rarely see so close together anywhere in South Kensington. The **Fast Foods Corner** definitely doesn't offer the healthiest of choices, but it's undeniably tasty. The delicacies produced by our star chef at the fast foods corner could easily rival those from Burger King or KFC. My favourite food in the **JCR**, however, is the freshly made sandwiches at the Deli Bar. Despite long queues that form at the Deli Bar, when I'm in no rush to get to a lecture, I try to drop by the bar to pick and choose the contents of my own custom sandwich. Subway lovers, this is just better.

7/10

Mario Hayashi

Campus Food Review

Scouring South Kensington for the ultimate in College cuisine – who will triumph in this war of gastronomy?



I have had various meals in the JCR, including sandwiches from the Delhi bar and the other places. I have to say, I'm rather impressed at the quality of the food as I expected it to be much worse! For about £5 you have a wide choice of full meal combinations at the cafeteria, much needed during the course of the day, and the various sandwiches available are fresh and prove ideal if you don't have the time to sit down and eat. The food should be able to satisfy most of the students since it ranges from common foods to Italian and Chinese. **7.5/10**

Michalis Michaelides



The JCR is okay. I do really like the sandwiches, especially the make-your-own counter – I always go with the freshly made baguette with cheddar cheese, tomato and pesto. The coffee is fine, the variety of drinks is very good and sofas are relaxing! **7/10**

Anastasia Eleftheriou



The quality of food in the JCR is high; I often have the Fish and Chips for lunch. However, I feel the variety can be improved on: more hot food, such as pasta, could be available.

7/10

Yong Zi Tan

The fast food section of the JCR hasn't got much in the way of variety. Sandwiches run out really early (I can't find any good ones by 13:00) and the Sushi should have more choices: they could introduce single options like wasabi. The pasta section really should have better options and borrow some of Pret A Manger's ideas (such as bacon, cheese, ham, tomato, and chocolate croissants). The 'Create-your-own' section needs improvement too, like having toasted sandwiches and more in the meat section (where is bacon and melted cheese?). The pancakes and panini section – the best in my opinion – has some good options, though the biggest problem for me is the fact that the JCR closes way too early. Everybody knows when the time for a pancake is – just after finishing your lecture at 4! Overall, the JCR just can't compete with a street shop in its category, due to the medium quality, taste, and the lack of options. **4/10**

Kyriakos Ioannou



On the one hand, you can find a variety of different foods; from salads to fresh sandwiches, sushi to crepes. The members of staff are polite and they are very quick at the cashiers. It's also a cozy place with nice, comfortable couches. On the other hand, it gets very crowded and is therefore noisy at around midday. I think this might happen because there is not enough space to accommodate everyone. Prices are reasonable and overall I consider the JCR as a place to grab something that I can eat elsewhere, unless it is not peak time. **6/10**

Ioannis Kourouklides

FOOD



Sometimes, the food is quite good but sometimes it's not. There is mostly Asian food on offer, and it's not of the best quality. **6/10**
Alexia Christophide



Most of the times, there are only one or two dishes I can eat. Food is of average quality and the prices could be lower, maybe by 30p or 40p. **6/10**
Michael Krestas



Half of the time the food is good, and half of the time it's not. There is certainly room for improvement. It definitely qualifies as a second choice rather than a first. **5/10**
Katerina Apostolidou

Love campus food? Hate campus food? **Have your say!** Send an email with your review to food.felix@imperial.ac.uk. Your opinion could make a change!

Library Cafe



As I generally feast upon the sandwich selection and the occasional jacket potato in the Library Cafe, my comments will be based upon these! In general, the taste is rather good (maybe except for the falafel...). Value is good compared with the closest non-campus food sources. **7/10**
Christina Ng



I often eat here. Portions are large and the price is fair. Sometimes, especially during peak times, the queue is a bit too long. However, students are served fast so I don't have to wait for long. Sandwich selection is good too, I usually have the Chicken & Bacon. Salads, on the other hand, aren't so good. The one time I had one, it was tasteless so I had to add every kind of sauces I could find. Overall, the Library Cafe offers good quality food and it's a nice place to have your snack. **6/10**
Stalo Constantinou

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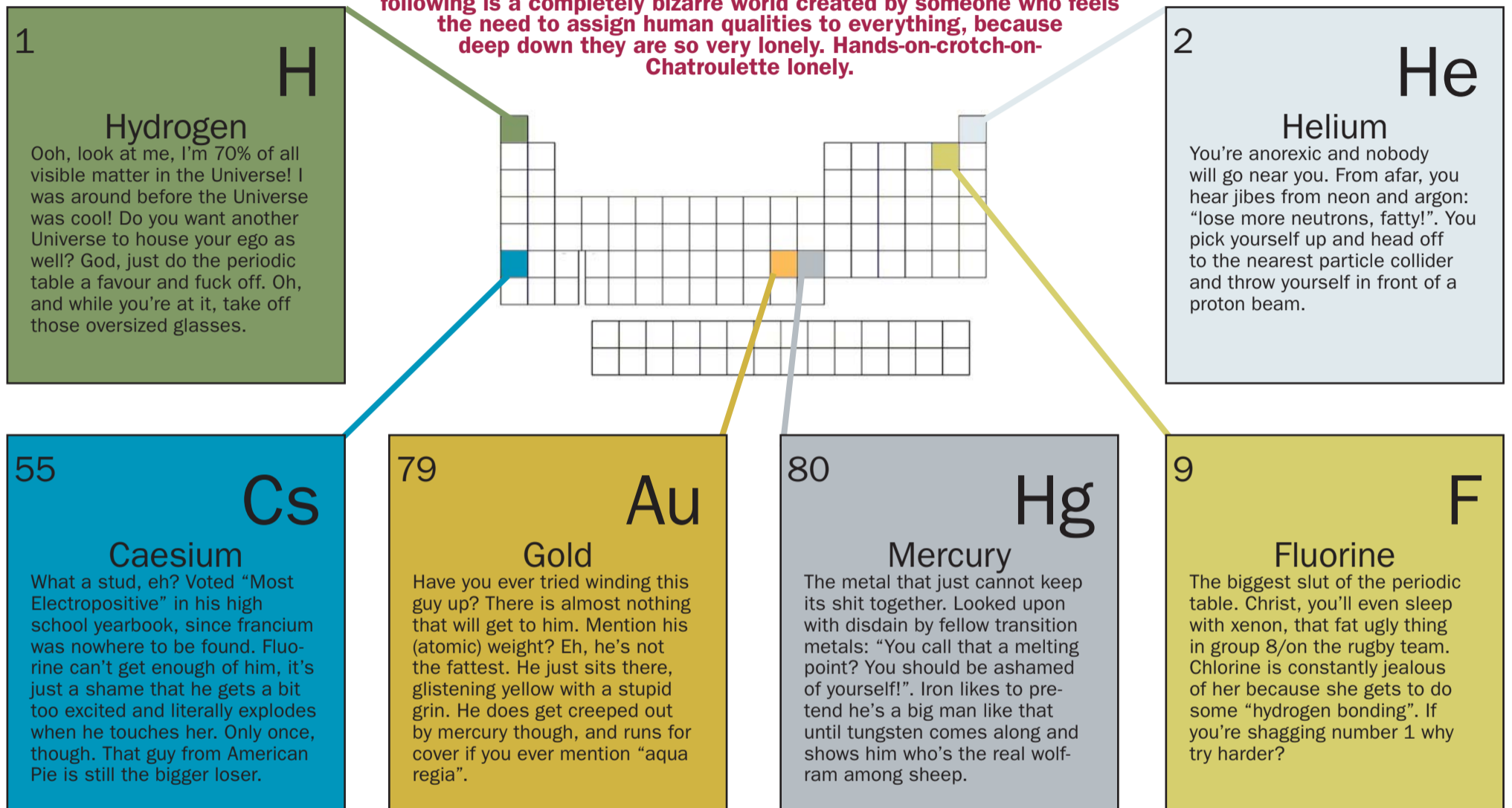
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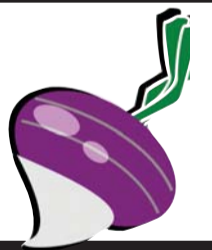
The Alternative Periodic Table

Chemical elements can't talk, no matter how much acid you take. The following is a completely bizarre world created by someone who feels the need to assign human qualities to everything, because deep down they are so very lonely. Hands-on-crotch-on-Chatroulette lonely.



the turnip

Hangman's Finest College News Source



Student emerges from Huxley after 20 years

A 40-year-old man reported to have a beard "as long as your mum is wide" was spotted exiting the Huxley building via Queen's Gate last Monday, having spent two decades finding his way out. After being stopped by security, who mistook him for a homeless person seeking shelter, he claimed to be an ex-student of Imperial who got lost after looking for the room he had a tutorial in.

Huxley's layout is notoriously confusing: room numbers run in an order not discernible without advanced mathematical knowl-

edge, resulting in the commonplace sight of undergraduates circling the building like pillocks.

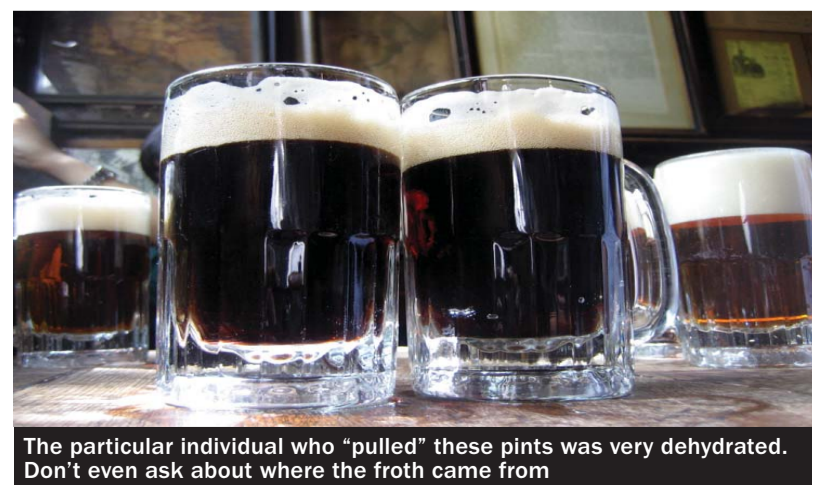
"I tried to ask people for directions, but everyone avoided eye contact like they were socially awkward or something. After two weeks I gave up trying to escape so I learned how to survive by sneaking into offices for food and water while their owners were out. I even stole the odd problem sheet to keep myself entertained."

The student is expected to receive counselling and be brought up to speed about the world's events since 1991, as per protocol for individu-

als who have been stranded from civilisation or travelled forward in time.

Currently Universal Studios is interviewing the man, with a view to make next summer's blockbuster: it has been described as "Castaway meets *The Terminal*, but with neither the humour, suspense nor Tom Hanks".

Channel 4 is also jumping on the bandwagon, with plans to commission a six-part survival series starring Bear Grylls. Bear Grylls celebrated the good news with an ice-cold pint of urine, noting that it still tasted better than Blackthorn.



The particular individual who "pulled" these pints was very dehydrated. Don't even ask about where the froth came from

HANGMAN

THE NEWS WITHOUT THE NEWS

G'ddafing a laugh? American Presidential candidate Herman Cain tries to recall if Libya is the pizza with the palm dates topping



The Illiterate Book Club

Felix may no longer have a Books section, but this will do. Probably. You can find reviews here. Obviously, we just judge them by their cover, but the only person that ever hurt was Dominique Strauss-Kahn: "She looked like she was giving me the eyes, I swear".

Heston Blumenthal at home

The cover of this book shows what appears to be a potential serial killer balancing food that he plans to devour after his latest victim is finished off. Then you realise, it's actually Heston Blumenthal. It is a little known fact that he was once banned from cooking outside of a television environment under the 'Protection of Animals Act' after marinating live chicken by firing peri-peri ammunition from a semi-automatic paint gun for a Nandos advert that never aired. He was also once in trouble after using the internet and finding an incorrect definition of 'spitroasting'. This was 10 years ago, and he has since sought psychiatric treatment. Nevertheless, this intimate journal documents his struggle to come to terms with the ban just as his career was just taking off. Blumenthal speaks candidly of how he would break down in tears before his toastie maker, after finding the instruction manual had been confiscated by the authorities. He attributes his lack of hair to a desperate attempt to cook with only a chicken fillet, a can of Lynx Africa and a zippo lighter. Although, in a funny twist of fate, this is now his recommended method of flame grilling chicken.

Horoscopes*

*New and improved since going on a pointless training course at the Cartier Polo

Aries

This week is anti-bullying week. You still have a completely reprehensible and pathetic personality and absolutely no physical presence at all. So your flatmates treat you like shit when you get home. This wouldn't be so bad if it weren't for the fact that you live with your parents.

Taurus

This week you post a facebook update about Skyrim. Notifications start popping up. 10 people like it! While looking at your profile you realise that everyone else has defriended you. The sensation of loss lasts for approximately 0.6 seconds longer than it takes Skyrim to load up again.

Gemini

This week, you decide to do a show on IC Radio. While chatting with your friends on air you remember an opinion you hold about the NUPSA. Just as you're about to air said opinion, the Union's Pre-crime team burst through the door and shoot you in the head.

Cancer

This week, you think to yourself how everyone warned you that every flat at uni would have one dickhead who no one liked, but now you're here and yours doesn't. When you walk into the kitchen everyone stops talking and looks away.

Leo

It's been three weeks into movember and all you have to show for it is Byron burger sauce stained fluff on your top lip. One the plus side, mothers of young families move their kids out of the way when you walk down the street. You love a good tease.

Virgo

This week, you are Theresa May. Yes! For some bizarre and unknown reason you still have a job. Seriously, no one likes you and you're not even that competent at what you do anyway. Somehow you manage to avoid getting fired. Irritating.

Libra

This week, you are offended by something you read. Awwwww, poor you, I feel really bad. Hang on, we just got an email in. It's a man who is starving and has a family to provide for. He said he is really sorry to hear about your plight. You complain about this horoscope.

Scorpio

This week, you realise that you're completely naked and standing in the middle of Oxford Circus, alternating between screaming at the top of your lungs and vomiting up a pale brown caustic liquid. The cold November air starts to bite and, shivering, soaked in your own bile, you die.

Sagittarius

This week, you go to the Union for a pint of snakebite. It's only 10 am but when you're Felix editor the rules bend to you. Blind drunk 3 hours later a wildly contentious diatribe arrives in your inbox. You put it in the comment section. Banter ensues.

Capricorn

This week, you start working on a group project. There are 4 of you and luckily you're not the smartest person in the group, or the dumbest or most organised. You coast through and are a good team player and get a good mark. Everyone else hates you. Fuck them.

Aquarius

You're eating in the chemistry café with your friends. When you're done, you get up and don't take your litter with you. YOU ARE A TWAT. IF I EVER FIND YOU I'LL KILL YOU BY RAMMING YOUR LITTER DOWN YOUR THROATS. The closest the Horoscopes get to Green Week.

Pisces

This week, despite the best efforts of your tutor to put you off, you decide to take an Imperial College Business School module as part of your degree. It nearly costs you your 2-1. Swearing to never do that shit again, you go into science academia. WIN!



First, you sacrifice your entire life to some morally bankrupt business venture to the detriment of your children's happiness, any respect from the male species, and any form of femininity (like you had that anyway). Then your sweaty suit goes for 0.2% of the value of some shitty Indian shirt worn by an Irish twot. AND, this is all for Charity, this is people being generous. Humiliated? You fucking should be. No wonder you're such a grumpy bitch.



Deborah Meaden's suit from Dragons' Den
 BBC Children in Need auction

Eddie Jordan's shirt signed by Formula 1 drivers
 BBC Children in Need auction

Item condition: **Used**

Time left: 3d 04h (20 Nov, 2011 20:01:01 GMT)

Current bid: **£225.00** [43 bids]

Place bid

Item condition: **Used**

Time left: 3d 04h (20 Nov, 2011 20:34:55 GMT)

Current bid: **£107,100.00** [117 bids]

Place bid

Enter £107,200.00 or more

Actual value: at least £2000

Actual value < 10 rupees

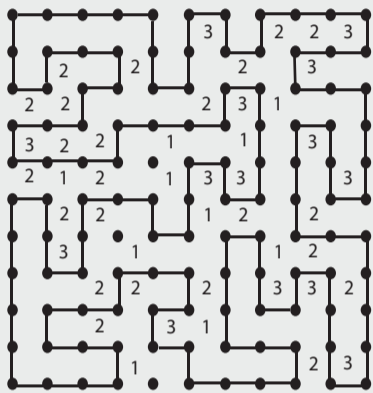
Puzzles Editor: James Hook

puzzles.felix@imperial.ac.uk

PUZZLES

Last Week's Solutions

Slitherlink



Crosswords

QUICK(ish) - Across 1. Tiger Lily 6. Cameo 9. Aroma 10. President 11. Tiger Woods 12. Prof 14. Trainees 15. Camera 17. Gaffer 19. Face card 22. Rout 23. Chopsticks 26. Entourage 27. Godly 28. Early 29. Ever ready Down 1. Toast 2. Georgia 3. Roadrunner 4. Imploded 5. Yields 6. Cain 7. McEnroe 8. Out of hand 13. Paper tiger 14. Tiger's eye 16. Earpiece 18. Flutter 20. Arcadia 21. Thrace 24. Stymy 25. Busy

CRYPTIC - Across 1. Samaritan 6. Clamp 9. Ad-lib 10. Ingenious 11. Fortissimo 12. Stow 14. Academia 15. Career 17. Pastry 19. Reckless 22. Anon 25. Bank Robber 26. Spare tire 27. Aorta 28. Leech 29. Strike out **Down** 1. Scarf 2. Malaria 3. Rabbit ears 4. Tailspin 5. Nagami 6. Cane 7. Apostle 8. Passwords 13. Back to back 14. Appraisal 16. Neckwear 18. Storage 20. Embargo 21. Rapids 24. React 25. Mesh

Chess

Astonishingly, black is in zugzwang after the move 1. Ba6!! Now no matter which move black chooses, he will be mated next move

It's Green Week, so your puzzles will have a 'green theme'. Yes, puzzles can make a point as well!

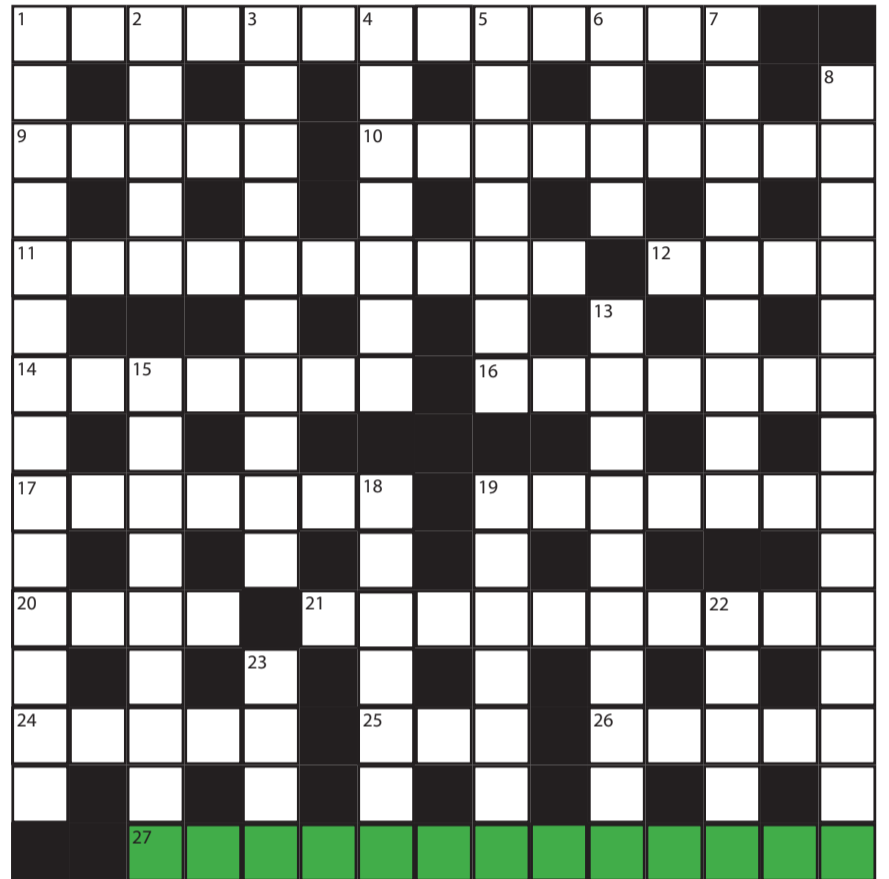
Crossword

Across

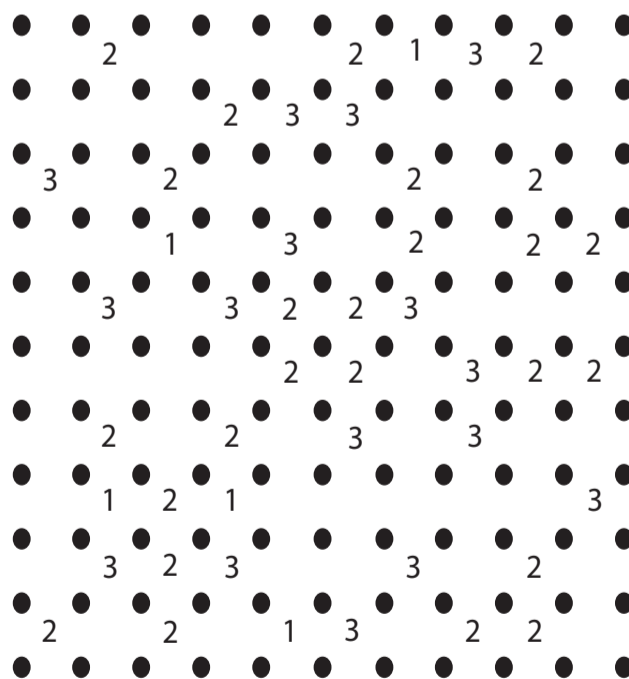
1. Be careful about how you behave; Irving Berlin musical (5,4,4)
9. Pulse-based location detector (5)
10. Country home of the world's largest crocodile (9)
11. Illuminator of new moons; Arthur C. Clarke 1955 sci-fi novel (10)
12. Eye infection; pig pen (4)
14. Large handkerchief (7)
16. Make anxious; destabilise a system (7)
17. Escape pipes (7)
19. Home of Lions, Tigers, Pistons, Red Wings (7)
20. Pay attention to (4)
21. Author of *The Rainbow*; *Lady Chatterly's Lover* (1,1,8)
24. Achieve; range (5)
25. Circuit; thighs when seated (3)
26. '82 musical famous for *It's a Hard-Knock Life* (5)
27. Green (13)

Down

1. Production company, films include *AI*, *Ocean's Eleven* (6,8)
2. Royal dynasty (5)
3. Stubborn; pragmatic (10)
4. Egg-shaped wind instrument (7)
5. Fruit of prickly stemmed plant (4,3)
6. Period of time; name (4)
7. Policy making committee of a Communist Party (9)
8. 90's sitcom - characters include Screech and Slater (5,2,3,4)
13. Oregon caldera (6,4)
15. Name for the Virgin Mary adopted by several cathedrals (5,4)
18. Distinguished academic (7)
19. Impassive or expressionless (7)
22. Group of 9 musicians (5)
23. Knife or razor used as a weapon (4)



SLITHERLINK



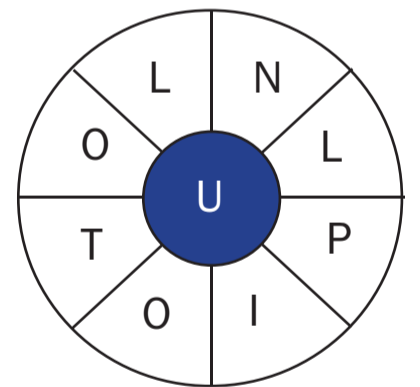
The aim with Slitherlink is to make one continuous closed loop by connecting the dots. The numbers in each square indicate how many edges of the square are part of the loop, so if it contains a "2", you know that two and only two out of four edges have lines.

That's all the info you need to get the one logical answer (though waiting a week to see the solution will also do). Answers to puzzles.felix@imperial.ac.uk, as the puzzles team receives one EU bailout package per correct solution.

Word Wheel

TARGET: 15

Make as many words of at least 4 letters as you can, always using the central one. **NO** plurals, conjugated verbs, comparatives or superlatives, because I said so.. There is always at least one 9 letter word.



Champagne Crossword Answers

Big thanks to everyone who took part, winners and answers below:

Cryptic Winner: Neil Hati-Kakoty

Across 1.Copperfield 7.Teetotaler 13.Disgraced 14.Alpha Centauri 15.Litchi 16.Arbital 17.Ear-nest 19.Get Off On The Wrong Foot 22.Bananas 23.Endorse 25.Run Into 27.Oven 28.Cosmetic 31.September 34.Aforeseen 35.Readapts 36.Slot 38.Cheeddar 40.Rollmop 43.Raiders 44.Scratching The Surface 48.Israeli 49.Lyonnais 50.Armpit 52.Sound Judgment 53.Intention 54.Resurgences 55.Pamphleteer **Down** 1.Coddle 2.Push The Envelope 3.Earthbound 4.Face 5.Endurance 6.Deafish 7.Top Drawer 8.E-mail 9.Overeager 10.Loudest 11.Reists 18.Offshore 20.Open Sea 21.Socrates 22.Buoyant 24.Deter 26.Nobel Peace Prize 29.Monarch 30.Chasm 32.Peter Out 33.Fender Bender 37.Difference 39.Retribute 41.Londoners 42.Presidium 44.Strauss 45.Tank Top 46.Kisser 47.Stoner 49.Logic 51.Etch

Quick Winner: Richard Worrall

Across 1.Hide And Seek 7.Kirk Douglas 13.Negotiate 14.Little Bighorn 15.Sparta 16.Familiar 17.In A Hole 19.Take With A Grain Of Salt 22.Hotline 23.Student 25.Detects 27.Yarn 28.As-terisk 31.Orchestra 34.Two-Handed 35.Noahs Ark 36.This 38.Centavo 40.Mittens 43.Omicron 44.Chitty Chitty Bang Bang 48.Parmese 49.Compadre 50.Bother 52.Chocolate Chip 53.Dark Horse 54.Crystal Ball 55.Empowerment **Down** 1.Honest 2.Dog Day Afternoon 3.Antithesis 4.Draw 5.Eyelashes 6.Killing 7.Kittiwake 8.Ruler 9.Debriefed 10.Unguaranteed 11.Lookout 12.Sander 18.Finessed 20.Notions 21.Assassin 22.Haystack 24.Union 26.Catcher In The Rye 29.Endemic 30.Knave 32.Cartoons 33.Paradise Lost 37.Big Brother 39.On The Ball 41.Trium-phal 42.Sobered Up 44.Cursory 45.Traipse 46.Ipecac 47.Arrest 49.Chela 51.Crow

Sport Editors: **Indy Leclercq**
David Wilson

sport.felix@imperial.ac.uk

SPORT

Felix Sports League

...where do you stand?



Team	P	W	D	L	F	A	Diff	Index
1 Badminton M2	2	2	0	0	14	2	12	5.00
2 Basketball M1	3	3	0	0	197	144	53	5.00
3 Fencing W1	2	2	0	0	270	137	133	5.00
4 Hockey M2	1	1	0	0	4	1	3	5.00
5 Hockey W1	3	3	0	0	9	4	5	5.00
6 ICSM Badminton M2	1	1	0	0	6	2	4	5.00
7 ICSM Football M2	3	3	0	0	11	6	5	5.00
8 ICSM Hockey W2	2	2	0	0	10	1	9	5.00
9 Lacrosse W1	2	2	0	0	36	3	33	5.00
10 Netball W1	3	3	0	0	108	75	33	5.00
11 Rugby M2	2	2	0	0	47	13	34	5.00
12 Tennis W1	1	1	0	0	3	2	1	5.00
13 Ultimate Frisbee 1	1	1	0	0	15	0	15	5.00
14 Tennis M2	3	2	1	0	22	14	8	4.00
15 Hockey W2	2	1	1	0	4	3	1	3.50
16 Squash W1	2	1	1	0	6	2	4	3.50
17 Badminton W1	3	1	2	0	15	9	6	3.00
18 Fencing M2	2	2	0	1	368	216	152	3.00
19 Rugby M1	4	3	0	1	116	58	58	2.75
20 Badminton M1	3	2	0	1	18	6	12	2.00
21 ICSM Hockey W1	4	2	1	1	23	9	14	2.00
22 Football M2	3	1	1	1	9	9	0	1.00
23 Basketball W1	2	1	0	1	117	69	48	0.50
24 Football W1	2	1	0	1	8	11	-3	0.50
25 Golf 1	2	1	0	1	5.5	5.5	0	0.50
26 ICSM Badminton W1	2	1	0	1	8	8	0	0.50
27 ICSM Football M1	2	1	0	1	4	6	-2	0.50
28 ICSM Netball W1	2	1	0	1	82	72	10	0.50
29 ICSM Netball W2	2	1	0	1	52	50	2	0.50
30 ICSM Netball W4	2	1	0	1	47	50	-3	0.50
31 ICSM Rugby M3	4	2	0	2	88	90	-2	0.50
32 Lacrosse M1	2	1	0	1	34	18	16	0.50
33 Squash M3	2	1	0	1	3	7	-4	0.50
34 Tennis M1	2	1	0	1	15	5	10	0.50
35 Futsal M1	4	2	0	2	18	27	-9	0.50
36 Football M1	2	0	1	1	1	3	-2	-1.00
37 Football M3	3	1	0	2	7	8	-1	-1.00
38 Hockey M1	3	1	0	2	6	4	2	-1.00
39 ICSM Rugby M1	3	1	0	2	52	104	-52	-1.00
40 ICSM Rugby M2	3	1	0	2	32	135	-103	-1.00
41 Netball W3	3	1	0	2	74	67	7	-1.00
42 Squash M1	3	1	0	2	3	12	-9	-1.00
43 Table Tennis M1	3	1	0	2	23	28	-5	-1.00
44 ICSM Netball W5	4	0	1	3	25	185	-160	-2.50
45 Fencing M3	1	0	0	1	120	130	-10	-4.00
46 Fencing W2	1	0	0	1	84	129	-45	-4.00
47 Hockey M3	3	0	0	3	3	11	-8	-4.00
48 Hockey M4	3	0	0	3	0	24	-24	-4.00
49 ICSM Badminton M1	1	0	0	1	0	8	-8	-4.00
50 ICSM Basketball M1	1	0	0	1	46	64	-18	-4.00
51 ICSM Hockey M1	3	0	0	3	6	26	-20	-4.00
52 ICSM Hockey M2	3	0	0	3	3	19	-16	-4.00
53 ICSM Hockey M3	1	0	0	1	0	3	-3	-4.00
54 ICSM Hockey W3	1	0	0	1	0	7	-7	-4.00
55 ICSM Netball W3	3	0	0	3	26	106	-80	-4.00
56 Netball Women's 2nd	1	0	0	1	14	41	-27	-4.00
57 Rugby M3	3	0	0	3	22	57	-35	-4.00
58 Squash M2	1	0	0	1	0	5	-5	-4.00
59 Squash M4	1	0	0	1	1	2	-1	-4.00
60 Table Tennis M2	1	0	0	1	5	12	-7	-4.00

The (actual) League table is back! It doesn't have all the teams in it yet, as some of you haven't played yet...but will be updated every week.

5 points for a win | 2 points for a draw | -4 points for a loss

Holloway Bears get mauled by IC

Mike Peacock

American Football

Imperial Immortals	19
Royal Holloway Bears	0

The Imperial Immortals American Football team stormed through for another victory this Sunday with a hard fought battle against the Royal Holloway Bears. At their last meeting the Bears had won by the closest of margins (scoring a field goal in 3rd overtime) so the Immortals stepped on the field with something to prove. With the momentum of last weeks win behind them the Immortals finished the game with their first shut-out of the season and a well earned 19 points.

The first half went very well for the Immortals, receiving the kickoff and driving the ball up the field repeatedly with power running by Tino Millar; breaking a number of tackles and carrying two of the Bears Linebackers into the endzone to score the first touchdown of the game. However, there were moments that the Immortals struggled against some powerful players, needing to make long yards on third down. With the weather perfect the team could turn to its passing game; Michael Peacock making an important catch in the Bears red zone to ensure first down. The catch of the day however came just before the half, with the Immortals Quarterback Bob Wolstenholme having plenty of time to throw a 40 yard pass to rookie Wide Receiver Max Hollister who was free to run it to the endzone for the last score of the half.

The Surrey offense struggled all game; having a number of players injured by the hard hitting Immortals defense. Not only were the Bears unable to keep the Defense away from their quarterback, any completed pass or run was shut down quickly by fast pursuit and



Not to be clichéd, but... Hut! Hut! Hike!

quality tackling. To top off their awful half, the Bears second choice Quarterback, under pressure from rushing lineman Temi Ladega, threw a lofted pass straight into the arms of waiting linebacker Dexter Valencia who returned for the first defensive touchdown in Immortals history. With the Surrey offense pushed back to their touchdown line after kick-off, Imperial hopes for a safety (sacking the quarterback in their own endzone) were dashed when the half was called and a down-cast Holloway team stumbled off the field with the score at 19-0.

However in the second half Royal Holloway stepped up their game. The Immortals clearly were suffering from over-confidence as the offense seemed lackluster; failing to drive the ball repeatedly and having to punt a number of times. Meanwhile the Holloway defense showed aggression and fought incredibly hard for every tackle, with a solid effort to try and pull Holloway back into the game. Even with this Imperial still came close to scoring again; until Bob Wolstenholme threw yet another ill-conceived pass straight into the arms of a Holloway Linebacker. Thankfully he was tackled to the ground immediately before any yards could be made. The defense maintained their

dominance throughout the second half, with Holloway losing their Centre due to injury it was even easier for the Immortals to blow-up any potential running plays in the Holloway backfield. In fact, this game had the highest number of interceptions and turnovers as the Immortals forced the Bears to keep making mistakes. Veteran Cornerback George Barnes making a fantastic interception but was unable to run it in to the Bears endzone due to age and lack of pace.

In the final quarter of the game Holloway realized they had been thoroughly beaten and instead turned to poor sportsmanship. Unfortunately resorting to poor play and questionable behavior in an attempt to force the Immortals to their level. Thankfully, the Imperial team remained calm and played the football they wanted to play; finishing the game with a shut-out.

The game was incredibly hard fought but the team look forward to their game next Sunday against the Reading Renegades. If you'd like to get involved in the sport the team is currently looking for physically large guys to play as linemen. If you think you would like to give it a go, message us by searching 'Imperial Immortals AFC' on Facebook or Twitter.

Selected results

in association with Sports Partnership



Wednesday 16th November

Sport	Team 1	Score	Team 2	Score
BADMINTON	Men's 3rd	123	Royal Holloway 2nd	5
	City University	123	Medicals Women's 2nd	2
Men's 1st	Essex 1st	7	Canterbury Christ Church 2nd	1
	Brighton 1st	0	Medicals Women's 3rd	0
Women's 1st	LSE 1st	3	Medical Men's 2nd	4
	Medicals Men's 2nd	4	Royal Holloway 2nd	4
BASKETBALL	Men's 3rd	1	Medicals Men's 1st	2
	Brunel 3rd	4	Royal Holloway 2nd	3
Women's 1st	Chichester 1st	59	Medicals Men's 3rd	31
	Chichester 2nd	51	Westminster 1st	36
FENCING	Women's 2nd	0	Men's 1st	8
	Royal Holloway 1st	3	Brighton 1st	4
NETBALL	Women's 1st	1	Men's 3rd	2
	LSE 1st	4	LSE 1st	2
RUGBY UNION	Men's 1st	25	Men's 1st	10
	Chichester 1st	24	Cambridge 1st	7
TABLE TENNIS	Women's	5	Women's	5
	Kings 1st	0	Kings 1st	0
TENNIS	Men's 2nd	13	Men's 2nd	13
	LSE 1st	4	LSE 1st	4
SQUASH	Men's 1st	8	Men's 1st	8
	Brighton 1st	4	Brighton 1st	4

SPORT

Captains' Interviews: Rowing Club Captain



Essential info:

Patrick Hudson, 22

75 kg, 181.5 cm, arm span: 186 cm

3 years' rowing experience

Information Systems MEng Undergrad

Likes: Flat water and sun to row in

A decent cooked breakfast
after training

Montage videos with
bangin' soundtracks

Dislikes: ULBC, DUBC, Brookes
Union paperwork

Indy Leclercq Sport Editor

I hope that the avid Sport readers (you know who you are) have been enjoying the Captains' Interviews series – because we've decided to go weekly on you. After having the Rugby first XV captain last week, we turn to an equally popular (and equally gruelling) sport. Live from the Boathouse in Putney, Rowing Club Captain Patrick Hudson answers my questions.

I have always been slightly in awe of rowers, with their steely, up-at-the-crack-of-dawn training ethos and their sheer drive for success. Somewhat inevitably, the first question I ask Patrick revolves around this: where does he find the motivation to get up at such scarily hours to train?

"I don't know where the motivation comes from...Possibly the fact that I live at the Boathouse and my crew will bang on my door to get up?" Ah, it's all about location then? Not quite, he says: "Seriously though, it's a rewarding sport and we do everything we can to win – anything less wouldn't be good enough." Impressive stuff.

My next question is about the Boat Club itself. Historically, it is one of Imperial's strongest sporting outfits, with the Putney Boathouse a testament to that fact. What is the level of the current senior squad? How has the club fared in recent years?

Patrick proudly admits that "last season saw our best performance in the last few years":

"A 4th place out of 300 for the girls at Women's Eights Head of the River; winners of the University Pennant and four crews in the top 25 out of 400 at the Men's Eights Head – no club matched that achievement, student or otherwise. Those successes were followed by wins and strong performances at the Henley Regattas in the summer. The current squad is in great shape and looks set to build on last

The current squad is in great shape and looks set to build on last year's achievements

year's achievements."

I ask him to elaborate further; what are the main objectives for this season?

"The most prestigious events for us are the Eight's Head races in March, then Henley Royal Regatta and Henley Women's Regatta in the summer. Building the fastest possible crews to compete and win at these regattas is our focus." What about BUCS points? "BUCS is good fun," he says, "and we'll put in a strong performance to do our bit for the uni, but it's not our ultimate goal." Sport Imperial do have some lofty objectives for this season, but I feel that Patrick and the boat club

will deliver – his hunger for winning is unmistakable.

Moving on to something slightly different, I ask about an association that a lot of people make in their minds: the one between rowing and the Olympics. It's a very exciting time for any sportsman-or-woman to be in London; will any Imperial rowers be involved in the Games?

"Mel Wilson from Imperial is in the Women's Quadruple Sculls and Adam Freeman-Pask, an alumnus who still rows with us, is also in the frame for a seat. Both Mel and Adam competed at the World Championships this year." After my noises of wonder and excitement subside, Patrick continues: "A few club members are volunteering at Dorney Lake and for the rest of us, or those lucky enough to get tickets, we'll be cheering for GB from the bank." Personally, I'll be cheering on any Imperial athlete who makes it to the games – in any sport.

Speaking of cheering, what of the social side of rowing? We don't often see the oarpeople (not sure if that's PC or not? – Ed.) around the union, as they tend to be down by the boathouse anyway. Does he have the time to take a breather and enjoy a drink with your rowing mates, I ask – or is the training regime just too strict?

According to Patrick, it's about getting the balance right: "Training is demanding but there's a big social side built around the Boathouse and the fact that most of us live in Putney. We normally save the mad-for-it nights out

Cryptic Crossword 1,502

1		2		3		4		5	6	7	8
							9				
10								11			
12							13				
						14					
15						16					
					17						
18	19								20	21	
								22			
23								24			
								25			
26								27			
28							29				

Across

- Mould at inside of house (8)
- Space-based revolutionary culture in US city (6)
- Alien from the east takes break outside from SQTs (7)
- Young one at half 5 beat with cane (7)
- Bereaved one having no outlet (6)
- Large block of time swallowing fishy oil (8)
- Urgency that knee develops partially (4)
- Leader of circus to call boy (10)
- Manager begins to get benefits (4,6)
- Student workshop bar (4)
- Boogie to bore boy nowadays (3,5)
- Rough, very dry, heartlessly anal (6)
- Removed merchandise outside for battle (7)
- Staring intently from sheltered confine (7)
- Northerner surrounded by stitch-up with time for knife (6)
- Even Steven's breathless from warmth! (4,4)

Down

- Give up! Whether I win lotto or change, Ireland misses out (5,2,3,5)
- Place setting in Electrical Engineering for theatre performance (7)
- Not as much to do in class (6)
- Mission for army's king (4)
- Whole of utmost corruption extremely abnormal (3,5)
- Madrid to win for logical one (7)
- Odd beetle trapped with arachnid's legs following hand in epistle about God's words (3,5,2,5)
- Gloated of design for sluice (9)
- I manage lots of money, having more elaborate home inside (9)
- Headless Marquis grasps hat in exciting adventure (8)
- Cravin' medicine (7)
- Coffee encapsulates Imperial regular structure (7)
- Enemy without initial revenge not enemy (6)
- Colour nearly making music (4)

for after races." He then lets me in on a further piece of (confidential?) information: "ICSMBC were kind enough to expose the weaknesses in our drinking ability at our joint pub crawl recently . . . maybe we should work on that, but we wouldn't want to steal their thunder." Wise words from the captain there.

Finally, as is customary, I ask him a bit about himself. How did he get into rowing? "I started rowing as a beginner in my first year at IC by default – I was too fat at the time to make the squash team. It's incredibly addictive and I like the potential for personal

development as well as teamwork." I can't help but think that squash lost out somewhere along the way.

What have his personal achievements been so far, then? He is hesitant to make much of this question – unsure whether people are going to be interested or not. I tell him that most students are interested in seeing the people behind the clubs. "Well, I won three BUCS gold medals last year, and came 23rd at Men's Eights (also in 2011) winning a pennant.

On the back of that, I think it's safe to say: bring on the races! Good luck to ICBC for the rest of the season.

SPORT

Rugby: 1st XV edge out Chichester

Third win in a row sees 1sts go top of their league

David Wilson

Rugby

Men's 1st XV	28
Chichester 1st	24

"[Chichester] were using their physical game to good effect"

Travelling the long distance to Chichester and producing a convincing performance against a physical minded team is not an easy feat and as a result this fixture has, in recent years, been a tight affair. Unsurprisingly, the most recent clash was no different, yet the grit and determination shown by Imperial was typical of the never say die attitude which this side has shown over the past few years.

Imperial arrived well ahead of kick off and were able to enjoy a relaxed and lengthy warm up, despite their ideal preparation, it was Chichester who struck first. After Imperial put good pressure on the Chichester scrum within the Imperial 22 meter line, the ball was recycled and Chichester's full back cut between George Lane and Michael Floyd in the centre to go through and

score, with the conversion added. Going behind so early did not spring Imperial to life but they good pressure deep within Chichester's half allowed fly half James Cox to take a penalty opportunity and cut the deficit to four points. Although Chichester may not have had the technical acumen which Imperial possessed, they were using their physical game to good effect around the fringes of rucks. Their physical endeavour was rewarded with a second try which was again converted. Imperial struggled to find an opening and exasperated coach Brimah Kebbie implored them to use the open side to greater effect. After good pressure within the Chichester half, Imperial were able to use their driven lineout, caught by Chris McGeough, to good effect and come away with five points courtesy of Sean Baker.



Imperial lost full back James Hayward before halftime to a neck injury but were able to hold out until the break trailing by just six.

Again it was Chichester who had the upper hand at the outset of the second half; despite this good work by the front row of James Scaife, Roby Kyle and Simon Fenton had the upper hand in the scrums whilst openside Jack Flanagan was constantly committing multiple defenders to bring him down. Imperial scored their second try of the match through replacement Josh Lowe but Chichester were not deterred and a long range effort in order to lead 21-13 going into the last twenty minutes. Imperial knew they had a game on their hands

and needed to dig deep to rescue their game. Wingers Joe Weddon, who was named man of the match, and Syarif Hertog were stretching Chichester out wide and ultimately it was superior fitness which proved to be the decisive in determining the match.

Imperial spread the Chichester defence on the open side before switching back to the blind side and slick hands allowed replacement Olisa Ufodiama, on for Michael O'Connell, to score in the corner.

Imperial gave away a needless penalty within their own 22 which Chichester's full back duly sent over to cushion their lead. Sensing the game was still alive, Imperial surged up the pitch after the restart and James Cox went over in

the opposite corner to cut Chichester's lead to one point with less than five minutes to go. Upon winning a penalty within their own half, Imperial kicked for territory.

David Wilson shrugged off the average chat directed at him by Chichester supporters at the lineout which was won by Charlie Esberger, Imperial then put on an impressive drive from outside the Chichester 22 with Ufodiama at the back going over for his second try to give Imperial the lead for the first time in the match, with one minute to go. Imperial wound down the clock and came away with an impressive victory, which will hopefully spur them on for the rest of the season.

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