

FELIX GRADUATION PULLOUT INSIDE

FELIX

"Keep the Cat Free"

18/10/13
Issue 1556
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Prince Harry Visits Imperial

Aemun Reza

News Editor

The Royal British Legion Centre of Blast Injury Studies (CBIS) officially opened at Imperial College today (Oct 17). The CBIS held its second networking event in the Royal School of Mines and invited HRH Prince Harry to unveil the centre.

The CBIS is a charitably funded research centre between the Royal British Legion, Imperial College and the Ministry of Defence and was established in 2008, under the name 'Imperial Blast'.

The aim of the centre is "to improve the mitigation of injury, develop and advance treatment, rehabilitation and recovery in order to increase lifelong health and quality of life after blast injury", as quoted by Professor Anthony Bull, the Director of CBIS.

The networking event also included lectures about blast injuries and different aspects of the research taking place at the centre.

Professor Anthony Bull opened the event with an introductory talk discussing the aim of the centre. The morning half had lecturers such as Professor Sir Simon Wessely, Dr Mazdak Ghajari and Major James Singleton. The talks ranged from myths of military mental health and traumatic brain injury to battlefield injury clinical research at CBIS.

During the intermission, HRH came to unveil the centre and said a short



IMPERIAL COLLEGE LONDON

Prince Harry giving a speech about how he wouldn't have got into Bioengineering but settled for the army.

speech addressing how important the research is at the centre. He was also given a tour of the Imperial Labs in the Royal School of Mines building.

There was also a poster competition for research for PhD students and post-docs with a £100 first prize and 2 runner-up prizes of £75.

The second half of the event included lectures given by Surgeon Captain Mark Midwinter CBE, Wing Commander Alex Bennett, Dr Tobias Reichenbach and Dr Spyros Masouros. Topics included defence rehabilitation research, lower extremity blast injuries, the effect of blast induced traumatic brain injury on hearing and measuring injury burden and outcome parameters in combat trauma.

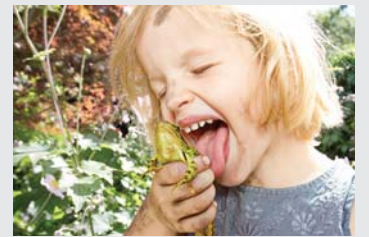
The event was open to all students and staff who expressed an interest to attend and that registered for the event.

One famous attendee was Bobby Charlton, the former England football player and former Manchester United player.



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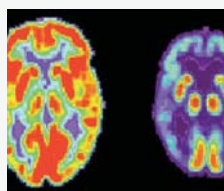
Get rich quick, YouTube style! **38**

EDITOR'S PICKS

SCIENCE

Alheimers

Delving into the developments in neurological research, is a possible cure for Alheimers on the horizon?



COMMENT

This week

Confessions of a GTA Part II: GTA means Graduate Teaching Assistant. Our columnist is back with more tales from the land of tutorials...



ARTS

Christie's

Our "undercover" reporter goes to an auction at Christie's!



SUB STREAM



This Friday enjoy a live DJ set from Tom Fitzgerald and Jordan Ford, available to stream on STOICTV.com and ICRadio.com from 21:00. Looking at house music from its disco roots through to modern UK bass.

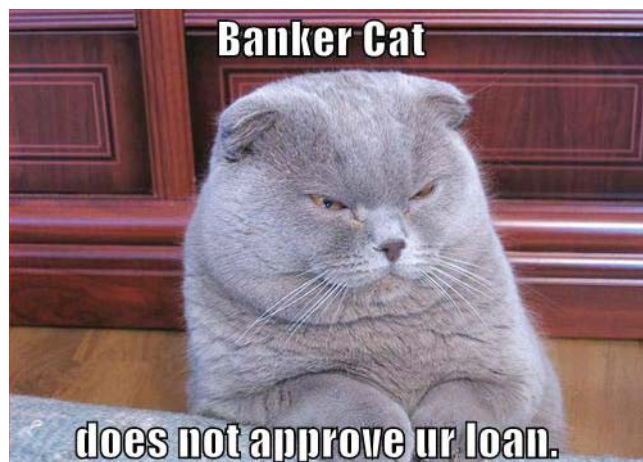
IC Radio and STOIC members can join us live in the studio for the set in our studios in the Union's West Basement.

Live music is becoming a big part of your student radio station at Imperial. If you want to get involved as a performer, web developer, sound engineer or hardware engineer contact icradio@imperial.ac.uk or stoic@icradio.com.

Erratum

We had a few errors in last week's paper. Do you want to help catch the errors before they're printed? Join the copy editing team :) email felix@imperial.ac.uk

LOLCAT OF THE WEEK: More from teh Lolcat editor



Prince Harry!



Joseph Letts Editor-in-Chief

Another week gone, another issue produced! I think we're starting to get the hang of this newspaper thing!

The big story this week of course was Prince Harry's visit to the South Kensington Campus (see page 1). Of course while HRH Prince Harry was visiting the Centre for Blast Injuries studies our very own Tessa Davey (*Comment*) was sent away by her department so she couldn't even see her work being presented to the Prince, how unfortunate is that (page 12).

Aside from visiting royals and lots of rain the other big thing in the Felix office this week was our preparation for next week's Commemoration day ceremonies. Inside this week's issue you'll find a Graduation pullout, something you should give a read even if you're not graduating this year, it contains many pearls of wisdom. Of course if you're not interested you could always pass it on...

In addition to all of this excitement the Union has had some activity of their own, as well as getting ready for their careers fair and hosting "The Great Soc Off" on Thursday (yesterday) night the Union are preparing for the commencement of this terms elections. The elections



IMPERIAL COLLEGE LONDON

begin tonight (for more information go to imperialcollegeunion.org/elections).

The elections (see page 3) are to elect a variety of part-time officer roles at the Union including the Ordinary Members of the Union Council (giving the winner a say on the formation of Union policies; more important than you might think), Liberation Officers, Course Reps and Year Reps. You should vote, not because people (like me) tell you to, and not because of the gentle prods you receive by email, but

because you truly do have a chance to make a difference with your vote.

As indicated by our previous NSS performance many students with grievances against the system keep to themselves over the course of their degree and then complain bitterly at the end. However if you would prefer to highlight problems you are having and trigger changes that will happen during your time at Imperial, this can only be achieved if you vote the best candidate into office, so give it a shot!

THIS WEEK FELIX WAS BROUGHT TO YOU BY

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NEWS

Higher Education News

Warwick



Last year, feminist students at Warwick University over exaggerated their uproar in response to a semi-naked calendar produced by female student rowers to raise money for the Macmillan Cancer Charity. This year, they shed the remaining garments in defiance!

Labour



Yesterday, Labours new spokesperson for women discovered that a national newspaper was offering a handsome cash sum for pictures of her from a previous life! It appears that Gloria de Piero has also indulged in a spot of artistic clothes shedding. She raises the concern that something she did when she was a young student may stand in the way of her serving her community and becoming successful in politics. Or will it?

Degrees from top institutions

You've graduated; the future's looking good, the world is your oyster. Or is it? Political commentator, Anna Claeys says a degree from a top university doesn't open more doors.... anymore. Being an intern has become a possible rite of passage to the job you want. But be warned! You may land your perfect intern position with a leading law firm only to discover that they have forgotten all about you and no one knows what to do with you. Excellent CV material! 300 applications later, you finally get an interview and they ask you to engage in a dance-off for the position. Or another interviewer tells you that you don't look right for the job. Still, it could be worse, you could be asked to compete in a Boris Bike Race to win a job.

First Union Council Session of the Year

Maciej Matuszewski

Reporter

The first meeting of the Union Council was held in the Union Dining Hall last Monday. The Council, consisting of over two dozen student representatives – including the Management Group chairs and Constituent Union presidents, is the main policy making body of the Union and is subordinate to only the Trustee Board.

While most of the meeting consisted of start of year reports from senior Union officers there was also a discussion on the Union's policy towards under 18s. Campaigns Officer Christopher Kaye raised the point that current Union policy of barring under 18s from the Union for ticketed events such as the Freshers' Mingle might leave them feeling left out. A number of Council members who started their courses at 17 confirmed that they had often felt isolated and secluded from the wider student community in their first year.

Union President Paul Beaumont, however, said that the policy was in place as a safeguard against any incident with underage drinkers. He reminded the Council of the strict government alcohol licensing regulations, saying that "if there was an incident with a 17 year old the Union's license would be taken away". Marissa Lewis, Deputy President (Welfare), said that every effort was being made to make younger freshers feel included – pointing in particular to the success of this year's Alternative Mingle – "a free event with ... non-alcoholic refreshments". Beaumont also added that the Union is keen to have events which appeal to both drinkers and non-drinkers – confirming that he does not want to see a divide form between the two groups.

The next meeting of the Union Council will be held at 18:30 on Tuesday, October 29 in the Union Dining Hall. All member of the Union are welcome to attend and contribute to the discussions, though only members of the Council have votes. Nominations are open until Sunday, October 13 way for the 16 Council Ordinary members, the directly elected student representatives on the Council. Voting itself opens Friday, October 18 and closes on Tuesday, October 22.

Union Elections now open

Faculty	UG or PG	No. of positions
Faculty of Engineering	UG	4
	PG	2
Faculty of Natural Sciences	UG	3
	PG	2
Faculty of Medicine	UG	3
	PG	1
Non Faculty	-	1
Course Reps	-	One per masters course
Year Reps	-	2 per each year

Nida Mahmud

News Editor

Union elections are kicking off again on Friday 17 at 12pm, they will be open till Tuesday 22 at 12pm.

These elections are for Reps and Union Council. This year 464 students in total have stood for elections for 115 positions. This shows an increase to the number of total candidates that ran last year, which was 390, even though last year there were more positions available at a total of 139.

Rebecca Coxhead the returning officer stated "This is a brilliant way to get involved and be part of ensuring



student views are expressed to the right bodies to make changes for the benefit of students. Whether you want to be involved with representing your Year Group or Master's cohort to your Department, or be one of the 'voice of the students' in Union Council, we hope this guide will help you."

So make sure you vote if you want your voice heard.

Sponsored Editorial

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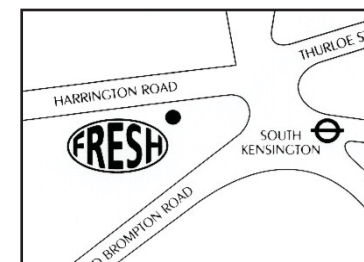
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FEATURES

Editors: **VACANT**
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Project Wild Thing - Coming to

George Goldberg
Reporter

David Bond is a worried man. When he was a child, he spent his time outdoors in the natural world, but now all his children do is stare at screens and obsess with big brands. He sets out to change things, appointing himself Marketing Director for Nature. This witty and irreverent documentary follows his antics as he attempts to launch a national marketing campaign to get children back enjoying the great outdoors. Described as “Like David Attenborough and Morgan Spurlock got drunk and had a baby” by one watcher at the Sheffield Doc Fest where the film premiered this summer, it’s sure to be an interesting watch.

Felix caught up with the man himself, fresh out of the BBC newsroom where he’d been preparing an edit of the film for Newsnight.

The film release is quite soon now, so how are the preparations going?

It’s going really well. We’ve got over 50 cinema screenings, which for a documentary is really an amazing release, and we’re going out all over the country, which is really amazing. We’re really pleased to be playing at Imperial. We’ve had a couple of interns working on the film who were at Imperial, so we feel quite connected. Noah Baker and Andrew Mehigan were both interns with us. So that’s one of the reasons we rang Imperial Cinema – “you should screen it as your guys have been working on it”.

The preparations are good, we’ve got loads of events going on at the different screenings. It’s been a hell of a ride. It’s been 3 years in the making, so it’s been pretty terrific.

I love the style of the trailer, the idea of socking it to the big brands in a language they understand. Since you are setting yourself up as the Marketing Director for Nature, what’s your elevator pitch?

It’s the ultimate product. It’s fun, it’s free and it’s good for you. And there’s almost nothing in the world you can say that about... except maybe sex, although that’s not always true for sex even.

Why did you take the approach of a big brand to the idea?



GREEN LIONS

I’ve got two young kids, so I noticed that they are much more into the telly and computer games and toys than going outdoors. When I get them outdoors, they really love it. As a product, they love consuming it and they really enjoy it, but they don’t choose it, and that struck me as probably a branding problem. I wanted to compete with the brands that they do choose, even though they don’t enjoy them as much as going outdoors. They do choose Disney and Nintendo and Apple and CBeebies. Partly that’s because the stuff that those guys have got to offer is not necessarily good for them but quite addictive, but it’s partly because there’s a lot of advertising and branding that goes on, around, well in the case of Disney they own Marvel now, so everything my son’s got is Spider Man now – he’s kind of saturated with the Marvel Brand, so I guess I wanted to see what it would look like if I tried to saturate his life with the nature brand, whether it would have an effect.

When you were doing all this, did you find anything very surprising with your experience?

There’s some things that people think about nature that really aren’t true. People think that it’s the preserve of the wealthy, the middle classes, to go frolicking in nature. Actually we discovered that the disconnection of children from nature cuts across class, wealth and geography. You’d like to think that people in rural places are really well connected with nature and that people in cities aren’t, but that’s

actually not true, in fact it’s slightly the other way round according to a study published on Wednesday by the RSPB.

Also, the discovery how universally loved it is as a product, how weirdly we don’t choose it as it has been displaced by these other better marketed products.

Those were the two big things that struck me – that nature is a product, a thing to go and consume, (there’s something weird about describing it as a product because it’s free and we’re part of it in a sense), but at the same time, being able to set it up and talk about it as an option for enjoyment. A kid would have a pie chart for what they do, and nature, the outdoors, would be one chunk of that. And I guess what I saw my job as doing was to try and grow that segment of the pie chart. And I just loved discovering just how much children love it, and adults of course. Everybody loves being outdoors, but people don’t choose it, and I’m convinced that’s a kind of marketing and branding problem.

This film has got quite a wide release for a documentary? How did you manage it?

We came up with the idea, and raised money from various sources, including BritDoc and Channel 4, and some private places, including the National Trust, the RSPB. We were tremendously lucky in raising the money to release it. In terms of getting the release, it’s just got to go down well. We played it at the big

European documentary film festival in Sheffield (Sheffield Doc Fest). Lots of buyers came and saw it there, it was a packed house, and people reacted really well. It’s funny because people laugh when they watch it. I don’t think people were expecting it to be funny. I think we were quite lucky that we managed to pull that off, because it’s a really serious issue about how we are going to connect with the environment in the future, and whether our kids are going to give a toss whether species die out or not. So it’s a heavy subject and it’s also got an element of heaviness in it because it’s about what we ought to do, it’s got a bit of a government information feel to it – that you ought to eat 5 a day, you ought not to smoke, you ought to go outdoors, but I think we managed to avoid it feeling like a film that does either of those two things, either that is really heavy about the issue, or feels really preachy, by just having a lot of fun making it. And also cooking up this slightly crazy caper where I tried with no money and not very much time, to do a nationwide marketing campaign for a nonexistent product which we cooked up. Well, it’s out there, but we employed ourselves as it’s marketing directors.

Apart from you, who’s the team behind it?

It’s me and my longtime producer who I worked with on a number of films, Ashley Jones. Then the core team is Lorraine O’Donovan and some camera people and editors who come and go, but really the core team is just three of

us. We have some researchers, which is why we worked with people from Imperial, although Andrew was also assistant producing. And then now, obviously, we’ve got publicists. So it’s a really long and difficult process, but the core team is really quite small.

What would you say inspired your documentary style?

I really love documentaries that are irreverent, and fell like an adventure. I really like what Morgan Spurlock and Michael Moore do, and I’m really influenced by that kind of campaigning, active film making. I’m a big fan of the Yes Men. On TV I really love Louis Theroux. In terms of the look, we’re just so lucky with cameras. We shot it all on a C300 camera, which is around £10,000. Ten years ago it would have been a £200,000 camera. And then of course we chose the visual style of the animations – there are animated sequences which are very lively and quite humorous and light, so rather than going through a series of documentary scenes to explain the scientific benefits of nature, we just go into a 90 second animation about it.

What is the big goal of what you want this to achieve with this film?

The creation of this film has brought into existence this outfit called the *Wild Network*. It’s a network of organisations and individuals who all want to campaign to get children more connected with the outdoors. It includes the National Trust, the RSPB, the NHS some big brands like Arla

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FEATURES

an Imperial Cinema near you...

and Lurpak, and advertising agencies, and 300 other organisations. They are going to campaign to reconnect children with nature, and they are using the film as an awareness-raiser. So what I hope to achieve is that lots of people see the film, and start thinking about how little time British children spend outdoors. And just by thinking about that and being aware of it, I'm pretty hopeful it will help it to change it. And especially with the Wild Network following that up with recommended things, so they are going to announce to ask every British child to try and swap half an hour of screen time for outdoor time every day. It's basically the Wild Network saying "Go Watch the film, but then try and swap a bit of the time we all spend staring at screens". We support that, but the film doesn't ask anything of you other than to enjoy it and watch

it.

Imperial is a Science and Technology University, so we love our screens. What would you say to Imperial students?

I think all the Imperial students I've met are very well balanced. They interact with technology at their work and their study because it's a fundamental part of what they do. But maybe the ones we've spent time with are the ones who are interested in the issue and therefore more connected with the outdoors? I'd say, just watch the film. If you come and see it – obviously it's playing at Imperial – what we've found is that people don't necessarily make some massive change, but it's just the awareness of the overwhelming scientific evidence that's out there now to say how good

it is for you to spend some time connected to the outdoors. I mean, the science is really compelling, it's good for your blood pressure, your stress hormones, patients with a view of nature recover faster than patients with an urban view, exam students who study with a view of nature perform better in exams than those who study without. There's a huge and growing body of peer-reviewed scientific evidence that you should get yourself a dose of nature, so I'd say to Imperial students, if your life has become balanced away from that and into a very serene heavy existence, don't stress about it, but at least find out about it, find out what you are missing out on.

I don't think screens are bad for you, but they displace something that's really, really good for you.

You are a film maker, so I can't resist asking, 35mm or digital?

We shot this on the C300, which is digital. But I've shot on film before and I love it. The trouble with film is that when you press the record button on the camera you can just hear the money burning. It's so expensive shooting on film, and the joy of digital is that you can do lots of takes. We shot 180 hours to make this 90 minute documentary. If you did that on film, you'd have to have a very, very, very big budget. So I think, as a documentary maker, my answer is digital.

Finally, how did the frog taste?

It actually tastes pretty good. Once you get over the texture it has quite a nice earthy, maybe even mushroomy

kind of flavour. It wasn't bad... it was a little bit wet and cold, which is always a bit of a downer when you are licking something, but it was pretty good.

We hired it from an outfit called Celebrity Amphibians, and that frog had been on Casualty.

Project Wild Thing opens in Cinemas nationwide on Friday 25th October. It will be screening at Imperial Cinema on Friday 25th October at 5pm. Tickets £5 students / £7 others available online at bit.ly/wildthingimperial

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Higg's-tory through the ages:

Philippa Skett gives us an exciting history lesson about the Higg



François Englert and Peter W. Higgs at Cern before a conference about the search for the Higg's boson

CERN

Last week saw the Nobel Prize in Physics go to Peter Higgs and François Englert for their theorisation of the Higg's Boson, only months after its confirmed detection at CERN. The controversially named "God Particle" has delivered excitement (and mass) to both the scientific community and the general public, with the tale behind this unassuming boson featuring the twists and turns of a race in science never seen before. It is also a story with many leading roles, but who deserved the prize at the end is still a matter of debate.

It all began in 1964 when Peter Higgs, a physicist from the University of Edinburgh, suggested particles take mass from an invisible energy field, and, as this field needed an associated particle, he suggested that a boson must also exist. Detection of the boson would in turn provide affirmation of the Standard Model, a theory of the fundamental interactions between subatomic particles. The boson was essentially a missing piece of a large particle puzzle, that without it could

not confirm some of the key ideas that underlie theoretical physics.

Peter Higgs was the first of several researchers to publish a paper theorising the boson's existence, including our very own Professor Tom Kibble from the Blackett laboratory. Unfortunately, the paper Tom Kibble wrote, alongside other researchers Gerald Guralnik and Carl Richard Hagen, was the last to be published in the Physics journal *Physical Review Letters* about the topic, costing him the Nobel Prize. Although he stated that he regards "[his] treatment as the most thorough and complete," he sadly was a few months too late.

After the theorisation of the boson, more scientists stepped forward to contribute to the function of this mysterious particle. Steven Weinberg, an American professor of physics at Harvard University, suggested the idea that the boson will provide the unification of electromagnetic and weak forces, two of the four fundamental interactions within nature. Not only that, but Gerard 't Hooft, a Dutch physicist and professor

at Utrecht University, based in the Netherlands, built on this by proving it mathematically.

Hooft went on to win the Nobel Prize for this in 1999; the boson, even though still theoretical at this point, was already demanding international interest and delivering awards unlike any other.

It was in this time that the term "God Particle" was coined by Leon Lederman, an American experimental physicist. He coined the term "God Particle" in the title of a popular science book he wrote because that, "One, the publisher wouldn't let us call it the Goddamn Particle, though that might be a more appropriate title, given its villainous nature and the expense it is causing. And two, there is a connection, of sorts, to another book, a much older one..."

The media loved it, much to the dismay of Higgs himself; not because his name itself became somewhat neglected, but because of the sensationalist connotations this presented. Humbly, he himself would rarely refer to the particle in

question as either the God Particle or the Higg's Boson – displaying more than a modicum of modesty often undetected in today's scientific researchers.

As speculation and controversy surrounding the so-called "God Particle" ebbed and flowed through the media, scientists were now burrowed away from prying eyes and had begun to design and build the Large Hadron Collider (LHC). This was to become the largest, most powerful particle collider, and, with a price tag of \$8 billion, was the most expensive too. Its overall function was to test and predict various theories within particle physics, but excitement around the LHC was centred on the idea that one day it could allow for the creation of a Higgs Boson.

The LHC was constructed between 1983 and 1988, and crossed between Switzerland and France at four points throughout its 27km long circumference. It officially went live on the 19th of September 2008, sending protons whizzing through the tunnels at speeds of only 3 metres per

second slower than the speed of light and them making 11,000 complete revolutions of the main ring per second.

It seemed that the final hurdle to overcome in this theoretical physics race was to actually detect the boson, although this was categorically easier said than done. To do this, two separate, opposing teams of scientists huddled away at CERN in Geneva, Switzerland, to independently discover this elusive particle. The two teams, Atlas and CMS, were named after the two gigantic detectors built into the Large Hadron Collider that could measure the outputs of proton particles being smashed together at high speeds.

The collisions were predicted to produce the boson that would then immediately decay into a multitude of different subatomic particle combinations, including lots of excess energy in the form of gamma rays. A boson is an elementary particle that can mediate forces between other bodies, such as the electromagnetic field, or the strong force that binds



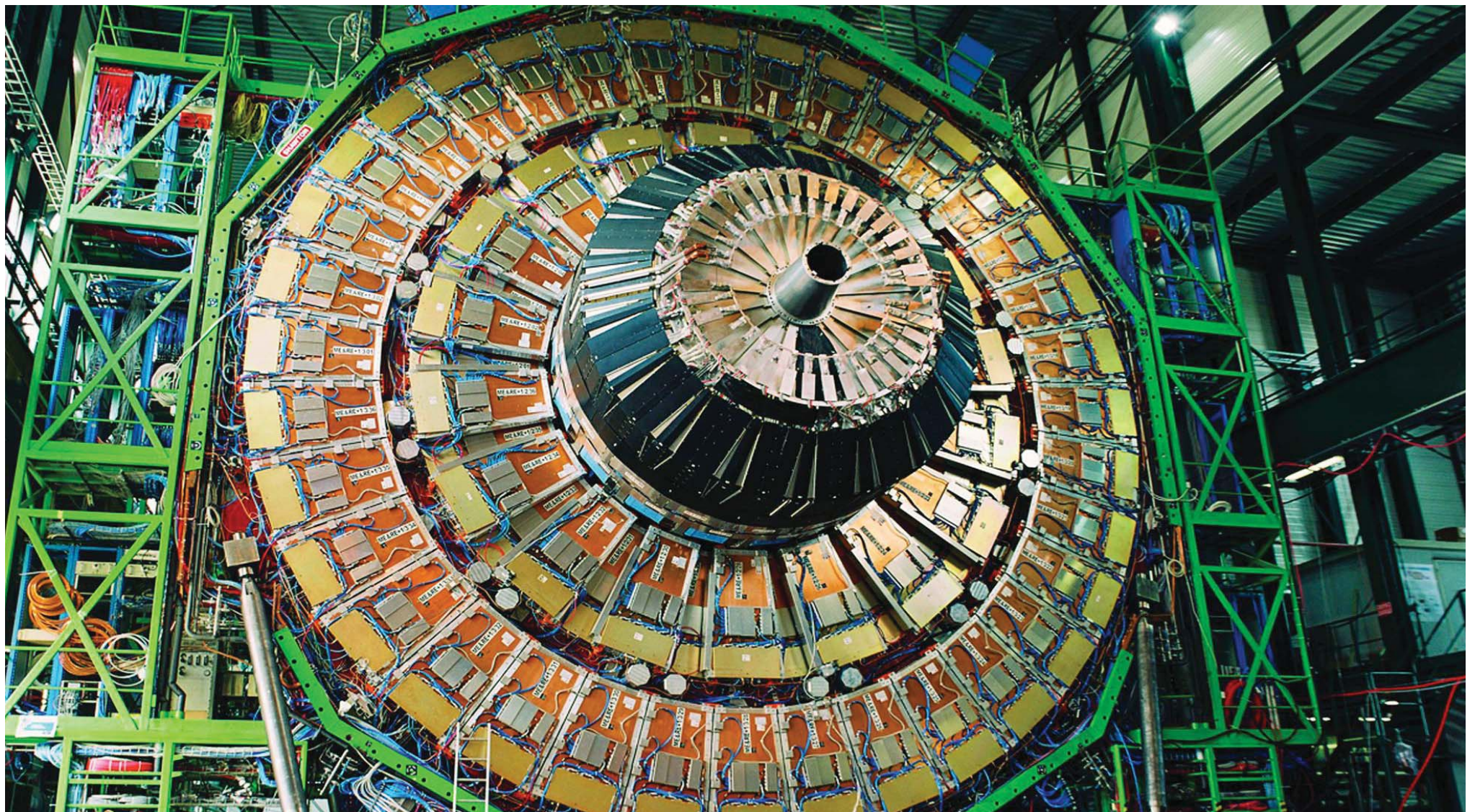
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SCIENCE

fifty years yields Nobel prize

g's boson and how its existence was finally confirmed last year



The Compact Muon Solenoid (CMS), one of two detectors at the Large Hadron Collider (LHC) used in the search for the Higg's boson

CERN

atoms together from nucleons and protons. They often break down into lighter particles in an attempt to attain stability; the Higg's Boson was predicted to break down into a W boson, which could then break down further into a lepton, among other combinations.

These breakdown products were what the LHC was trying to detect, and would be measured by Atlas or CMS- they manifested as anomalies in data output, represented as "bumps" on an otherwise consistent line on a graph. These bumps represented an unexpected excess of gamma rays or other decay residuals; possibly from the aftermath of a Higg's Boson disintegration.

Bumps in the data were common, but through repeated collisions were smoothed out as they disappeared through the realms of statistical averaging. It was only when the bumps remained, and became less anomalous and more predictable, that the two teams started to sweat.

Truth in science is all about statistical significance. If the odds of something

occurring are above a certain quantitative threshold, it is considered to be a truth, and the highest threshold for this determination is considered to be a "5-sigma level." This means that if the odds of something taking place by chance are less than 1 in 3.5 million, then you can confidently state that what is occurring the other 3,499,999 times is the norm, and can be heralded as the truth.

A persisting bump on the graphs of one team corresponded to a gamma ray of mass of around 128 billion electron volts. The gamma rays produced by the Higg's Boson decay were theorised to lie between 115 billion to 200 billion electron volts of energy, so as the bump persisted in the datasets produced by particle collisions, excitement, coupled with the characteristic skepticism all good researchers harbour, started to grow.

It was team Atlas that was fortunate to nurture this bump throughout repeated tests until its occurrence had reached a 3-sigma level: the chances of it being a systematic fluke were only 1 in 740.

CMS were also seeing important fluctuations of energy, this time in the form of a "four-lepton" signal. The results were almost at a 3-sigma level, and it seemed that both Atlas and CMS had simultaneously and independently cracked the code. Neither could boast a 5-sigma significance however, so the race was still on.

Dr Heuer, the Director General of CERN, revelled in these first hints of particle discovery, so set up a symposium in CERN. Dr Heuer reasoned that a sigma significance of 4.9 would not be enough to call something a discovery, but two experiments boasting such a value would combine to make a sigma value that would be enough to tilt the scale in favour of statistical significance. It was now a matter of combining data in the right way to produce that statistically sound support for the boson's existence.

It was a solitary graduate student that finally produced results that breached the 5-sigma level, but the discovery was not ultimately confirmed until another pair of graduate students had

brought all the datasets together and combined them to produce a result of a significance level of 5.08-sigma. They had finally found the boson.

This result was the combination of datasets spanning 1,000 trillion proton-proton collisions, resulting in the formation of 240,000 possible Higg's Bosons, 350 pairs of gamma rays and 8 sets of lightweight particles from the lepton channels. The two teams presented their work simultaneously at the CERN symposium on July the 4th, 2012, with the whole world watching. CMS went first, followed by Atlas, and then Dr Heuer declared that they had indeed found a previously unknown particle.

Dr Higgs was present in the audience, was seen to be crying as the ripples of the news began to spread from the CERN epicentre to right around the world. Follow up data analysis was done, and on the 14th of March, 2013, it was tentatively confirmed to be the Higg's Boson.

So who really did deserve the Nobel Prize? Some people suggest that in reality, those at CERN who made the

discovery should be heralded with the greatest accolade that mankind has to offer, whilst others are still squabbling about the theoretical history of the particle and who exactly should be recognised for theorising the boson in the first place.

The Royal Swedish Academy of Sciences announced last week that Peter Higgs and Francois Englert had won the prize "for the theoretical discovery of a mechanism that contributes to our understanding of the origin of mass of subatomic particles, and which recently was confirmed through the discovery of the predicted fundamental particle, by the ATLAS and CMS experiments at CERN's Large Hadron Collider"

CERN was not attributed with the Nobel Prize for its role in this marathon, and it could be humoured whether or not Higgs would have even got the prize if the particle's existence had not been proven. Needless to say, the unfolding of the discovery of the boson is a great story to tell, and no doubt will become one of scientific legend as the years pass.



Breakthrough towards curing Alzheimer's...

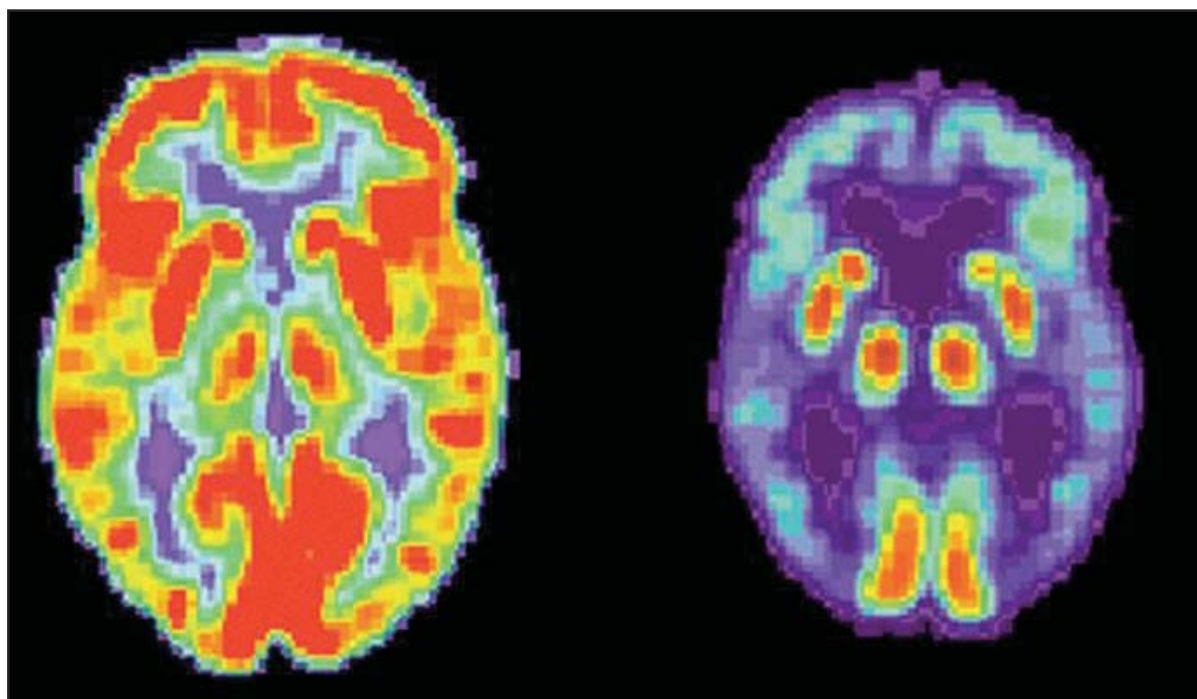
Utsav Radia on a new step to neurodegenerative disease treatment

The MRC Toxicology Unit research team, led by Professor Giovanna Mallucci at the University of Leicester, has managed to successfully control the progression of Prion disease, a neurodegenerative disorder, in mice. The study, published in *Science Translational Medicine*, shows great promise for human neurodegenerative disorders such as Alzheimer's, which affects around half a million people in the UK.

In Prion disease, the build up of abnormally folded proteins over-stimulates cellular control mechanisms within the brain that switch off the production of all new proteins. Without certain vital proteins, the nerve cells within the brain struggle to send and receive messages and eventually become starved.

This control mechanism is supposed to be self-regulated, so that protein production 'turns on' again when the misfolded proteins have been removed. However, in mice with Prion disease, the abnormal protein levels continually increased, resulting in protein production being kept 'switched off'. This would eventually trigger the death of the brain nerve cells.

The team had previously trialled a



ALZHEIMER'S DISEASE EDUCATION AND REFERRAL

method using proteins that blocked the pathway for the 'off switch' so that new protein production could continue in presence of other abnormal proteins. This time, the team was able to use an orally administered drug-like compound which, once in the bloodstream, was able to cross the blood-brain barrier and block

the same pathway that switched off all new protein production within the brain. The compound worked by inhibiting an enzyme, PERK, which in the presence of high levels of misfolded protein, would trigger cell apoptosis (controlled cellular death). This enabled the nerve cells within the brain to survive in the presence of

abnormal proteins, thereby restoring some brain function and preventing further memory loss.

In Alzheimer's disease, parts of the brain start to atrophy causing the formation of beta amyloid protein plaques and neurofibrillary tangles, known as tau tangles. Amyloid proteins are abnormally folded and

hence the build up of these can disrupt and damage the cholinergic neuronal cells within the brain that carry messages to and from the CNS, gradually destroying them. Slowly, this disease can spread to other areas within the brain, further damaging our ability to process thought, speech and memory.

Professor Mallucci confirms that the "compound has completely prevented neurodegeneration" in the mice studied. However, there were certain prominent side effects on the mice, including damaging effects on the pancreas which caused mild diabetes and weight loss. The next big challenge is to transform this method of treatment into human patients with minimal side effects.

Professor Morris, of King's College London, says that, "This finding [...] will be judged by history as a turning point in the search for medicines to control and prevent Alzheimer's disease." So far, we have only been able to control the symptoms of Alzheimer's through AChE inhibitors such as donepezil and NMDA receptor antagonists like memantine.

Whether this new research will enable us to revolutionise the way Alzheimer's can be treated, only the coming years will tell.

Nobel prizes announced

Chemistry

The Nobel Prize for Chemistry this year was awarded to three scientists for their work in multiscale modelling of complex chemical systems. Martin Karplus of the University of Strasbourg and Harvard University, Michael Levitt of Stanford University and Arieh Warshel of the University of Southern California, began their work in the 1970s, using computational models to simulate and study chemical reactions. Over the years, the methods became more sophisticated, and their applications expanded to include well-known biomedical problems such as protein folding and drug design.

When applied to large biological systems such as proteins, however, most computational methods encounter a problem of scale: the difficulty in simultaneously modelling both the atom-level chemical properties and the large-scale behaviour of the overall system. The work of the Nobel winners provided a way to bridge this gap, combining quantum mechanics with classical physics.

Computational methods and their advocates, unfortunately, often meet with scepticism from experimental scientists. In Imperial's own Life Sciences department, there are reports of early-career academics having had to play down their interest in theoretical research when applying for jobs, with one senior lecturer dismissing the entire field as 'nonsense'. This historic award should firmly establish the importance of theory in modern science.

Physics

Researchers and experimenters of CERN, working at the LHC in Geneva, Switzerland, capped nearly 40 years of theoretical study and experimentation to find certain physical evidence for the existence of the Higgs boson, a particle included in the Standard Model. It was hypothesised by modern particle physics to be crucial in giving all elementary particles the property of mass. Its discovery proved the existence of the Higgs field, which bestows this property, achieved by attempting to produce the boson by accelerating two streams of particles to extremely high energies (in the region of Teravolts) and causing them to collide head-on.

The awarding of the prize has been controversial as a multitude of people had been involved in establishing the Higgs boson in theoretical physics, and more involved in the experimentation to obtain physical evidence. The Nobel Prize's policy is to only allow up to three people to share an award, which this year went to Peter Higgs and Francois Englert. Besides them another colleague, Robert Brout, was also considered to be a frontrunner to share it, but he passed away in 2011.

Medicine

Vesicle traffic is the transportation system of molecules within our bodies at the cellular level, in packages called vesicles. Three researchers shared this prize, although they did not directly collaborate on a specific study: James Rothman unscrambled the protein machinery which

allows vesicles to merge with target bodies to transfer their contents, Randy Schekman discovered a set of genes that are instrumental in directing vesicle traffic, and Thomas Südhof unearthed how electrochemical signals are processed by vesicles to release their contents accurately and precisely.

The significance of their work, though apparently simple and fundamental in nature, is crucial in understanding this delicate system within the human body. Any disturbances or inconsistencies in the vesicle traffic system can lead to long-term adverse effects upon general health, and are known to contribute to many major medical conditions such as diabetes, immunological problems and neurological disorders.

Peace

The Organisation for the Prohibition and Control of Chemical Weapons (OPCW) received this prize not for one particular campaign but a cumulative effort over decades in trying to eliminate and outlaw the use of chemical weapons internationally. Such weapons were infamously deployed in both World Wars, and have also been more recently used by terrorist organisations, with current media focus on the alleged use of chemical weapons against the Syrian people.

Since their formation, the OPCW has led efforts to prevent manufacture, ensure destruction and eradication of chemical weaponry, receiving the support of over 180 countries to date. Although heavyweights such as the USA and Russia have not acceded to the OPCW's strong recommendations, there is growing international pressure for this to change, all thanks to their efforts for a peaceful and more secure world.



 @feliximperial

 FelixImperial

SCIENCE

...and releasing a vaccination for malaria



PATH MALARIA VACCINE INITIATIVE

Lauren Hoskin
sciencesays.co.uk

Results released on the 8th of October revealed that scientists are making promising progress in the development of an effective malaria vaccine called RTS,S. The vaccine could potentially save millions of lives as it aims to combat one of the world's deadliest diseases.

This mosquito-borne disease kills approximately 660,000 people a year, mostly children, and almost all in Africa. The nature of malaria makes it extremely hard to vaccinate against since it is caused by protozoal parasites, which are considerably larger and more complex than bacteria and viruses.

These unwieldy organisms are capable of wearing a number of different protein coats to disguise themselves from the immune system, making them ex-

ceptionally difficult to detect. It is thus essential for the vaccine to protect against something permanent on the surface of the parasite.

The imminent vaccine aims to defend against *Plasmodium falciparum*, currently the deadliest strain of malarial parasite. *P. falciparum*, like many other protozoal parasites, follows a specific lifecycle once inside the body.

Injected through the bite of a female anopheles mosquito, the parasite enters the bloodstream and is carried straight to the liver to infect liver cells. At this stage of its lifecycle it is called a sporozoite and expresses a surface protein called a circumsporozoite.

Researchers are using this circumsporozoite molecule to act as part of the immunization. It will be this molecule that the immune cells become sensitive to and seek to destroy when next detected within the body.

Unfortunately for researchers, circumsporozoites alone are not enough to provoke a sufficient immune re-

sponse. They must be combined with another antigen to do so.

The vaccine in question creates a hybrid of circumsporozoite antigens with Hepatitis B surface antigens and an additional immune booster. It is this combination that prompts the necessary immune reaction.

Trials so far have been promising. The recently released results indicated that young children (aged 5-17 months at the beginning of the trial) experienced 46% fewer cases of malaria than those immunized with a control vaccine. Infants (aged 6-12 weeks at the beginning of the trial) were reported to experience 27% fewer cases of malaria.

Initially designed in 1987, it has been a long time in the making. It is hoped that it will be available for use by 2016. Whilst not providing complete protection, the sheer number of people suffering and dying from malaria worldwide, estimated at over 300 million cases, means this is a huge step forward.

Jet lag resistance in mice

They don't suffer like you after a long flight, **Fiona Hartley** explains

Jet lag is one of those annoyances that stems from living in the modern era. Anyone who has flown to Asia or come home to the UK after an American holiday recognises its unpleasantness. You just have to wait for your body to adjust to the new time zone. When evolution was working on humans, it had no foresight regarding the development of the aeroplane, or that it would play havoc with our body clock by enabling us to travel across the planet in one or two journeys.

The suprachiasmatic nucleus (SCN) acts as the 'master clock' of the human body. In the SCN there are thousands of neurons that regulate the numerous bodily functions that run in a 24-hour cycle, which are called circadian rhythms. These include your core body temperature, urine output, and expression of genes that affect the circadian clock (unsurprisingly called clock genes).

The SCN also synchronises these rhythms with the outside world. When we pass through several time zones on a jet plane, our internal clocks become misaligned with external time. Shift-workers have a similar problem. Since some studies suggest that shift work increases the risk of heart disease and certain cancers, a way to combat the physiological effects of misaligned circadian rhythms would

be significant to many.

Jet lag was first studied in 1965, over a decade after the advent of passenger jet services. Since then the condition has eluded a cure. But Hitoshi Okamura and his colleagues at Kyoto University have made a breakthrough in understanding how the neurons in the SCN communicate. This gives scientists greater hope that there could one day be a treatment for the symptoms of jet lag. The group published their study in *Science* last week.

Arginine vasopressin (AVP) is a hormone released by around half of the neurons in the mouse SCN and detected by several receptor proteins. There are also AVP receptors in the human SCN. In a population of mice, the researchers deleted two AVP receptor genes: V1a and V1b. This made the mice unable to respond to AVP. The group then placed this genetically-modified population and a wild-type population of mice on a 12-hour day, 12-hour night light cycle for two weeks.

When the light cycle was changed to mimic an eight hour time difference, as occurs when humans suffer from jet lag, the 'normal' mice took many days to readjust to the new rhythm. However, the mice lacking in AVP receptors re-entrained to the new



She's obviously taken a red-eye flight recently

CaptiveBredReptileForums

light-dark cycle at least twice as quickly. When the V1a and V1b receptors in wild-type mice were temporarily blocked with chemicals they too recovered from their induced jet lag quickly (though not quite as quickly), confirming that the missing receptors are responsible for the accelerated rate of recovery.

In addition, the mutant mice did not suffer any obvious ill-effects to

their internal clocks. Their circadian rhythms maintained a normal 24-hour cycle. As with a mechanical clock, the SCN was able to uphold good time-keeping internally whilst being easily resettable in response to external solar time.

It will still be very difficult to create a magic pill capable of treating jet lag thanks to the presence of AVP receptors throughout the body. Any

drug disrupting the receptors in the SCN would also disrupt receptors that control blood pressure and water retention, the better-known functions of AVP. But the hope is there, and the knowledge should help scientists to further investigate the intricacies of the SCN.

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COMMENT

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Nintendo's Ethical Legacy

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Comment Editor



Computing power is evolving at a relentless pace. The gaming industry moves in tandem with this tempo. Unfortunately (and for some, regrettably) its viability has waned in recent years having come under pressure from a burgeoning smartphone market and a reversion to the PC as the preferred platform of choice. Playstation serves as a suitable allegory, experiencing a 15% like-for-like drop in revenue of US \$1.19 bn for the April-June quarter. Likewise Nintendo, despite a market valuation of US \$85 bn, faces flagrant criticism for failing to sufficiently 'move with the times'. Avid enthusiasts can expect a turbulent future. I find it all slightly depressing.

In spite of this all hope is far from lost for Nintendo as a perennial Japanese multinational. The recent release of Pokémon X & Y has served to brighten the horizon. A notable 1.26 million units were pre-ordered in Japan, with a similar reception to the franchise emulated around the globe. The event served to spark memories of my childhood. I recall infinitely many afternoons spent in euphoric bliss levelling up my Pikachu, seeking counsel with The Great Deku Tree in The Legend of Zelda or tripping out on Rainbow Road in Mario Kart 64.

I find that the modern games

console is recurrently misconstrued as an instrument of detriment. National surveys in England estimate that three in ten two-to-15-year-olds are overweight. It has been suggested that the reversion of children to sedentary pastimes (including television and games) is the core reason for the phenomenon. I categorically believe that the blame lies elsewhere.

In an attempt to vindicate the games console I want to analyse Nintendo products. For decades they have invigorated innumerable dynamic and lofty thoughts in children, promoted logic and injected moral allegories into the plots of their games. One might even stretch to say that Nintendo introduced children to the philosophical concept of self-determination and utopian aspiration.

To begin with, let us consider the Mario video game franchise. Elements of its world and adventures are simultaneously dynamic and yet fixed. Children are introduced to the confines of Euclidean geometry through the recurrent appearance of recognisable shapes (mushrooms, man-eating flowers and gold coins to name but a few). A child familiarises themselves with this concept with relative ease. Upon achieving this, the child is now free to explore the opportunities presented by the fictional 'world' with its given set of parameters. A reader might be able to relate to the awe instilled in the catacombs of the mind when playing Super Mario 64, Paper Mario or Super Mario Galaxy. The crux of Nintendo's franchise is its predictability. Despite this, by interchanging the parameters to 2D graphics or by giving Mario the ability to fly, a child is introduced to



the concept of innovation and rebirth within a rational and predictable world. It might be argued that this can encourage resolve, enthusiasm and optimism in a child. It may even evolve to become a transferable and indispensable skill in later life.

The Legend of Zelda saga is saturated with material from which one can draw inference. Taking inspiration from a blend of (to my mind) Celtic, Scandinavian and Oriental lore, children are introduced to the fundamental challenges and questions relentlessly pondered by civilisation for millennia. Enclosed within the framework of quests and interspersed with 'temples' and 'bosses' to thwart, children can find themselves engulfed in mimesis. Their eagerness and anticipation to discover further twists to the plot morph with the unfolding tragedy recounted by the game. It might be debated that children are introduced to the concept of catharsis, a form of cleansing or emotional renewal. The wider relevance of this is to stimulate a child's awareness of the essential place of culture, art and identity in society, unveiling a new dimension to human existence. While the world may be full of physical wonder there is also, however, a world buried deep within the catacombs of our minds. In this realm reasons for our identity and our actions, that universally preoccupy each and every one of us, dominate the everyday machinations of the world.

From this we can identify the presence of ethics within the thread of games produced by Nintendo. Bearing this in mind we might choose to address Pokémon. It is a world where society is centred on pre-meditated parochialism. Walking is the preferred mode of transport. Vehicles are only used when necessary. The economies appear to be planned and seem to benefit all citizens. With a mart and health centre as the principal business establishments, consumerism has no place in the towns. The larger cities are sparsely populated and exhibit luminous, clandestine walkways. Characters encountered during the course of the plot all exude a sense of well-being; the man in the street

expresses analogous content to that of the most successful Pokémon masters. Man's relationship with nature (Pokémon) is inherent, and rooted as a central tenet of society. Academic research appears to wholly revolve around Pokémon. One could list many more desirable facets however reality tells us that such a utopian existence is unattainable. The restlessness of the human id fails to surface.

The trainers don't get mugged in the dark. The Pokémon battle on a regular basis and yet blood is never drawn. Emotions of anger, lust and jealousy are rarely, if ever, presented in the plot. For me this is of significant importance; children may notice that the incongruities of the real world are excluded from the adventure. They may well extend this inference to a collection of other Nintendo games. They are presented with the opportunity to compare and contrast and ultimately, build an informed opinion.

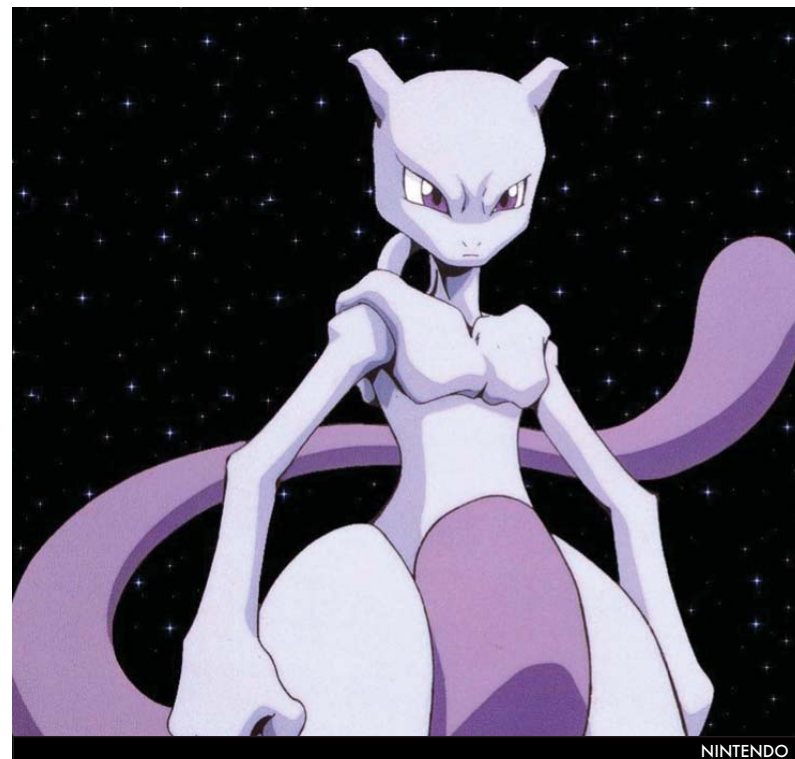
Despite the mediation of the Pokémon world, each successive generation has reflected contemporary technology. Professor Oak's chunky computer has gradually been replaced

with a sleek model over time (and yet teleportation has always been possible). One might draw from this that the game, despite its enclosed ambiance of insulation, further encourages a player to compare and contrast. Pokémon is more relevant than ever. In our world of vigorous expansionism, the game brings attention to a need to live within our means. Sustainable trimming, rather than development, may indeed be the way forward. Man's enmeshed relationship with animals, as illustrated in Pokémon, promotes connotations of the current European policy of 'Rewilding'.

To close, Nintendo provides more than a desirable legacy but a fully-fledged set of blueprints for a beneficial gaming industry. In a world where many fail to raise their eyes from their phone or tablet to look at the stars in the night sky, a revitalised approach to technology would be desirable. In the past it has taught children to look treat their technology as a mere catalyst for the awnings of the mind. I simply hope that it has a place in future markets to do the same in the future.



NINTENDO



NINTENDO

Ralph Miliband: A Benefactor of Slander

Christy Kelly

Writer

The recent Daily Mail 'essay' (to use Daily Mail sketch writer Quentin Letts' wonderful euphemism) on Professor Ralph Miliband has demonstrated once more, in no uncertain terms, the vicious and quite frankly lunatic nature of some elements of the British Press. They have, quite rightly, come under the strictest censure and condemnation for what can only be described as a hateful and fear-filled piece. On the other hand (this is not to defend 'The Mail' in any way) I could hardly describe the article as a 'smear'.

That the article was written to vilify is in no doubt. The actual result has been, on the other hand, positive. After all the Mail has introduced us all (be honest, how many of you knew of Marxist academic Ralph Miliband last month?) to an erudite and redoubtable intellect. Some of the Mail's statements sound like praise, at least to my ears, be it "Miliband was taught politics by Harold Laski, a giant of Labour's Left" or "He was already on his way to becoming a heavyweight thinker", and I positively envy both the position of his grave

(just twelve yards from that of Karl Marx!) and the subdued eloquence of his epitaph 'Writer Teacher Socialist'. The Mail's argument does not make sense; first they attack Professor Miliband as a dangerous socialist espousing a 'poisonous ideology', then they criticise some dubious tax affairs (an issue that is genuinely concerning) as "hardly the behaviour of a tax-loving socialist." This reminds me a little of Freud's old broken kettle joke: I find that a kettle I had lent to a neighbour is now broken. They explain that: 1) they had returned the kettle undamaged; 2) the kettle was broken when they received it; and 3) they never borrowed the kettle off me anyway. The Mail's argument lacks the sophistication for three excuses: You get the point.

More important than internal inconsistencies in the Mail, however, (or indeed the negative attitude behind the article itself, which is, let us be honest, simply business as usual for a rag) is the manner in which the Mail has been criticised. The first is the remarkable inanity of the very criticism that "it's unfair to attack a dead man". This may be so, but I would suggest dead people do need vilifying, not least Lord Northcliffe, founder of the Daily Mail. "Seventeen year olds write stupid things". Yes, they do, but the excerpt quoted by the Mail seems reasonable – we must not forget that Britain still has the

most disgraceful colonial record in history, despite the attempts of the Japanese, the Belgians, the Americans etc. Finally, who really cares whether someone hates 'their' country or not? The second would be the remarkable consensus across political parties about the incorrectness of the Mail.

There is evidence that The Conservative Party (despite Vince Cable's warnings) are still human, perhaps a sign, even, that the entire political class is able to transcend the petty rivalries of partisan politics and achieve a 'third way' perspective on both matters of 'national importance' and basic human 'decency'. It is when we arrive at this conclusion that alarm bells ring.

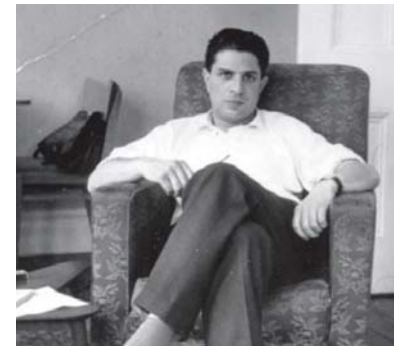
The first point of concern was made in an otherwise deeply stupid article by Tim Stanley in the Telegraph (an article that, relying only on ad hominem and tu quoque, compared the journalistic integrity of the Mail and the Guardian), noting that the Mail has given ample reason for the Government to push forward moves for press regulation. The point was brought home to me by Tory MP Grant Shapps, whose approach on question time left me musing that "the MP doth protest too much, methinks."

The second point was already being made by none other than Ralph Miliband in his 1977 book, *Marxism and Politics*: "In the liberal view of politics, conflict exists in terms of

'problems' to be 'solved'. The hidden assumption is that conflict does not, or need not, run very deep." This is always the assertion on a ruling, complacent class and it is with only a little exaggeration that I claim every ground-breaking political advance in history has been based on the notion of antagonism and committed struggle.

This is why I see the recent 'polarization' of politics as a good thing; for all his faults (and they are many) Ed Miliband has finally started a movement away from that fictional 'centre'. 'Fictional', I say because of Tariq Ali's point about an 'extreme centre', extreme because this 'centre' unquestioningly accepts principles that good 'centrists' like Margaret Thatcher had to fight tooth and nail for. The recent anti-Blairite 'witch-hunt' is also a good thing by my book (if that is really what it is) and if accompanied by a change in face is an equivalent change in policy.

I mentioned earlier that it was to the credit of the Mail that they had revived Professor Miliband for another generation. He is perhaps the one subject whose actuality has been somewhat effaced in the whole discussion, appropriated as it has been for political purposes (not least by myself). It is therefore with great admiration that I close with the final lines Professor Miliband's own short encomium to the aforementioned



"That the article was written to vilify is in no doubt. The actual result has been, on the other hand, positive."

Harold Laski in *New Left Review*: "Philip Rieff has a nice phrase about Freud having 'disturbed the sleep of mankind'. No such large claim can be made for Harold Laski. But he did greatly disturb the sleep of many people in Britain and the United States in the thirties and forties. He was an exemplary public intellectual. There is great need for more such intellectuals on the Left today."

Confessions of a GTA: Part Two

"GTA does not stand for Grand Theft Auto!"

The GTA

Anonymous



Sadly, this is true. In fact it is an acronym for 'graduate teaching assistant'. You know, the ones standing at the front chatting to the professors instead of helping you out. Yep, I'm one of those and as far as I'm aware we do not steal cars, only solutions to questions when the lecturers truly overestimate our abilities. We do not get chased down by cops but by students in the last minute of a two hour tutorial, deciding that they don't understand the entire subject so far. And we don't go to glamorous parties. Well okay, maybe we do...

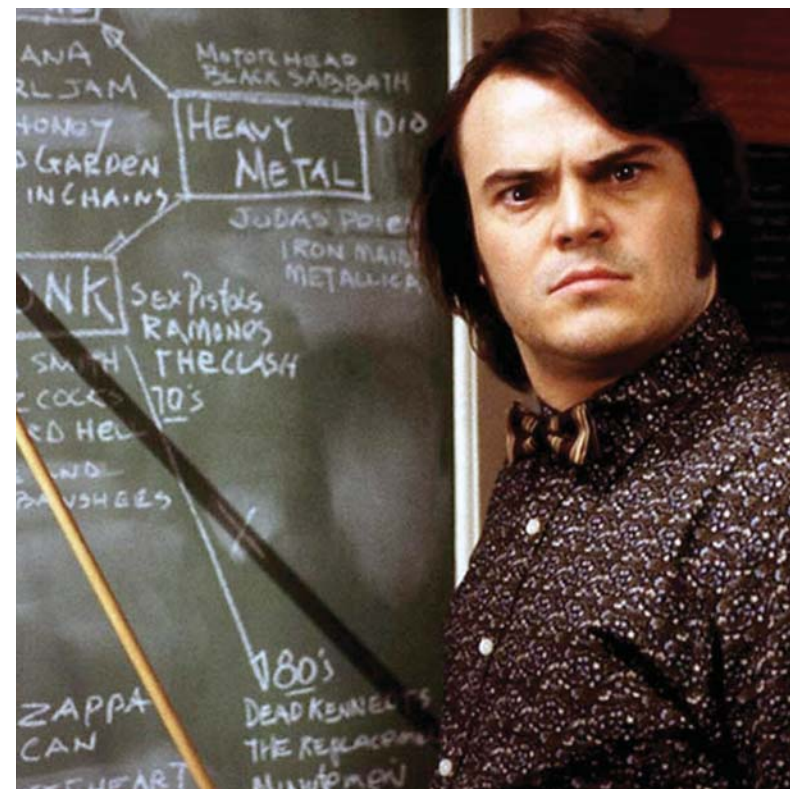
On the other hand, this week we found out in our training that we do something pretty cool. GTA training is

compulsory for all students wanting to help out. If you don't go, you don't get paid, which of course means we all go but our interest is obviously driven by wanting to assist the future Imperial graduates. We are just those kind of people. It is three hours; what could they have to say that could possibly take that long?

Well, there is a lot of jargon, like learning styles: after a questionnaire, I turned out to be a reflective, visual, sequential, sensor learner. These are words meaning that I like to learn with pictures, not words, in an organised manner by learning step by step, not as part of a group. How I got through Imperial I have no idea! Apparently they cater for the completely opposite person. This strange species are active and intuitive. They like dealing with lots of theory in text and enjoy working with other people. The test basically said that I was, in effect a genius, as I managed to do a course taught entirely wrong for me. This clearly did not surprise me.

What did surprise me is the university's opinion of us. They see us the front line of student interaction. We are the shield that stops students totally embarrassing themselves by asking a stupid question of a slightly crotchety lecturer, who has had all their solutions stolen by some post-grad. We stand doggedly in the cold and wet preventing students walking into large machinery on field trips. We guide them through the first few days of hellish programming where nothing make sense and 1+1 no longer seems to work according to the computer. We are on the front line of feedback to tell students what isn't and what is definitely a stupid question.

Thus, we may not be manic gamers convinced that what Felix really needs is a low down on what we do in a virtual reality each week, but we do have our uses. So next time you see us chatting away at the front, ask us a question, because if there is one thing GTAs are good at is answers; we stole the solutions. **The GTA**



COMMENT

Editors: **Eoghan J. Totten, Tessa Davey**
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My Royal Conspiracy

Tessa Davey
Comment Editor



Kensington Palace finally revealed last week that the mysterious VVIP guest who's attending the grand opening of the "new" Centre for Blast Injury Studies is none other than my favourite eligible bachelor, Prince Harry. As part of the opening, they're holding a Network Event, a day full of talks from scientists and soldiers alike. And the best part is, anyone can go. Anyone that is, except for me.

I spent six months this year (ab)using the CBIS equipment, and as a favour to one of the postdocs fielding our red headed royal's visit, I spent the first few days of my PhD avoiding any relevant work, and making a poster of my old project, to be handily displayed in the lab throughout the visit. I even resisted the urge to put my phone number on it (just in case, you know, he has any questions). Hours of my time in the lab were disrupted by hordes of people in suits coming and going, being briefed on the itinerary, and scribbling in their notebooks, without so much as an apologetic glance in my direction. Certainly an inconvenience, but anything for Harry!

Despite my begging, I'd been told firmly that I wouldn't be able to cadge a spot in the lab during the demonstrations, but I was very much looking forward to finding any and every excuse to walk the halls of RSM and Bessemer while he just so happened to be around. I've always had this firmly held belief that if we were to ever meet, he would fall immediately in love with me, and that would be that: my happy ever after. I know that I'm in South Ken. every day, and I could just frequent Boujis if I really wanted to meet him, but as far as I was concerned, this was it. I was finally (and literally) going to meet my prince. This Cressida wouldn't be a problem. After all, who's he going to prefer: a socialite, or a scientist? And her last boyfriend was also called Harry - who does that?

But then I got an email. Suddenly I had to attend an all day meeting on the 17th! And as if they knew that I would try to sneak out, just for a little bit, I was scheduled to present at exactly the same time as my beloved HRH's address. Despite all my efforts, it became completely impossible for me to be on campus at all during the delightful Captain Wales's visit. A bit too convenient, I think.

And this is why I think it's a conspiracy. See, I might have mentioned my plan to someone who might have been a little bit in charge, and I may have inadvertently come across as a bit "fanatic" or "obsessive". That seems like a subjective observation to me, and I certainly wasn't "sinister", but there we have it. Out of the blue, my plans were scuppered, and I lost out on the chance to brush shoulders with His Highness.

Doesn't that seem like a bit of a coincidence to you?



TELEGRAPH

Robin Thicke: Trivialising Rape?



STAR TRAK, LLC

Kirstin Hay
Writer



*You know you want it.
You're a good girl.*

These are lines taken from Project Unbreakable, where survivors of sexual assault are photographed holding a poster with a quote from their attacker. These two lines come up again and again. They are also oft-repeated lyrics in Robin Thicke's song, Blurred Lines.

I could tell you about the seven student unions across the country (from Edinburgh to Kingston), who have decided that listening to the "language of rapists" is not appropriate for their student unions. I could say that we should do the same. I won't because there's little merit in banning one song, when commercial music is full of highly objectionable lyrics – violence against women, homophobia, racism.

Banning one song (however bad) is not the solution if those who want to play it do not understand why others

do not want to hear it.

We need to ask our union bars, and those using the Union to think about what they are playing. Do you want to be the person responsible for playing a song that makes a number of people in your bar uncomfortable? Do you want to play a song with lyrics veering into sexual assault or homophobia?

"Break a motherfucker's table over the back of a couple faggots and crack it in half." – Eminem, Rap God, 2013

You could argue that listening to songs with offensive lyrics or meanings is not a problem in our student union since we are all adults and can think for ourselves and not be influenced by it, which for most of us, I am sure is the case. On the other hand, is that really the point? If someone were to use that kind of language to me in person, I would justifiably complain. Is it then okay for that same language to be playing for everyone to hear?

You could say that if I don't want to hear these songs, then I should just stay at home with a cup of tea. I do love a good cup of tea, so this is tempting, but the Union is not a central London

bar running for profit. The Union is the hub of student activity at Imperial and has to be a welcoming environment for all students.

You could highlight that the intended meaning of songs like Blurred Lines is more complex than just being a bit "rapey". Robin Thicke has said that his song is designed to challenge the negative treatment of women by making fun of it. He has also said that it was a pleasure to degrade women in the video, so you can believe whichever version you choose.

Whatever the meaning of the song (intended or not), the language is still problematic, and makes a large number of people uncomfortable. I do not want to sit and listen to a song telling me that when I say no, I might mean yes, while having a quiet drink in our student union.

I don't want to listen to the language of rapists.

I am not calling for a ban of the song in the Union, but I am asking you to think about what you are listening to, and if you do like the song but not the lyrics, perhaps you could always play one of the parody versions, or an instrumental version instead. The problem is much wider than Blurred Lines. Be aware of what you are listening to, particularly in a public place.

"banning one song... is not the solution"

LETTERS

Dear Felix Editor,

I am writing to you, to inform of you of a tremendous crime against humanity. Just last week I was in the Union and asked if they had ice cream so I could have an Ice Cream float, the greatest of all beverages. I was then informed that they had in fact no ice cream. How can this be? How can the union spend so much money on various poisons to add to coke but not Ice Cream? Sort this out please.

The Druid

P.S. And it better not be any of that frozen yoghurt shit.
P.P.S. Or Sorbet.

"Disagree with any of this week's articles, or just want to be as cool as The Druid? Write in! felix@imperial.ac.uk"

Union Page

Don't forget to vote in Your Rep & Union Council Elections

YOUR REPS

ELECTIONS

AND UNION COUNCIL

Voting opens in Your Reps & Union Council Elections this Friday at 12:00 and runs till Tuesday 22 October at 12:00.

You can decide who becomes your Year Reps, Course Reps, and who becomes your LGBT Officer and International Officer. You can place your vote at imperialcollegeunion.org/vote. Find out more about the elections and read the candidates' manifestos at imperialcollegeunion.org/elections.

You can also tweet us during voting - just include **#voteicu** in your tweets.

imperialcollegeunion.org/vote

RAG Bike Auction, Thursday 24 October



Each year a huge number of bikes are left unclaimed at the Imperial cycle stores, and each year RAG gets to sell these bikes to the highest bidder. Come along to Beit Quad on Thursday 24 October, 12:00 - 14:00 and grab a bargain and help us raise a ton of cash!

Join us at Thorpe Park with Give It A Go



Thorpe Park is transformed with Halloween horror entertainment and a late night opening. Join us at one of the UK's biggest and best theme parks for thrills, scares and rollercoasters! Coach transport and park ticket included in price. The What's On calendar on our website also has more details and even more events and activities that you can take part in. Have a look at imperialcollegeunion.org/whats-on.

Firefighter Strike this Saturday, 18:30 - 23:30

A strike has been called by the Fire Brigade Union and is between 18:30 and 23:30 on Saturday 19 October 2013. College security will be on hand to deal with any emergencies you may have, but the service of calls to 999 will not be at the normal level during this time.

Please take extra care and sensible precautions during the strike to keep yourself safe. If you do have any problems on campus, please call 4444 (internal) or 020 7589 1000 (external).



Undercover at an auction

Jiaqi Shi investigates Christie's

I've always been intrigued by the mystery which surrounds the highly opulent-looking establishment that is Christie's in South Kensington, never more so than when I traversed past it in my first year as a fresher on the route to campus from Evelyn Gardens. When one of its most recent sales came up on "Travel, Science and Natural History", it seemed to be too good an opportunity to miss.

Christie's was founded by James Christie in the late 18th century, and has grown into a household name across the world. However, they are not what you would expect from many hours of watching daytime TV such as *Treasure Hunt* (yes, I know, but I couldn't be bothered to change the channel). Everything is conducted with precision and a hint of ruthlessness.

I simply love their catalogue, which is beautifully printed in a glossy magazine which can be picked up by the counter in the foyer, continuous with the main auction area. On one side it is lined by high tables where Christie's trained telephone staff sit, whilst the other side had framed paintings hung at eye level for you to peruse at leisure, of which many would be sold during the day.

I was tempted to register for a paddle (the numbered plate you make a bid with), but seeing a 28cm wide meteorite go for an astounding £3500, I decided window-shopping is not



GETTY IMAGES

"£3000 from Japan! £4000 from Moscow! £5000 from the little old man in the front!"

such a bad idea!

Five minutes into the bidding, I was already baffled. The auctioneer frequently addressed the online bidders, somehow knowing exactly where they were from ("£3000 from online bid in Japan") whilst taking their bid to the telephone bidders and those in the room. He spoke at lightening pace and fired questions at those in the room as well as the staff who were on with bidders over the phone, whilst simultaneously acknowledging the presence of these online bidders. I was perplexed. Where was he getting the information from? Unless they were speaking in tongues, I hadn't the foggiest idea.

The staff at Christie's kindly pointed it out to me: there is a small screen facing the auctioneer with online bids from buyers across the globe who has registered prior to the auction online, displaying their country of origin and bidding amount as the auction was being streamed live on their website.

If you happen to have saved money since the start of term, you might have been interested in a 1719 early Italian binocular telescope, a bohemian tellurian, or even an early English terrestrial globe. The problem is in order to see the actual collections, you have to come before the auction day to the galleries at the back of the office where they are displayed. I happened

to see the Japan-themed collection and they have some amazing stuff!

To the scientists amongst you (yes, you), the name Ivan Petrovich Pavlov will not be unfamiliar to you. I was mesmerised, with bated breath, as the bidding started for the first edition manuscript of Pavlov's celebrated lectures on physiology of digestion, for which he won the Nobel Prize in 1904. With just a flick of a wrist, a click of a mouse, the buyers faced stiff competition from all sides as they clamoured to obtain ownership of this rare collection. With each exchange, the price increased: £2500, £3000, £3500.... And with a final shake of the head in the room, the manuscript

went for a whopping £7000, more than triple the estimate!

You could feel the tension in the air when bidding started, and watch open-mouthed as people battled to get what they wanted. The added bonus of seeing the collections before they are sold off to private collectors was worth the time, and if you happen to be around the area, go to Christie's and step into another world. You never know what you will find in the treasure trove.

Christie's South Kensington is located on 85 Old Brompton Rd, SW7 3LD. Auctions are free to attend, with no need to register.

ARTS RECOMMENDS

Musical Theatre Society's *Time & Again* @ Union Concert Hall, Beit Quad

The first completely original musical performed by MTSoc, 'Time & Again' is an intimate story about second chances and what might have been, written and directed by Imperial alumnus Shamini Bundell.

16th and 19th Oct at 7.30pm, 20th Oct at 2.30pm, £6 non students, £3 students

Drama Society's *Gasping* @ Union Concert Hall, Beit Quad

Ben Elton's 'Gasping' explores a world in which air becomes a commodity, as greed forces the price up until the oxygen industry is privatised. And if you can't afford to pay, you have no right to live...

18th and 20th Oct at 7.30pm, 19th Oct at 2.30pm, £6 non students, £3 students

The Inside Out Festival 2013 @ venues across London

A smorgasbord of performances, debates, workshops, lectures and exhibitions for those excited by knowledge in all its guises. Includes a mini Festival of Failure, a crime-writing workshop and The Maths and Computing Magic Show. See insideoutfestival.org.uk/2013 for more details.

21st- 27th October, many events FREE

An algebraic love affair at the Science Museum

Edward Leggett
Writer

Marcus du Sautoy and Victoria Gould recently starred in a short run production of "X&Y" at the science museum, a story of two algebraic variables apparently falling in love. Together they explore and tackle some of the biggest questions out there. What is infinity? Is there an edge to the universe? Are mathematics and theatre the same? All played out on a small, sparse stage somewhere in the back room at the Science Museum. Sounds interesting right?

The 'play' takes place pretty much entirely within a cube outlined with neon lights - this is X's home and whole world, and he is content with it.



BENJAMIN EALOVEGA

Marcus Du Sautoy and Victoria Gould as X and Y, puzzling themselves and the audience with a very long piece of string

Y then enters and shatters this illusion, setting the premise for a discussion about the possibility of an infinite amount of cubes, life after death and the meaning of nothing.

The play picked up multiple themes and ideas only to immediately drop them that lead to a very disjointed and often confusing piece of work. It felt more like a series of lectures rather than a cohesive piece of storytelling. The scatterings of humour throughout however did have the audience laughing and kept it light-hearted and fun.

Marcus du Sautoy's acting nevertheless was powerful and very convincing, troubled and confused by the sudden realization that all he knows may not be true. It truly was a great performance from him. Victoria Gould showed some opening night nerves, occasionally forgetting her lines, but also did well. The problem

here was not the acting but rather the construction of the dialogue.

If your maths knowledge is limited then perhaps this could serve as an stimulating night out to test your mind - but it came across a bit patronising to an audience of mostly adults. The concepts were interesting but they needed to be woven together better, and overall it was disappointing.

It would work perfectly for a teacher to take their class to on school trip and have their minds blown by some cool maths tricks, getting them interested and talking about maths and science in the process. Unfortunately however it fell flat as a work of art trying to combine theatre and mathematics. Maybe too much was expected from this small production.

X&Y will be performed at the Manchester Science Festival 30th October - 3rd November.



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ARTS

Die Fledermaus goes batty

Emiel De Lange reveals the disastrous results from ENO's operetta

What: Die Fledermaus with the English National Opera
Where: London Coliseum
When: Until 6th Nov 2013
Price: Various

Die Fledermaus, the Bat, is an operetta by the king of the Viennese waltz, Johann Strauss Jr. Operetta, the ancestor of today's musicals, is an entirely different affair from opera. The plots are frivolous and funny and mostly carried through dialogue with punctuating musical numbers. Through its development in the 19th century it became extremely popular for its crude humour, which bordered on the pornographic. Eventually even professional and 'serious' opera houses began to stage operetta, albeit in a toned-down style.

When Strauss entered the scene and made the operetta famous in Vienna, the plots were less crude; they were funny for their parodying of social values. The music he wrote was more refined and typically Viennese with waltzes, polkas and other dances in the style that brought him fame in the casinos and ballrooms.

Die Fledermaus is his masterpiece of operetta and the plot is suitably absurd; in revenge for a past practical joke, Dr Falke invites Eisenstein, who is wanted by the police, to a ball where

he must be disguised. Dr Falke also invites Eisenstein's wife, his maid and the prison governor, all in disguise. At the ball there are some awkwardly funny encounters, but overall the mood is celebratory and the company sings a tribute to the "king of wines", champagne. By the final act, everyone finds themselves in prison where the jailor too is drunk, but the prank is revealed and everyone lives happily ever after.

Usually this is a hugely funny and cheerful event, but not so at the English National Opera. Director Christopher Alden has tried to elevate this operetta into the ranks of the most profound of German opera, with disastrous results. This is a production in complete conflict with itself; the tension between the light-hearted plot with its sparkling waltzes and the dark and serious aesthetic of the production are stark and irresolvable.

The ever-present bed and the immobile hands of the clock suggest that the action is taking place in someone's dream. From this pours forth a series of bizarre sequences, always surreal, occasionally funny, but sometimes actually horrifying. Large sections are confusing, the dialogue barely making sense given the on-stage action. Larger stretches still are bleak and depressing. The entire final act is a black abyss through which any trace of humour is sucked as we



ROBERT WORKMAN

watch police officers (suspiciously resembling the Gestapo) beat people and point guns threateningly.

Given the staging, the music hardly seems worth mentioning; though played well enough it could hardly be called a waltz at such fast speeds. The cast performed admirably, and I

am sure the fault for the rather cold interpretations lies with the director. Alden has tried to find and present a psychological subtext where perhaps there isn't one, and in the process has assassinated operetta. It may have been possible to find interesting truths here if I'd taken my psychoanalysis

textbook and a pen, but the ENO has published the greatest possible of untruths in their own description of the production: "Light-hearted and colourful". That is everything it was supposed to be, but also everything it wasn't. My advice would be to avoid this.

Liola gets frisky in Irish Sicilian Gypsy Musical

Lily Le
 Writer

What: Liola
Where: The National Theatre
When: Until 6 November 2013
Price: £12 to £34, £5 with the 16-25 Entry Pass Scheme

First, a disclaimer: for those with a strong aversion to musicals avoid this play at all costs. *Liola* opens with a group of gypsy musicians providing music to what looks like a strange village sacrifice. One point to director Richard Eyre for immediate audience captivation.

It turns out that this is early 20th

century Sicily, and the assumed-sacrifice, Mita, is in fact the young wife of rich 'Uncle Simone', forced to dance because she is blamed for his lack of children.

In a nutshell, without giving away too much of the very little story that there is, Uncle Simone's niece, Tuzza, is jealous that she was not chosen as his wife and mother of his children. After getting pregnant by the charming but slimey Liola, who already has three sons by three different women, Tuzza persuades Uncle Simone to declare the child as his own in order to stake a claim in the inheritance that the child would one day gain. Liola, being Mita's childhood friend and star-crossed lover, helps her to prevent Tuzza getting away with the devilish plan.

As demonstrated by the plot, this is not a very profound piece of work. Although I am unfamiliar with the original by Luigi Pirandelli, who an

Italian source informs me was a classic author that many studied at school, there is not really any need to be able to compare it to Tanya Ronder's adaptation for the National. The play really is what it is.

Which is, a bunch of Irish actors running on and off the stage in song, laughter, tears – but mostly song – with Sicilian hair (mainly dark curls), old-style Italian dress, and a Mediterranean backdrop. The fact that it obviously was not an Irish production that was so well-acclaimed that it had to be shipped over to us Londoners, but actually Irish culture as a centre-point to the adaptation, makes it slightly bizarre.

I have tried to work this one out. Obviously, British actors squabbling in thick Italian accents and cries of "Mamma Mia!" or whatever we expect Italians to do based on our viewing of Dolmio adverts probably would not



CATHERINE ASHMORE

Song, dance, laughter, tears... and Sicilian facial hair. A recipe for musical success!

have been very PC.

Is the Irish element supposed to allow us to relate to the social values considered by the piece yet emphasise the foreign and anachronistic context

they occur in?

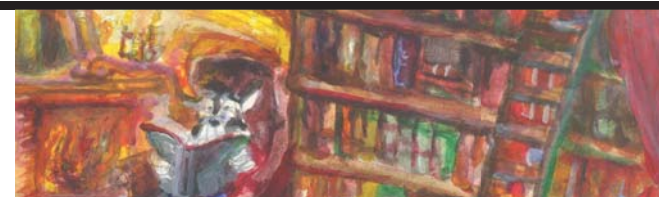
It is probably best not to think about it too much. In fact, there is little need to think about much at all during the play – but this is no bad thing.

Although it is easy to imagine it could have been controversial in its day, there is little else that invokes much pondering. There seem to be no hidden meanings or metaphors, and even the songs are so literal that I was slightly taken aback when one character started singing about peeling potatoes for her dinner

Aside from the very few and very slight GCSE Drama cringe moments, it is a very well directed play. Its light-heartedness is humorous and charming, and although it borders on the cheesiness of what many musicals are known for it never falls directly in, and even I with an aversion to them managed enjoyed it.

BOOKS

Editor: **Maciej Matuszewski, Eva Rosenthal**
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Student Picks

Maciej Matuszewski picks:

Dracula by Bram Stoker

Bram Stoker's *Dracula* is one of the most famous works in the English literary canon and it has served as inspiration for countless other works, yet surprisingly few people that I've met have the book itself. This is a great shame since this is a truly fantastic novel.

Given how deeply the story has penetrated into the public consciousness I think there is no need to give an outline of the plot. *Dracula*, however, is a far deeper and more profound novel than most of its adaptations convey. The figure of the Count himself is a constant shadow over the proceedings of the novel, appearing both suave and charming but also appealing to our deepest, primal fears. It is no secret that it is this character – a complex creation who has generated countless analyses from the literary establishment – is the main reason for the lasting appeal of the novel.

The book is also helped by its style – which, even today, many would consider at least somewhat avant-garde. The story is told entirely in the form of diary entries, newspaper clippings, letters and even transcripts of phonograph recordings. This presents the goings on from many different viewpoints – not only maintaining the reader's interest but adding to the depth of the characters and setting – allowing Stoker to build up a very dense mythology and backstory for his tale in a way which seems very natural.

This is a rare treat – a book combining tension and intrigue with genuine literary merit. In recent years vampire fiction has become, for many, a laughing stock but the original, and best, story remains untarnished.

Flash Fiction

Unrequited by Evelyn Craven

I had spent months obsessing over you – but I didn't feel able to tell you. When I saw you last night holding hands with another, all I felt was joy. Finally, it was over.

Send your submissions for our newest regular features!

FLASH FICTION: Ultrashort fiction up to 200 characters

STUDENT PICKS: Send us up to 250 words on your favourite book and how it changed you

books.felix@imperial.ac.uk

Smart and Funny

Calum Grant explores a nefarious plot to educate cartoon viewers

Simon Singh has returned with a lovely new book all about the role that mathematics has played in the longest running and arguably most successful animated television show ever. What that means exactly is far from obvious, but in reading the book it appears as though the whole show may have actually been filler whilst high level mathematics has been subtly broadcast for years with few people noticing.

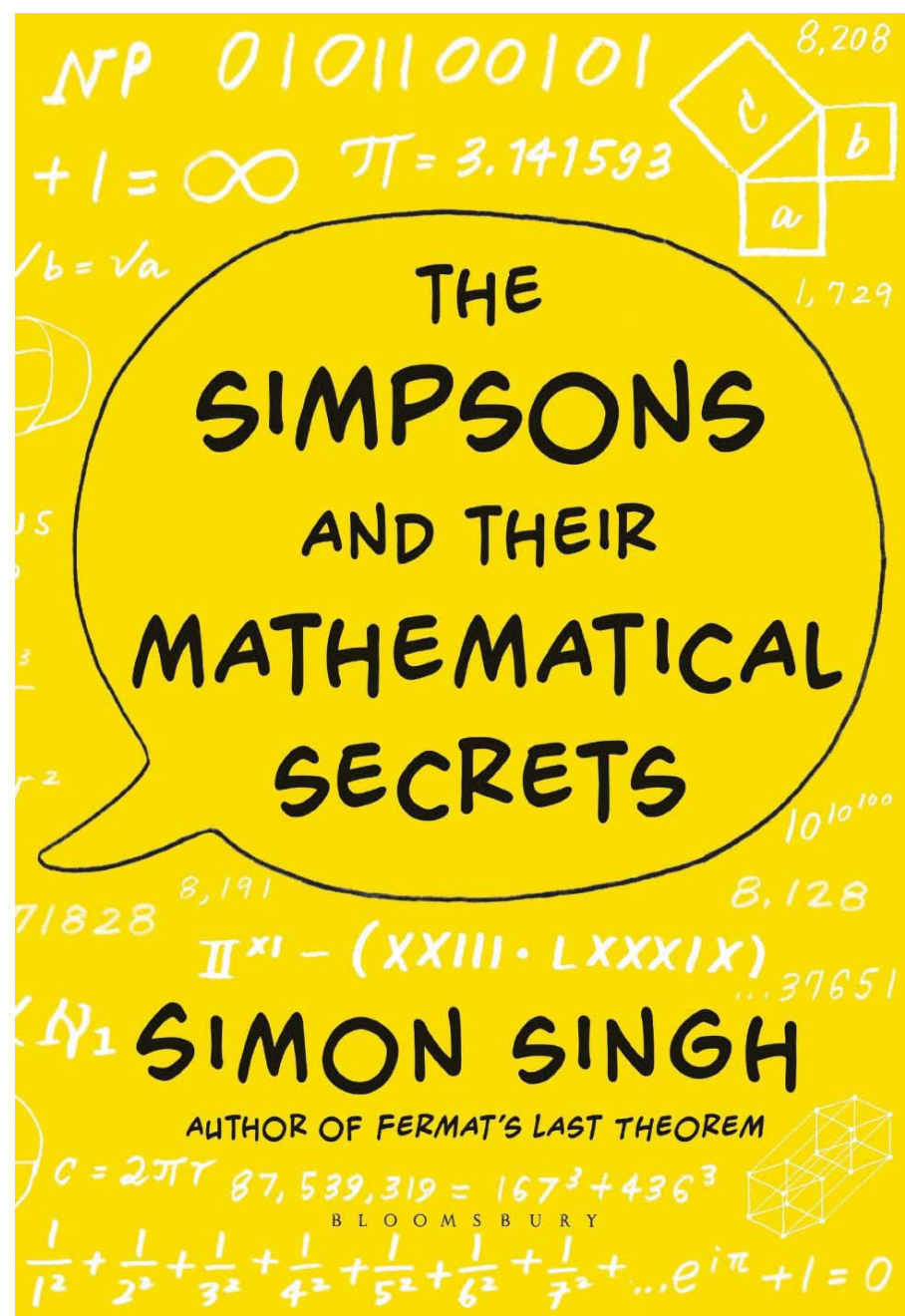
Indeed, when looking at the academic backgrounds of the people who came together make *The Simpsons* the credentials read more like those on the roster of some start up tech company: maths majors, computer science Masters, PhDs in applied mathematics and research scientists. All these brains walked away from their dreams careers in cutting edge research and instead took the coward's way, out opting for an easy life writing for a cultural phenomenon. But the appreciation and itch to continue playing with their intellectual roots lead to the whole *Simpsons* back catalogue being littered with some advanced equations and numeric concepts.

After chronicling how all these geeks found themselves in *The Simpsons* writing team Singh goes on to explore some of the interesting and out-there topics that found their way in to episode and passed the non-maths-minded by. A great many of the maths motives demand a much greater explanation, and Singh is all too willing to provide it in insightful and often humorous ways.

One splendid example is the episode 'Wizard of Evergreen Terrace', in which Homer becomes partly obsessed by Thomas Edison and decides to take up invention. Between working on the electric hammer and the make-up application device (which is essentially a shotgun loaded with make-up) we see his blackboard littered with equations. One predicts a mass for the Higgs Boson, another the curvature of the universe and a third scrawling is a solution to Fermat's last theorem. This is the same theorem that plagued mathematics for hundreds of years and was only demonstrated to be unsolvable as recently as 1995. However, this episode was broadcast in 1998 and seems to contradict Andrew Wiles proof. Testing Homer's solution on a pocket calculator reveals it to work, which is very troubling. It turns out that David S. Cohen wrote a program to sweep for solutions to Fermat's last theorem to within 0.000000002% accuracy, just enough not to show up on the ten digit readout of most calculators. Sneaky, and funny on an entirely different level.

Together with a raft of mathematical jokes requiring varying levels of maths ability, the book was a real pleasure to read from start to finish. Sometimes informative, sometimes hilarious and often startling to learn what concept and ideas made it into the show.

Having read Singh's previous publication *Trick or Treatment: Alternative Medicine*



on *Trial* I honestly can't say I was expecting anything like this. With the knowledge Singh must have racked up campaigning for libel law reform and appealing his libel case I was rather hoping he'd present us with a whimsical history of just that, packed with hilarious anecdotes, which would both inform and entertain. One can empathize with his not doing so however, as it clearly wasn't a battle he sought, but rather was dragged into for doing little more than calling a spade a spade. Though in his case it was actually calling chiropractor's treatments bogus. Despite having all the scientific evidence on his side British law came down on the side of business interests rather than empirical demonstrability. Going back to his own roots of popular mathematical writing, using *The Simpsons* as a jumping off point to talk about things like

narcissistic numbers, the use of statistics in baseball and topology would seem like a far more appealing thing to be getting on with.

He wastes little time in reasserting his newly found rights that he was instrumental in bringing about though. The Defamation Act became law in April of this year, though only time will tell the extent to which its powers will be asserted in the courts. Nevertheless, Singh references one episode in which Homer is forced to abandon a spinal manipulation device he invents by the chiropractors of Springfield so they can, in Singh's words, get back to 'happily promoting their own bogus treatments'. The particular reference doesn't actually serve as a set-up to any larger mathematical point, but is something that Singh must be happy seeing hitting the shelves up and down the country right now.

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BOOKS

An interview with Simon Singh

Calum Grant

Writer

Calum Grant: Having written about the history of mathematics, code breaking, the Big Bang and Alternative medicine, was this book on maths Easter eggs in the Simpsons the easiest book you've written?

Simon Singh: I think so. You see there's no real theme, no rhyme or reason to what I do. Both of the maths books I've written I would like to revisit and have another run at some of the chapters. For students at Imperial they may be fine, but my audience is the general reader. This book was pretty easy, but the big challenge was working out the make-up of this one. The first draft had six big chapters covering topics like Lisa and her more rational approach in the show, and another chapter on the role of pi – which turns up now and then in various episodes. However, when I was on the plane to the USA to meet the writing staff of the show I decided to reconstruct the entire book into eighteen shorter chapters to make it more pacy and digestible. I had to make sure it had the right balance of the writers' stories, the history of the maths involved and why maths-minded writers may be funny.

CG: As someone with a PhD in particle physics, and having written several popular science and maths best-sellers how much did you yourself learn about maths purely through researching all the Simpsons Maths Easter eggs?

SS: I had never really thought deeply about what fractals were before. When explaining how, in an episode of Futurama, Leela and Prof. Farnsworth go from being in three dimensions to two dimensions after a scientific mishap. This meant they went through a fractal landscape on the way, and so it took me some time to fully understand it so I

could explain it in the book.

CG: Were there any maths references you were taken back by, at the sheer incredibility of them being smuggled in?

SS: I just find all of them astonishing – because there's no reason any of them should be there!

CG: Did you make any suggestions for Maths jokes or ideas they could explore in any future episodes?

SS: No. I did ask if they have a mountain of ideas they are trying to get in, but most of these ideas just come from nowhere during the writing process. Jeff Westbrook said he had wanted to get undecidability into an episode of *The Simpsons*, but hadn't worked out how to.

CG: You talk in the book about the writers and producers having regrets about walking away from a life in academia and research, and most people would be flabbergasted that given the careers they would feel this was about not following up on science. Did you find that surprising?

SS: No, I didn't actually. I left Physics and went to join the BBC where I'd be visiting great laboratories, meeting Stephen Hawking, going to volcanoes with geologists and just seeing so many scientists doing real science, something I'd always wanted to do. And I still think there can't be anything more wonderful than making a new discovery, of coming up with a breakthrough of making a new invention. But for me I clearly did the right thing; if I had stayed in science I wouldn't have been a very good scientist. My skill set is pretty perfectly matched for what I've ended up doing, and I think it's the same for them. What else could they have done but be the greatest comedy writing team in the world? But I can see why there is a little bit of them that is sad they that never got to solve any great theorems.

CG: Did you ever set out to become a science writer?

SS: No. I took a gap year before my undergraduate degree and went and worked in industry. That year at the research centre I worked on semi-conductors and integrated circuits. Then when I was at Imperial I did a summer placement in Delaware at an electrical engineering lab, a position I got mostly due to my gap year job. Then I got a PhD working on semi-conductor detectors at Cern, helped enormously by my previous placements. I got the job at the BBC because I had the PhD, and I wouldn't have got into writing if I hadn't been at the BBC. Looking back you can see a path, but there was no grand plan.

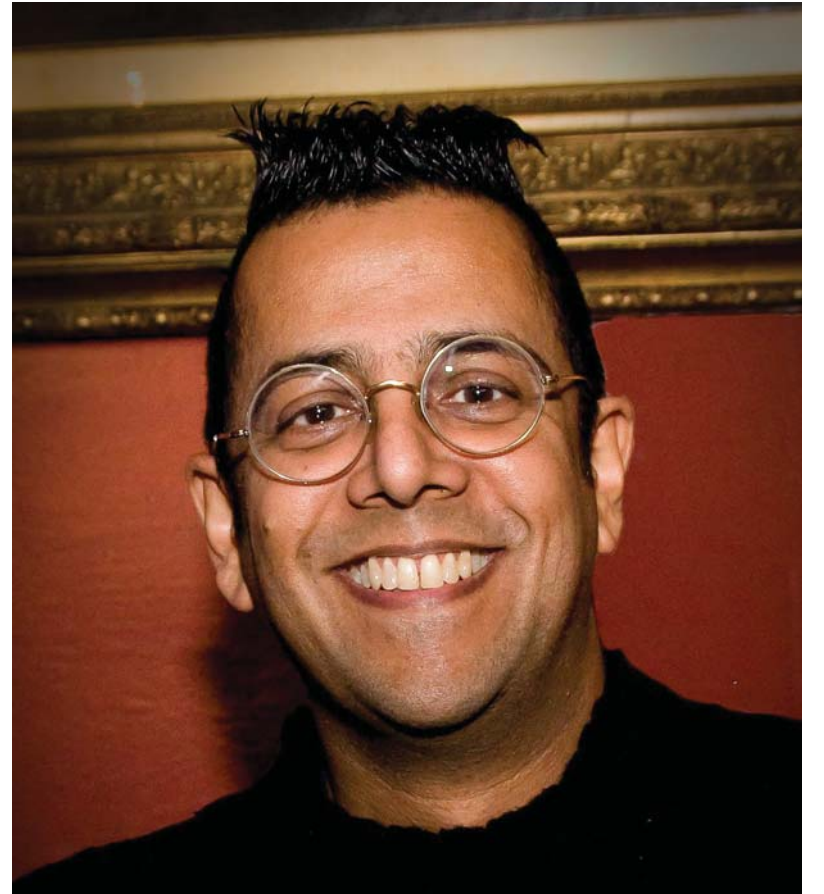
CG: Do you have any rules or your own approach to conveying sometimes heavy-going scientific ideas to the greater public?

SS: I write the books that I would want to read. I'm interested in history, stories, people and heroes; things that make me smile and laugh. I only write about things I find interesting, and I really maintain my sense of interest and wonder of things long after their novelty has passed. I assume my readers are bright and curious, but don't assume they are in any way experts.

CG: Are there any writers who you grew up with, who got you into science and who you aspire to be?

SS: I think Richard Dawkins is the most beautiful writer, and I really admire that. If anyone asks me to read I always refuse because firstly I'm not good at reading, but mostly my prose...its just doesn't sound very good. I admire that, but I don't aspire to it. Reviews of my work often say 'clearly written', they never say 'beautifully written'.

CG: You courted a lot of controversy going after alternative medicine.



Were you intimidated or nervous to be writing and releasing that book?

SS: No. My co-writer Edzard Ernst did warn me, as he'd been a professor in that field for ten years. He got hate mail, people called him very nasty things. He wouldn't get invited to conferences, or get his work accepted at them. It never really bothered me though because I don't have a job. I really appreciate the fact that I can say and do what I want; I can stand up at a science communication conference and say 'that was an appalling example of science communication, it was wasteful, pointless and society X should be ashamed of itself' because I'm not someone who has to work with such a society or apply to them for grant

money in the future.

CG: Did you consider writing a book about your libel case and subsequent legal reform?

SS: Yes, I thought about it. It's a great story of grass roots activism, and a great story of how you can change the laws within a political system. In a way I wish somebody had written it, but I don't think it's the right book for me. For this kind of adventurous story you'd need someone who could bring out the emotion, and the personal angels involved.

CG: Why don't Maths jokes work in base 8? Because 7 10 11.

SS: Very good.

Point your face at this

Emma Wills

Writer

Demetri Martin's first book of drawings is an utterly beguiling read from start to finish. Perhaps it isn't accurate to say 'read' as there are few words in it – each page is taken up by a new simple black-and-white line drawing of charming hilarity, ranging from a graph of melted cheese temperature against time (with a discontinuity at perfect tempera-

ture) to a man walking a fish.

It is a book that is easily dipped into and out of, with the sheer number and diversity of the sketches meaning that it can be read from cover to cover over and over again, each time finding something new. Most of its comedy is light-hearted and observational, so appeals to a wide audience, though some of it leans towards the slightly more macabre, like the double page spread of skulls ending in your own.

Anyone who is familiar with Dem-

etri Martin as a comedian from his many television broadcasts and stand-up shows, will recognise his charming trademark mix of cheerful, somewhat silly one liners and slightly more satirical and thoughtful sketches. For anyone who isn't, he can be described succinctly by his list on influences on Wikipedia, which includes Eddie Izzard and Socrates.

With its Venn Diagrams, entertaining questions such as: 'why do the lions have to be tamed?' and off-

the-wall equations like 'spray tan = (vanity + stupidity) aerosol', this book comes across as the doodles of someone trying to make sense of life, albeit someone who doesn't take it too seriously.

I found myself laughing aloud many times at this book and insistently passing it around to share my favourites. *Point Your Face At This* is sure to make you smile, laugh, and think a little, and would make a perfect gift for almost anyone, especially for yourself!



Portrait of the Artist
as a Frustrated Artist



CAREERS FAIR 2013

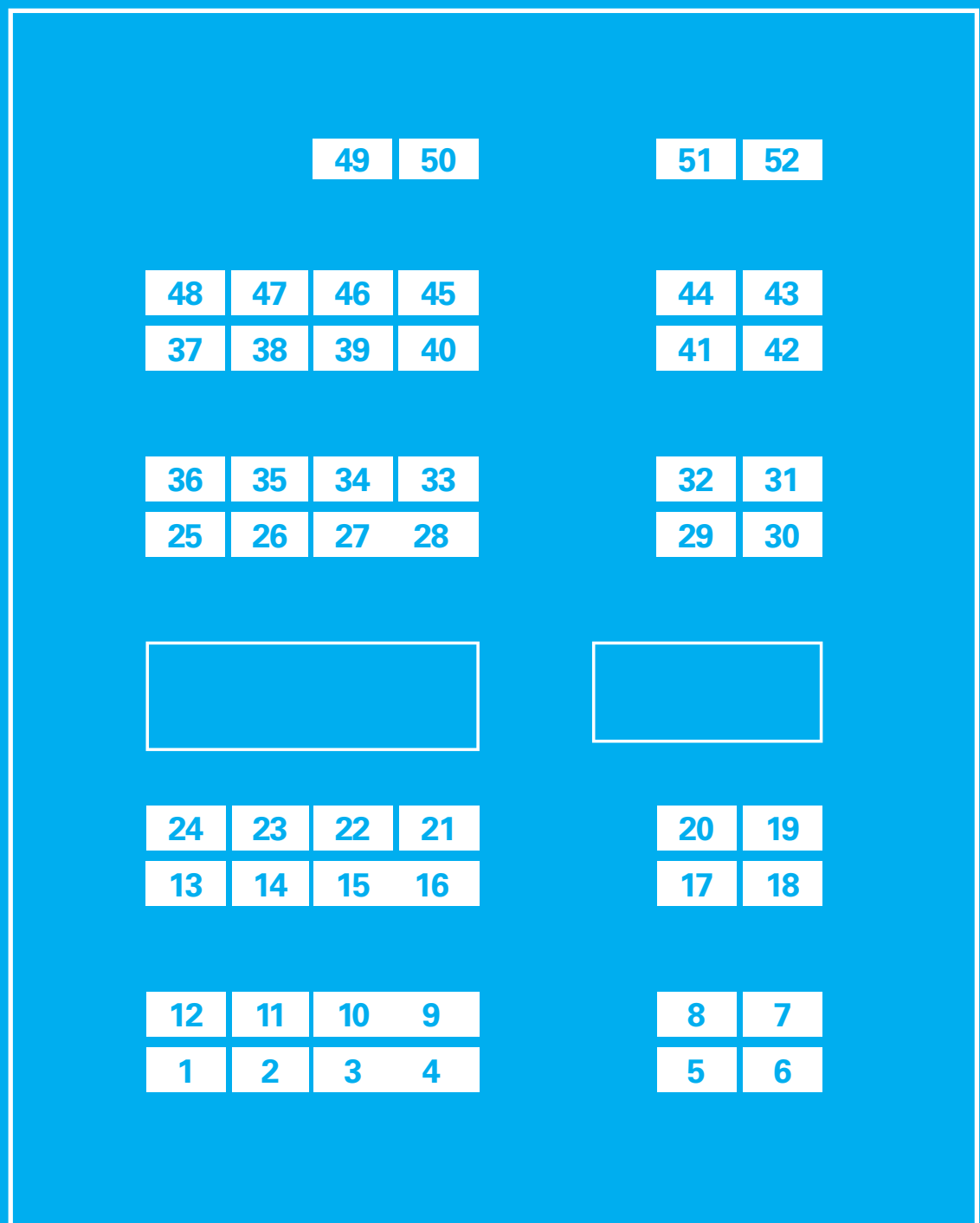
Find your career here

The annual Union Careers Fair is the largest careers event held in College each year. With over 50 companies attending, the fair is your opportunity to meet the many different companies that want you, an Imperial graduate, to work for them!

Monday 21 October 2013

11:00 - 16:00 | Queen's Lawn
Imperial College London

Accenture	3-4
Allen & Overy	36
Bae Systems	44
Bae Systems Detica	46
Bank of America Merrill Lynch	40
Barclays	09-10
Bloomberg	15-16
Bristows LLP	37
Buro Happold	38
Cambridge Networks Ltd	42
Careers Service	52
Chartered Institute of Management Accountants (CIMA)	31
CHP Consulting	35
Citi	41
Deutsche Bank	34
dunnhumby Limited	11
FTI Consulting	13
Glencore	19
Graduate Recruitment Bureau	47
Help Desk	5
IBM	25
ICAEW	22
IMC	6
Inside Careers	51
London Business School Masters in Management	1
Macquarie Group	24
McKinsey & Company	18
Metaswitch Networks	32
Microsoft	33
Milkround	45
Operis	12
P&G	48
PA Consulting	23
RateMyPlacement	43
Rolls Royce PLC	27-28
Royal Bank of Scotland	7
RWE npower	2
Societe Generale	21
Standard Chartered	39
Standard Life	30
Stem Graduates	20
Target Jobs	17
Teach First	50
The Ministry of Defence	14
Towers Watson	26
UBS	29
Unilever	8
Wiki Job	49





@feliximperial

FelixImperial

MUSIC

Chillin' in fanboy heaven

Stuart Masson reviews Mountain Goats at the Union Chapel

The Mountain Goats are probably my favourite musical artist. From the early years of just **John Darnielle** with a guitar and a tape recorder right through to the current three piece iteration I am an embarrassingly large fanboy. So, a few months back, when they announced they were playing at the Union Chapel, one of my favourite venues, I snapped up tickets the moment they came on sale. So last Tuesday I descended upon Islington with a heavy sense of excitement. After an excellent opening set by singer-songwriter **Alessi's Ark**, I was expecting the show

to end all shows.

For this show they had been reduced to just John Darnielle and bassist **Peter Hughes**. This limited the set somewhat, since several tracks (including most of the choice cuts from the new album) don't really work without drums, as John himself admitted to one particularly adamant heckler. It did mean we were treated to a few more old numbers though, which is always a good thing. Considering the total repertoire numbers around 600 songs, I was overjoyed when I realised that an intro describing at length the role of the running back in an American football

game meant that they were about to play my favourite Mountain Goats track: *Fall of the Star High School Running Back*. An incredibly rare performance of early cassette-only EP track *Going to Monaco* (I did say I was a huge fanboy...) was also pretty spectacular. There were also stunning performances of *Up the Wolves*, *Woke Up New* and *See America Right*. I was also blown away by some tracks I'm not obsessed with. Both *Maybe Sprout Wings* and *Wild Sage* were far more beautiful in the live setting whilst new album track *The Diaz Brothers* finally clicked for me. There was also a firm reminder that John is yet to



all shows. Peter Hughes' bass guitar refused to make sound during the first track, which proved distracting to John as well as the audience. It did lead to an impromptu solo performance of *Jenny* though, so I suppose I can't be too annoyed about it. What I maintain my right to be annoyed about is the piano portion of the show. I don't know whether it's because John isn't as good at writing for piano, or as good at playing piano, or if I just don't like the three songs he played on piano (it's definitely the last one) but the complete lack of energy during these songs really killed off the momentum for me. The fact that I felt bored at any point of a Mountain Goats show would be a shock to most of my closest friends, but that's how it was. I left the show feeling a bit disappointed, but looking back on the setlist, I real-

ise that I absolutely loved every single second that John was holding a guitar. It was just this tepid rendition of a few songs off the extremely boring *The Life of the World to Come* that didn't hit the spot with me.

All in all, it's obvious that I'm never going to enjoy the perfect Mountain Goats gig unless they let me pick the setlist. In terms of "big hits" we got *Dance Music* but there was no *This Year or No Children*, which was a bit of a shame. Of course, once you've written 600 songs, you're always going to have to cut some of them, so it's a bit stupid of me to complain about tracks that weren't played. The setlist that was played was great, and the performance was top of the range. I suppose when you love something this much, it's hard not to be upset with the smallest flaw.

AMS album of the week

Capital Cities – *In a Tidal Wave of Mystery*

Whilst we were all fussing over the hottest and driest summer since 2006, something radiant happened on the infinitely more weather-blessed West Coast of the US. I'm not talking about the small yet progressive steps our darling cousins are taking for gay rights, but I am in fact referring to the release of Capital Cities' true gem of a debut album, *In a Tidal Wave of Mystery*.



The lyrical duo of Capital Cities, Ryan Merchant and Sebu Simonian (a fabulous name only rivalled by his cracking beard), have produced an album in which you will be taken on a veritable journey of upbeat and feel-good electro inspired creations paired with languid and well-written indie tunes. Their success in producing a diverse album makes for an interesting and refreshing listen with great promise for their future. [Inb4 jack of all trades]

Our opinion of music is often affected by the everyday, non-sonic stimuli. For example, if we are experiencing the joys of love there are certain songs that appeal to us and if the artist has fallen on hard times then that can very much be apparent in the music. In this case, I believe my opinion of the vocals is buoyed somewhat by the palpable bond between Ryan and Sebu. In fact, this album is chock full of jaunty, get up and go tunes which make you just want to grab your bff (*Safe and Sound*, *Origami*). If you end up liking this album's vibe, check out their really funky covers of the classics *Stayin' Alive*, *Holiday* and *Nothing Compares 2 U*.

For those interested in music videos, *Safe and Sound* is certainly worth its weight in gold. [On a charming aside, if anyone is a fan of vsauce you will be familiar with how one might weigh a music video] Ok I digress. Anyway, at first you think, "Ah! Dance styles from throughout the ages and two chaps dancing ecstatically celebrating their successful foray into the music scene; that's cool." But upon further investigation (and I owe this insight to a particularly observant and savvy West Coast gal) you realise that there was real talent behind the elegant and seamless combination of the footage for the music video which produces a simply incredible visual feast.

I will bring this review to a close with a tip of my top hat to the promising Ryan and Sebu for this joy, thank you.

George Spence-Jones



put out the best song he's written in a few years in his ode to a bullied kid at school, *You Were Cool*.

Sadly, this wasn't the show to end

Music Newsround

Snoop Dogg/Lion has re-branded himself as **Snoopzilla** for a funk project with Stones Throw maestro, **Dam Funk**. The duo are calling themselves **7 Days of Funk** and will release a self-titled album on 10th December.

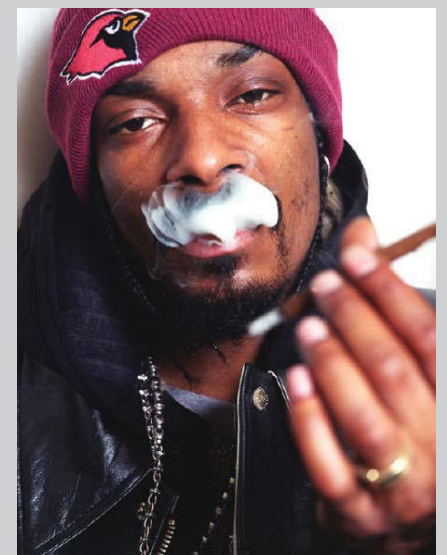
Coolio dropped in on a student flat in Preston to cook a three-course meal and perform an extra special rendition of "*Gangster's Paradise*", accompanied by some bloke on a guitar.

The first band performing at Glastonbury 2014 has been announced. **Stanton Warriors**, the Bristol-based DJ duo will be playing their 10th Glastonbury festival.

Death Grips cancelled a tour and festival appearance this Autumn. No reason was given.

Death-Row affiliated rapper and producer **Daz Dillinger** has issued Rockstar Games with a cease and desist order over alleged copyright theft on the sound track to the new GTA game.

Metalcore titans **Trivium** and **Killswitch Engage** have announced a double-headline tour in February next year.





**40 years on, we
on RCS**

**Want to get more "exposure"
Email centrefolds@imper**

The Graduate



Imperial
College
London
Class of
2013

THE GRADUATE

Congratulations from the Vice Provost Education

Professor Debra Humphris
Vice Provost (Education)



Commemoration Day is one of the most exciting dates in my diary. It is fantastic to see the South Kensington Campus filled by returning students and proud relatives and friends. There are over 2,000 people graduating but that impressive number shouldn't obscure the individual achievements of each and every graduand who will be sitting in the Royal Albert Hall.

I'd like to thank all of you for many the different ways you've contributed to, and shaped, College life during your time here. I hope you see this as simply a new chapter in your continuing relationship with Imperial, as you take the skills you've developed, the experiences you've had and the friendships you've made into a bright and successful future.

Very best wishes

Debra Humphris

"We've just got to make sure we lift ourselves and finish what we set out to do. We have to keep our standards high and make sure we give it everything we've got."

Ian Foster
PhD, 1988
High Performance Parallel Logic Programming Languages

So, you're graduating!

So, you've survived the Imperial Maze! Congratulations! Finishing your degree is a huge achievement, especially when you're at Imperial.

Today will undoubtedly be an interesting day, full of a wide range of emotions, happiness, sadness, excitement and nostalgia, and for a chosen few, a longing to return to the academic world.

Regardless of how you spend your last time as a graduand we hope that this pullout will stay with you. We've got lots of information about post-university life as well as a few tips to help you make the most out of the Commemoration Day festivities.

We hope you have great day, one that you will be able to remember for years to come.

Happy Commemoration Day Class 2013!

THE GRADUATE

A lifetime of alumni rewards

Your relationship with the College does not end when you graduate. As an alumnus, you will be joining a lifelong community of over 170,000 alumni in 192 countries, and have access to an exclusive range of benefits and networking opportunities.



Exclusive alumni benefits

Membership of the alumni community is lifelong and free. Make sure you register online to receive the Imperial magazine, special events invitations and other alumni news. In addition, alumni can access the Central Library and make use of the Careers Service.



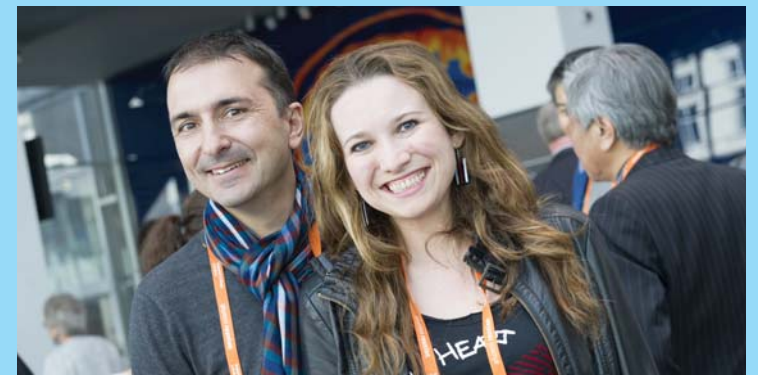
Alumni email service

You can display your Imperial connection after you leave the College with a free alumni email address ending in @alumni.imperial.ac.uk. Easy to set-up and manage, the service includes calendar and chat functions.



Global networking

Stay involved by joining one of 60 alumni groups and associations worldwide, giving you the opportunity to take part in alumni reunion activities, ranging from dinners and adventure trips to lectures and guest speaker events.



Alumni Visitor Centre

Alumni visiting South Kensington can make use of a dedicated alumni lounge and meeting space in the College's main entrance. Facilities include complimentary refreshments, free Wi-Fi, a bookable meeting room and a left luggage area.



Join us on LinkedIn

Being an alumnus opens up fantastic opportunities for you to develop a global network of professional contacts. Join the Imperial College London alumni group on LinkedIn and be part of the online alumni community.



Get involved

Over 1,000 alumni volunteer their time to support Imperial, ranging from speaking at student recruitment events to providing careers advice. Visit our website to find out about the latest alumni volunteering opportunities.

THE GRADUATE

Your time at In

Union President

David Goldsmith
ICU President
2013-14



Think back to the person that accepted that place at Imperial College and compare them to the one reading this column today. I can say, without a doubt, that these will be two very different people- the former may very well have been slightly awkward, anxious and overly excited. On accepting this place you probably heard rumours about the impossibly heavy workload, how difficult the course was going to be, and perhaps you doubted yourself. Today is the day that you can proclaim that you triumphed over all of that- the person reading this column today is now a fully formed Imperial Graduate- highly skilled, well rounded and exceptionally employable, and now even more excited, at the prospect of taking on the world.

It is important to recognise that this journey was not solely one of academic achievement. Along the road you will have formed numerous bonds: in your hall of residence, with your year/faculty group, with your club or society. It is important to note that the Union, as well as the College, facilitated these exchanges- it brought you together as a true community, equipped with a voice and empowered. This community will have connected you with like-minded people, allowed you to explore your passions, and to shape yourself into the type of person that you truly wanted to become. I wish this newly developed person the best of luck in their exploration of what is to come.

CGCU President

Lejon Chua
CGCU President
2013-14



Hearty congratulations to all graduates of the CGCU! Time really flies and you're now a fully-fledged engineer. Over the coming months, you'll have to come to terms with the question: "How did I manage to accomplish so much over the past few years at Imperial?" A great sense of fulfilment must come from all the knowledge and skill sets you've acquired, and even more so when you consider how much you've grown as a person during your time with us. Such a wonderful feeling is well-deserved given all you've undergone as an Imperial student, pushing you beyond your limits. This, I strongly believe, has prepared you to face any challenge you're about to encounter out there.

With all the rich experiences and insightful advice they have to share, don't underestimate the value our alumni can bring to your working life. The City & Guilds College Association (CGCA), the largest constituent college alumni body of Imperial, now has more than 4,000 members around the world from a myriad of professions. Joining the CGCA after graduating is an excellent way to forge and maintain links with other members. Its informal network can prove extremely worthwhile as a source of information and contacts in this increasingly fragmented commercial world. For a membership fee no more than that of a college society, you will also receive biannually a copy of the Association's Journal, "The Imperial Engineer", gain access facilities at the New Cavendish Club and enjoy a full range of social, networking and re-union events. Finally, let me share a quote from Ralph Emerson which truly embodies my sentiments and sincere wishes for all of you: "Do not go where the path may lead; go instead where there is no path and leave a trail."

I bid every one of you Godspeed and may you always stay positive, keep an open mind, and find for yourself the drive and determination to enrich the lives of your peers in all possible ways."

RCSU President

Plabon Saha
RCSU President
2013-14



It's the end of an era as for many of us university plays a defining part in our moulding. It is with mixed emotions that one must say goodbye to one's beloved university but an end is where a new beginning is born. A new world waits out there, where it is more than just exam grades, more than solving equations or coursework deadlines.

No matter what your degree result is, it neither defines success nor you. The building blocks of success are within all of you and it is up to you to find a way to build the wall with decency and dignity. In that journey, don't be afraid to fail. It is impossible to live without failing unless you have lived cautiously all along. In which case, you haven't lived at all and thus have failed by default.

I am sure many are happy to finally leave this institution but like many before us; we will be a part of it as much as it is a part of us. There is no better way to feed one's nostalgia than through the Royal College of Science Association, the alumnus group for RCSU students. It's a fantastic way to keep in touch with your former classmates and Imperial College itself. They will be running various events through the year including annual alumni dinners. Please visit www.rcsa.org.uk to find out more. Best of luck to you all.

Plabon

RSM President

Emily Pennington
RSM President
2013-14



Huge congratulations are in order for all Royal School of Mines students due to graduate in the upcoming commemoration day ceremony! I hope that the past three or four years have left you with only the fondest memories of the RSM. You have helped support the RSMU student body by being active social members who took pleasure in getting to know students of all ages and showing true RSM spirit at all the events through the years.

Now, the good times don't stop here. The applied nature of the science and engineering degrees gained from the Royal School of Mines departments of Earth Science and Engineering and Materials lead into a wide range of industries, careers and research; RSM graduates can be found on all corners of the globe, both in bustling cities and in the back of beyond. The skills you have gained during your time at Imperial will be used to benefit the world in all aspects of modern life, from resource extraction to the creation of groundbreaking technologies and products.

In the future, when you are all super successful and have incredible life stories to tell you can reconnect with your fellow graduates and reminisce about the great times you had and the memories you made here. As you all know, you will be missed and are welcome back any time. Congratulations again, you should be so proud.

ICSMSU President

Steve Tran
ICSMSU President
2013-14



Whether you are qualifying as a full-fledged MBBS Doctor or a PubMed-savvy Bachelor of Science, I wish to congratulate you on achieving a considerable milestone in your life so far. Even if you are not graduating, make sure you embrace the euphoria of this year's Commemoration Day, as it won't be long before it is you having the constant fear of being labelled as THAT student who tripped up on stage.

Although it is a relatively young alumni networks at Imperial, the ICSM Alumni Association in recent years has gained a lot of momentum and with their help, there is now additional support for our clubs and societies as well as blossoming joint projects on career advice and academic tutoring between students and alumni. So if you haven't already, please consider giving back by joining the ICSM Alumni Association.

For those who are leaving us, I dearly hope you have enjoyed your time with us. As a parting message on behalf of everyone at ICSM, I would like to thank each and every one of you for your fantastic contribution to life at the medical school and at Imperial. You have all helped to shape ICSM as the medical school we are so proud to be a part of. You will be sorely missed and I wish you the very best of luck with your careers and I have no doubt in your future successes.

Steve

THE GRADUATE

Imperial College

Queen's Tower

If you haven't been up the Queen's Tower at least once so far then you've certainly been missing out. With amazing views of London and huge bragging rights if there's a chance to climb it during Commemoration day and you're too busy showing your parents the Dyson hand dryers in your department, you've definitely missed out!

Did you Know: The Queen's Tower used to be the central tower of the Imperial Institute and has a total of 325 stairs?

Princes' Gardens

Up until this week you might have only visited Princes' Gardens while on they way to Ethos or the Eastside bar but this time why don't you visit the area with family? It's surprisingly beautiful and green, no?

The Library

It's hard not to remember the Library whenever you think back to your undergraduate days. Either as a place to run away from, or a second home during tough coursework and exam seasons, the Library will always be recalled, especially the orange pods facing the windows.

If you're ever lucky enough to live in the South Kensington area again you can always join the library as a local resident, especially useful for those who like textbooks!

Union Bar

The Union Bar (and the artfully named FiveSixEight) is also another top location you're likely to remember as your memories of lectures fade with time. If you're lucky enough to have your name engraved on a tankard or two (or three) you'll probably be back sometime soon to drink from them.

Your Department

Last but not least, your department. You've spent many a year between these four wall, learning lots of things you might forget later on. However, over the last few years you've also developed as a person and a student, improvements that can last for a very long time. Try to avoid the awkward introductions between your parents and your lecturers, this isn't school after all.

Visit again in 10 or twenty years you might be in for a treat, or at least a lovely champagne reception as a part of a reunion.

THE GRADUATE

The Careers Service: Supporting you beyond graduation



Congratulations to Imperial College London class of 2013! We wish you the best of luck and prosperity for the years ahead.

Careers Service
Imperial College

Graduation is a time for celebration. To reflect on the years you have spent working hard to achieve your goals both academically, personally and ultimately to move onto the next stage of your life. Your time with us at Imperial will have equipped you with a world class education and also exposed you to lots of opportunities to develop your key skills that will make you employable in the future.

Your final year will have been a time of consolidation of all the hard work you have put in, and will also be time to look forward. Forward to the opportunity that now presents itself in terms of your future career, whether that is in the workplace or remaining in academia.

Of course, not all of you will be fixed up yet. This could be due to you wishing to travel and explore the world a little more before you settle down. You may want to gain further experience by volunteering or getting involved in your local area to enhance your transferable skills further while you take a bit more time to decide on your career path. Whatever your reasons The Careers Service does not stop supporting you after you graduate. Imperial alumni can make use of The Careers Service for up to 3 years after you graduate. This will enable you to continue to access Jobslive and the thousands of opportunities that are on there. You can also continue to use the range of on-line resources available on the Careers Service webpages. If you need to speak to a Careers Consultant this can be arranged, either in person or by making a Skype appointment. To continue to benefit from the support that the Careers Service can offer you simply need to register as an alumnus via the Careers Homepage (www3.imperial.ac.uk/careers).

Imperial has an excellent record in graduate employment and the annual Destination of Leavers from Higher Education that the Careers Service manages consistently shows Imperial Graduates outperforming the rest of the UK both in terms of graduate employment statistics and graduate starting salary.

We know many of you will have secured yourself graduate level employment and are excitedly waiting to take up your new roles wherever that may be. Congratulations on navigating the process and succeeding in what can be a stressful process in your final year of study. Moving into the unknown can be daunting but you should look ahead positively. To help you prepare for your new challenge if you are going into the workplace The Careers Service has produced a few tips for you to consider:

1/ The basics. Reread your joining instructions from your employer. Make sure you know your starting time, work location and any special

instructions they have given. Often on your first day you will need to bring in various forms and documents to enable to you become a formal member of staff. Usually this will involve a trip to the Human Resource Department to drop of forms and collect your identity card (and you thought you had left that all behind you when you took your College card off for the last time!)

2/ Be yourself, but be your positive self. Your first few days in your new workplace will involve meeting people. Lots of people. Be friendly and polite. It will be tiring but the impression you give to your new colleagues during your first few days will last.

3/ Show a positive attitude toward the tasks that you are given. It is likely that your first few weeks will involve an induction and this will vary according to the size of the organisation you have joined. It could be a full programme lasting weeks where you will undergo specific training on the systems in use and the various different procedures

that you will have to become familiar with. Some of it may involve days, half days or a few hours out of your normal place of work. Smaller organisations may not have such a formal structure but you should expect an introduction to colleagues, systems and all the relevant health and safety information that are required to keep you safe in the workplace.

4/ Be realistic. You will have only just started and you cannot expect to know it all. Show a willingness to undertake tasks but don't be afraid to ask for help and clarification if you are unsure. Your new colleagues will be willing to explain more and help you gain confidence in your new role.

5/ Enjoy. You will be exposed to a lot of new experiences, people and systems. Take some time to reflect on your first few months in your new role and look forward to building a successful and rewarding career. Before long you will be meeting up with your fellow alumni for a 1 year get together! It really will go that quickly.

THE GRADUATE

Tessa's Top Ten Tips for Graduation



IMPERIAL COLLEGE LONDON

Tessa Davey
Comment Editor



Commemoration Day at Imperial is pretty well labelled, signposted and explained, and it's pretty difficult to fail to do any of the essential parts. But as with anything else, it's good to be aware of any potential stumbling blocks so that you can streamline your day. And so as a voice of potentially embarrassing experience, here are some tips that I wish someone had given me.

1. Get your gown as early as you can. It might seem like overkill to get there the full three hours before the start of your ceremony, but with your parents and younger sibling in tow, all good intentions can go out the window, and you'll end up leaving late. They're grown adults, and can (probably) make their way to Imperial by themselves, so why not run ahead and pick up the gown by yourself? It gives you more time to run around pretending to be a bat/wizard before their judgemental eyes arrive, and you can make them super proud by meeting them at the tube in your full regalia. The key thing that you want to avoid is going the cross-London sprint in your graduation clothes. I had to make this run in heels, and the race induced sweating made my hair go frizzy. Your proud parents are going to whip out the photos from your graduation for the rest of your life, so it's important to make sure that you look your best.

2. If you do manage to wrangle your whole family to College nice and early, leave the 'rents outside the Great Hall while you pick up your gown.

Ede and Ravenscroft dress you in it, so you don't need your parents to do anything, and they'll really just clog up the system. While Mother Hen might still love to help, the faster everyone can get through the Great Hall, the more time you have to take jumping pictures in front of the Albert Memorial.

3. It can't be emphasised too much that girls need to bring safety pins to secure their gowns. Bring lots, bring spares for your friends! Unless you can pin your gown, it's going to be a pain in the arse all day. The staff giving you the gown can't pin them for you, so get a friend to help you (unless you're exceptionally skilled and can do it yourself, of course), or head out of the hall to get your parents to do it. It gets pretty frantic in the Great Hall, so the last thing you want to do is add to anyone's stress by getting in the way. You should also remember that you're going to be wearing an extra layer of heavy material all day, so ditching your jacket with your parents is a good option. It gets pretty warm in those gowns, so don't forget to put on deodorant!

4. In the Royal Albert Hall, you'll be seated alphabetically by degree type. As you've been studying with these people for years, you'll probably know the people you're sitting on either side of you, who you can nudge and giggle with throughout the ceremony. But if you don't, it's never too late to meet new people. If the person you're sitting next to looks a bit sad and lonely, or if you need to talk to someone new out of necessity, you can still have a great time. Can't think of anything that would necessitate overcoming your social awkwardness to talk to someone new at this point? I happened to be sat next to my recent ex-boyfriend, who didn't seem to be overly keen on chatting with me. (If you're not graduating yet, I recommend avoiding

this at all costs. If you must date someone in your class, try and stay away from your end of the alphabet) I've never been more grateful for the sort-of-acquaintance on my other side, who kept me entertained the whole way through. Just because you'll never speak to them again, it doesn't mean that you can't be graduation BFFs.

5. You might be worried about falling over on stage. You'll be trying to juggle a lot of things: keeping your gown straight, the handshake-walk (at all costs, do not pause!), and possibly inconvenient clothing like heels, or a sari. It's a big ceremony, and a lot of pressure. But what I find reassuring, is that if you trip, it will be with all eyes on you, in the Royal Albert Hall, one of the most well known buildings in the world. That doesn't sound like a good thing, and while most Imperialites will find that kind of attention terrifying, after a few years (or a few pints) it will be a fantastic anecdote. If you do stumble, and someone will, remember to style it out. A full-on fall requires a bow, and if you pull it off, you'll be a hero. Almost worth doing it on purpose, isn't it?

6. After the ceremony, there is the highlight of the day: the champagne and canapé reception. I can't remember the canapés, but I can remember the champagne. My key advice here is to remember that while it is free alcohol (woo) and you're with all your friends who you might not have seen since exams finished (double woo), your parents are also there, and it is not appropriate to attack the champagne with your usual zeal. You will be very overexcited, and may not have managed to fit in breakfast, so it will go to your head. A bit of good spirited tipsiness is perfectly acceptable, but getting full on wasted is not. I managed to drink enough to do my usual 2 or 3AM drunk texting...

at around midday. Classy.

7. There are photographers in Beit Quad all day, but as anyone who's ever braved the Union on Commemoration Day will know, the queues for graduation photos are insane. There is plenty of time to get one taken either before or after your ceremony, but if you'd rather not stand around for ages, regressing to a sulky child who wants to go off and play with their friends, there are also photographers in the Queen's Tower Rooms the day before, where they lend you a gown for the photo. For less traditional photos by camera wielding parents, classic spots are the steps in front of the Albert Hall, the lions by Queen's Tower, and in front of RSM.

8. It's tempting to keep wearing the gown as long as you possibly can, just to make the most of it. As long as you return it by 8.30PM, there don't seem to be any restrictions with running off with it. Whether you want to take a whistlestop tour of London in your bat-cape, or just go out for dinner with your parents, you have to make the all-important decision of whether or not to return it before you leave. Especially if you're coming back in the evening, it might be tempting to keep it on, just to let your parents eke out the pride a bit longer. Remember that you will attract a lot of attention outside of South Kensington, and you might get a bit fed up of it after a while.

9. A lot of people will go out with a meal with their family on Commemoration Day, which is a minefield of things to watch out for. As there are several ceremonies, this could be lunch or dinner, and either before or after the champagne reception. Although you might just want to go and hang out with your friends, your graduation is also for your parents, and so you're fairly honour-bound to spend a bit of time with them. After all, they've

probably paid for the tickets, right? Deciding not to brave the Eastside "celebratory menu", I had to find somewhere to eat that wouldn't cause my father to grumpily mutter, "it's all the same anyway, foreign food, isn't it?", which is surprisingly challenging in London. With that decided in advance, I just had to navigate the non-perpendicular streets of Covent Garden to the restaurant in Covent Garden while suffering the aftereffects of the vast quantities of champagne, which was enough of an achievement for the day.

10. Going to the Union in the evening can be a fun way to get all your friends together when you might not have seen them in a while. Most people will still be in fancy clothes from graduation, and anyone who can drink from a tankard will be drinking from a tankard. It's really nice to see everyone, but expect the Union to be like a sports night, but worse. The queues at the bar will be horrendous, and as well as the recent graduates, there will be a lot of too drunk athletic types in ties. I wouldn't recommend the Union if you just want to chill out with your close friends, but if you want to bump into every acquaintance you've made during your time at Imperial, and make vehement promises (that you won't keep) to add them on Facebook and stay in touch, then it's the best place to be.

Commemoration Day marks the end of your stint as an Imperial student (or at least an undergraduate one) and you should absolutely make the most of it. It's a difficult combination of friends and family, but with a bit of care you can easily appease your parental responsibilities and catch up with all your friends. Massive congratulations to everyone who's graduating this year, and good luck in whatever you're doing with yourself next!

THE GRADUATE

Farewell Class of 2013

Goodbye from FELIX

Felix
Joseph Letts
Editor-in-Chief 2013-14



Congratulations graduates! You've made it! Over the last 3/4/6 years you've struggled and stressed over coursework, problem sheet, labs, and exams and look at what you've achieved! And while you've spent your time studying here you've also taken part in non-academic activities and joined clubs and societies, which hopefully helped to enrich your university experience.

Now you're through the University gauntlet it's time to look ahead to the future and look forward to what the future will bring. Some of you will stay in your field of study, while others will take the skills they've developed and apply them to a new area of study or commerce, one of the great benefits an Imperial College London degree provides.

As you all spread out into the world, I for one hope that you can look back on your years at Imperial with some warmth, I'm sure it's much easier to be happy about it if you earn a generous salary! Even so, Imperial leaves its mark on every graduate, akin to a blacksmith creating a new blade. And thus you become ambassadors of the Imperial brand as you progress throughout your career.

We at Felix hope that you've enjoyed reading the paper during the years you've studied here, and don't forget even though you've graduated you can still read Felix online, so if you ever have a burning itch to see the Rector being pied, or want to see how Imperial has progressed since your departure I openly invite you to read each issue online.

We hope that we've enriched your student experience while you've been studying at Imperial, from last year's coverage of #AgainstActon and the potential closure of Garden Hall to the protest against Life Sciences cuts several years ago, as well as weekly content (including the ever so gentle *Hangman* and the fascinating debates in the *Comment* section each week). I think the centrefold might deserve a separate mention, a unique section that brings greater exposure to different student groups. If you ever get around to looking at this week's centrefold you'll be treated to the rather unique sight of the longest surviving incarnation of the RCSU mascot (Theta the thermometer) being joyfully displayed by members of the CGCU Executive committee.

Looking around you on Commemoration day you'll see so many happy faces of friends and strangers alike sharing excitement (and free drinks) with their families and course mates. Graduation is an exciting time and it's irreversible, after you've graduated you can never go back, so make the most of it while you can!

The Felix team and I would like to extend our congratulations to you one last time and wish you all the best for the future. We're sure you'll have some great triumphs in the years ahead, even if you might have to hand your gown back after at the end of Commemoration day.

Best of luck for the years ahead!

Felix





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The Old Men and the Sea

John Park
Film Editor

Captain Phillips

Director: Paul Greengrass
Writers: Billy Ray, Richard Phillips (novel), Stephan Talty (novel)
Starring: Tom Hanks, Barkhad Abdi, Catherine Keener
Runtime: 134 minutes
Certification: 12A



Leave it to Paul Greengrass, the man behind *United 93*, to direct another taut, claustrophobic thriller, but this time set on the choppy sea waters instead of inside a plane. Based on the real-life Captain Richard Phillips (Tom Hanks) whose cargo ship was boarded by Somali pirates wielding machine guns, *Captain Phillips*, is a survival drama in which Phillips needs to muster up the courage, strength and intelligence required to make it through this tough ordeal. Suddenly thrust into the role of having to protect his crew as well as look out for his own life, this ordinary family man with no particular skills when it comes to dealing with terrorists faces the most challenging task of his life.

Shot in authentic locations (the ships, the ocean, the whole lot), the film's heightened realism is what gives this the extra kick, as once the pirates

start chasing their target with no sign of slowing down despite the unkind waves, it certainly marks one of the best things Greengrass has done in his already admirable directorial career. The shoddily defended cargo ship does what it can to protect itself and repel outside invaders, under the calm, level-headed command of the Captain (he even proves to be an excellent shot, attempting to derail their plan by firing flare-guns), but after an extended scene of unbearable tension that sees the pirates play around with their access ladder, they eventually board, which is where the stand-off begins.

Keeping his cool and trying to come up with a plan is Captain Phillips, using his ship knowledge to cleverly navigate his way around the pirates with his words. None of the crew on board are trained in fighting, most certainly

not against heavily armed Somalis who will stop at nothing to grab as much as they can. The strategy for the crew is to remain hidden at all cost, as Phillips doesn't want a hostage situation. There are many tense moments where the cast plays the most deadly version of hide-and-seek, one that escalates to something of a far higher stake that won't be spoiled here.

What's intelligent about Greengrass' approach to what may have been a simple, straightforward idea is that his "villains" are never as black and white as you would initially have expected them to be. The pirates live in a village where residents are constantly pushed and harassed to hijack profitable ships to pass on to their elders and leaders. It's evident that this is the only kind of life they have ever known, and it's refreshing to see a portrayal of the non-American antagonist in a blockbuster

production to be given much more depth and screen-time than what is typically shown.

The cast of the Somali pirates, all of them non-professional actors in their motion picture debuts, are simply stunning. Muse (Barkhad Abdi), the one spear-heading the operation is in particular excellent – he is as menacing as he comes across in the trailers ("look at me...look at me...I'm the captain now" he says. And we're all inclined to believe him), and his hostile one-on-one face-off with Hanks works exceptionally in the film's favour. There is a certain level of humanity each pirate shows throughout the film, and it's in these character interactions the film becomes unique in showing us a balanced look at both sides of the story.

Hanks is of course as effortlessly convincing as ever from the begin-

ning, but his performance hits a real high point in the film's final moments, as everything crescendos in scale and intensity along with his portrayal of the real-life character on screen.

There is an issue with pacing towards the end as the film tries to sustain its tension for as long as it possibly can, for around two hours. The United States government takes absolutely forever to get a plan in place, which is both worrying (good) and frustrating (bad) for the audience, the latter feeling taking over as the rescue mission starts rolling out a touch too slowly. The sun rises and falls at warped speed, making the timeline difficult to fully get your head around, but given the note-perfect ways in which the film opens and closes, this shows you can count on anything Paul Greengrass and Tom Hanks get their hands on.

All is Lost

Director: J. C. Chandor
Writer: J. C. Chandor
Starring: Robert Redford
Runtime: 106 minutes
Certification: 12A



That Robert Redford is 75+ and actually walked away from this film set alive is unbelievable in itself. The ordeal he's put through for J. C. Chandor's survival thriller looks positively insane, and although the credit mentions the use of a stunt double, there is no doubt this must have been a daring, physical shoot for the veteran actor.

A couple of things to be aware of before going to see the film: there is only one person in the cast. Only Redford stars in the film and really, that's more than enough. He has plenty of that old-man star power and charisma to power through the film. Something else to bear in mind: there is virtually no dialogue. Aside from the opening narration and a couple of scenes where Redford quite understandably uses curse words, Our Man (that's the credited character name) says not much else. And yet *All Is Lost* is one

compelling thriller of man vs. nature where it's the man's resourceful resilience that shines through.

Slight damage to the side of his ship turns out to be the least of Our Man's problems. Yes, there's a hole through which sea water is entering, but after some precise, methodical repair work, he's back on track out in the open sea. This is of course until a massive storm decides to strike. With sinister sound of the wind and heavy rain, things get worse and worse for Our Man as he's hit with one back luck after the other.

The poor old man is tossed and turned around time after time as mother nature proves to be a force too powerful for any skilled man at the sea can realistically handle. The alarmingly high waves and hail-like rain is a terrifying sight to behold, and the scale of every disaster is simply astonishing, which makes it easy for the audience

to be genuinely concerned and frightened for Our Man's safety. The camera follows him around in whatever situation and this strangely documentary-like style is a compelling one, closely observing each and every step of his fight.

It's an uplifting, triumphant tale of the human survival spirit, overcoming whatever seemingly impossible obstacle that comes your way, with a muted yet powerhouse performance from Redford. Essentially this can be summed up as 2012's *Life of Pi* except without the animals, and with more disaster ship-wreck scenarios.

The scope may be a narrow one for sure, but you won't find yourself wishing for more faces to make up the cast - because Redford on his own can more than hold his own, in this thrilling new adventure from a very young and promising director.





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FILM

No one can hear you scream

John Park
Film Editor

John Park
Film Editor

Gravity

Director: Alfonso Cuarón
Writers: Alfonso Cuarón, Jonás Cuarón
Starring: Sandra Bullock, George Clooney
Runtime: 91 minutes
Certification: 12A



Get ready for the cinematic experience of the year. Hopefully you'll be seated in the biggest 3D screen you can find with the best speakers surrounding you (hint, hint: go to the BFI IMAX). There is loud music, with captions reading "life in space is impossible". The music grows louder...and louder...then suddenly, nothing. And with a beautiful yet equally terrifying shot of the Earth from outer space, begins Alfonso Cuarón's much-hyped, box-office-record-breaking sci-fi thriller, *Gravity*, easily one of the best films of this year.

Dr Ryan Stone (Sandra Bullock) and Matt Kowalski (George Clooney) are

on a mission in space. The details surrounding this aren't so important, as soon they are bombarded with debris from a Russian satellite that jeopardises not only their mission (screw that) but also their lives. With zero gravity Dr Stone finds herself spiralling wildly out of control, and with her oxygen levels falling drastically with every panicked breath she takes, she and the more experienced astronaut Kowalski need to work together to even dream of landing back down on Earth.

From the get-go Cuarón's film is an adrenaline machine that churns out scene after scene of nail-biting tension. Even when very little is happen-

ing, the extremely tight atmosphere in which the characters communicate via message transmissions, this alone, combined with that view of Earth is enough to send shivers down the spine.

With every crash and bang the suspense builds to epic proportions, and when the helpless humans are flung about, the desperation for survival is felt through the two effective performances; particularly that of Bullock's - and hers is one the film's finale hinges on to make a real emotional impact, which it most definitely does.

Cuarón always finds the perfect vantage point for the audience to witness

the events unfold, going so far as to take the camera inside Bullock's astronaut helmet, seeing the narrow view of everything she sees, truly adding on the fear factor. The flawless special effects, the fantastic music notched up to maximum volume are all technical accomplishments worth mentioning, and it's no wonder James Cameron was floored by this film.

Yes there may be scientific inaccuracies. And yes, the rousing finale backed by a loud vocal chorus is without doubt corny and 100% what Hollywood is all about. But so what? All that is completely overshadowed by the impeccable filmmaking at work here.

The Fifth Estate

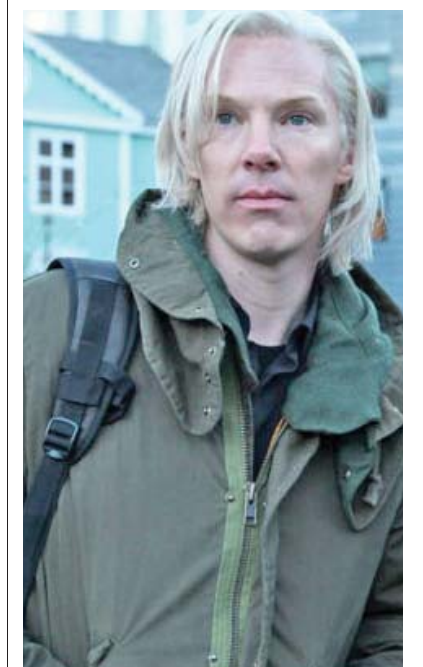
Director: Bill Condon
Writers: Daniel Domscheit-Berg (novel), David Leigh (novel), Luke Harding (novel), Josh Singer (adaptation)
Starring: Benedict Cumberbatch, Daniel Brühl, Laura Linney, Stanley Tucci
Runtime: 128 minutes
Certification: 12A



Who knew a fictional retelling of the biggest leak of classified information in history could be this boring and tedious? According to Bill Condon's new WikiLeaks movie, Julian Assange (England's favourite new bachelor, the rising *Sherlock* star Benedict Cumberbatch) and his partner Daniel Berg (Daniel Brühl) make their website an international sensation by standing around and arguing with ego troubles sometimes getting in the way of things.

Despite the incredibly sensitive nature of the information the protagonists are dealing with, there is no real sense of tension, not even when the United States government (comprised of Laura Linney and Stanley Tucci in what must be the most thankless roles of their careers) gets involved; the only highlight that comes out of this is when all the embarrassing transcripts from within The White House are released.

It's a light, but a surprisingly long recap of what sort of happened: and Assange's image remains relatively intact, thanks to Cumberbatch who rocks the bleach blonde hair and a competent Aussie accent.



Your hair looks sexy pushed back? You drink your milkshake? You drink it up? Are you not entertained? You shall not pass? Fish are friends, not food? You have unfinished business? With great power comes great responsibility? You want to play a game? Tell us all about it: film.felix@imperial.ac.uk



BFI London Film Festival

Fred Fyles
Writer

Borgman

Director: Alex van Warmerdam
Writer: Alex van Warmerdam
Starring: Jan Bijvoet, Hadewych Minis, Jeroen Perceval
Runtime: 113 minutes

In the opening scenes of *Borgman*, the latest film by Dutch director Alex van Warmerdam, a priest and his two accomplices hunt down a mysterious bearded man living in a subterranean hideaway; after they crash down through his ceiling, the forest-dweller only just escapes, throwing gas canisters behind him, emerging through a trapdoor, and running away through the trees clutching a briefcase. The film just gets stranger from hereon in.

Borgman is a surreal, darkly humorous home-invasion style film, in which the titular character, after es-

caping the priest, insidiously inserts himself into an upper-middle class household. Playing with themes of power and powerlessness, Borgman manages to be both the victim and the controller, being savagely beaten by the householder in one scene, and having dinner served to him whilst in a bathtub in the next. Cutting a Charles Manson-esque figure, Borgman, played by Jan Bijvoet, manages to gain the sympathies of Marina, the artist wife of a TV executive, who lives in a luxurious modernist villa with her three children and their nanny; seemingly imbued with shamanistic powers he - along with a gang of equally odd accomplices - manages to turn the household against each other, creating an atmosphere of tension and fear.

Of course, when talking about home invasion it is near impossible not to think of Michael Haneke's 1997 work *Funny Games*, and Borgman shares this film's lashings of black humour; however, van Warmerdam also seems indebted to Haneke's 2005 film *Caché*, and both films explore how the security of the middle-classes can be undermined by a single outsider. Un-

fortunately Borgman, despite much promise at the beginning of the film, doesn't manage to reach the dizzying heights of Haneke's work. The tension never quite reaches breaking point; the humourous elements of the film, while amusing, don't quite feel bleak or sardonic enough to count as gallows humour; and while the malignant, underlying darkness that lies at the centre of many seemingly-cosy families is an interesting theme to explore, van Warmerdam showcases this idea with very little subtlety or nuance - in one scene the husband tells his children 'we shouldn't have to apologise for being better off than others'.

These shortcomings make the film ultimately disappointing, and mean that the sense of menace that pervades the film throughout the first half doesn't continue into the finale, making it seem bloated and dragging. *Borgman* is visually brilliant, and appears to be utterly realistic in capturing the trappings of the bourgeoisie, but a failure to maintain pacing means that it feels a bit like an amuse-bouche stretched out into a full three-course meal.



Miele

Director: Valeria Golino
Writers: Valeria Golino, Francesca Marciano, Valia Santella
Starring: Jasmine Trinca, Carlo Cecchi, Libero de Rienzo, Vinicio Marchioni, Iaia Forte
Runtime: 100 minutes

Miele exists in the grey areas of morality, and makes a show of breaking down the walls of absolute morality; Irene is upset that Carlo is not ill, because that means she has broken one of the multitude of 'rules' she must follow when doing her job: she must not use the word 'wish', she must stay until the end, she cannot use any future tense verbs. Irene's views on the topic of euthanasia are clear cut, but as she gets to know Carlo, she begins to question what she is doing.

In some ways, film festivals like the one currently being held in London, are a godsend to films like *Miele*; where else, other than the festival circuit, will we be able to watch a French-Italian film, made on a miniature budget, that tells the story of a young woman who assists in the suicide of terminally ill patients? And yet, despite a description that makes it sound like any number of European arthouse films, *Miele* manages to retain a sense of warmth and pathos, thanks to confident performances on and off the screen.

The first directorial effort from veteran Italian actress Valeria Golino, *Miele* revolves around the double life of 20-something year old Irene (Jasmine Trinca), a young woman with an active social life, who swims every morning and has athletic sex with her lover. But every week she takes a plane into LA, where she then travels to Mexico in order to buy banned barbiturates; after taking them back to Italy, she becomes 'Miele', and uses them to help terminally ill people end their lives. An angel of death, dressed in skinny jeans and with a multitude of piercings, Irene/Miele resembles a sort of Italian Lisbeth Salander. Slightly distant to those around her, and harbouring dark secrets, Irene carries on living this double life, until she meets Carlo Grimaldi (Carlo Cecchi), an aging engineer who asks for help in ending his life. When she finds out he is not terminally ill, her carefully ordered world comes crashing down around her.

While such a topic is controversial, not least of all in Italy, the film manages to avoid becoming a polemic, subtly navigating the issues surrounding euthanasia. However, in doing so they rob the film of some of its energy, meaning that - after a promising start - the plot stagnates in the middle. Furthermore, Golino has a habit of avoiding the heart of the action; whenever Irene 'helps' a patient, we never actually see the patient dying. We never see the aftermath. Instead, the camera, almost without exception, will follow Irene, and music will fade in over the sound of crying. While such action may seem logical, if we compare it to Haneke's *Amour*, another film that revolves around assisted suicide (and does so in a much more visceral and horrifying manner), *Miele* seems quite laconic, almost trite. This is a difficult topic we are dealing with, and by directing it in such a way Golino does not show us the full picture.

That being said, the film does pick up again towards the end, and is driven along by Trinca's stunning turn in the role of Irene/Miele. Beginning as cold and aloof, the character slowly opens up to the viewer. We discover why she chose the career she did, and how - despite her tough, tomboyish exterior - inside she is just as scared and alone as those she helps kill. This skill in front of the camera, combined with Golino's developing skill behind it, make *Miele* a film to see - if it ever breaks out of the festival circuit.

Computer Chess

Director: Andrew Bujalski
Writer: Andrew Bujalski
Starring: Patrick Rister, Wiley Wiggins, Myles Paige, Robin Schwartz
Runtime: 92 minutes

Andrew Bujalski's film *Computer Chess* is a humorous, experimental look at the early days of chess programming. First screened at Sundance, where it won an acclaim and accolades, it then bounced around festivals, and finally it has touched down on these shores with a reputation that precedes it. It is therefore perhaps no surprise that I find myself, despite the fact that it is a gloomy Friday afternoon, in a sold out auditorium, filled with people excited to see this strange little film.

While the concept of the plot - programmers in the early 80s coming together in a hotel to pit computers against each other in games of chess - may not sound like the most enthralling of films, Bujalski's frequent tangents give this film an incredibly experimental edge. The most striking thing about the film is how authentic it is; Bujalski filmed the entire thing on video recorders made in the 1970s, and the majority of the computers used in the film are authentic artifacts from

the time period. Non-professional actors, who make up around 90% of the cast, remain uncompromisingly awkward on film; every 'umm' and 'ahh' is accentuated, creating an atmosphere of nerdy anxiety. In fact, the realism is so convincing that producer Alex Lipschultz has stated that most people believe it to be a documentary for the first 15 minutes - something I can completely understand.

It would be easy to describe the film as a mockumentary, but that description would be too simplistic, as it doesn't take long for the film to explore bizarre tangents, essentially making *Computer Chess* seem like a series of miniature shorts, strung together by circumstance. We have Michael Papageorge, a surly, confrontational programmer whose hotel room has been booked out to someone else; we follow his surreal nocturnal wanderings trying to find a room, roaming the corridors and knocking on everyone's doors; when he finally does get a room he finds that it is inhabited by cats. And then we have the coming-of-age tale of Patrick Reister, a cripplingly awkward young programmer for the Cal-Tech team, whose failure to comprehend social interactions is tested when he runs into a couple who are at the hotel for a 'self-help' retreat, and is invited into a menage-a-trois with them. It is stories like these that mark *Computer Chess* apart from other

films; while Bujalski could have easily used the ready-made narrative of the chess tournament to drive the film, he seems to have resisted this temptation, instead creating a winding, non-linear film that delights and astounds.

A film that consists of a mainly non-professional cast, that was mainly improvised (Bujalski only wrote 8 pages of script), and spans such a wide range of genres - from documentary to comedy, arthouse to sci-fi - could easily descend into a complete mess, crushed under the weight of its own ambition, but *Computer Chess* doesn't have this problem. The multitude of plotlines have been edited down into a streamlined 90 minutes, creating a product that is well-paced, snappy, and incredibly amusing.

It is fascinating, in a world that seems in thrall to the fetishisation of analogue technology, to have a film that explores a world that has been forever lost. Bujalski has called the programmers who inspired the work 'a different breed...who saw this mountain and insisted on climbing it'; while today the world of technology revolves around Apple and Silicon Valley, the origins of computer programming could not be further removed from this idea of 'geek-chic'. Bujalski reminds us that the vanguards of the programming movement were - much like this film - odd, awkward, endearing, and utterly brilliant.

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Fred Fyles
 Writer

The Congress

Director: Ari Folman
Writer: Ari Folman
Starring: Robin Wright, Harvey Keitel, Jon Hamm, Paul Giamatti, Danny Huston
Runtime: 120 minutes

The Congress is a film about Hollywood. It is about the effect new technologies will have on the centuries-old movie industry; it is about the nature of copyright, and the ownership of an actor's image; but most of all it is about how older actresses are treated in a world where youth is king, and you're only as good as your last facelift. 'How old are you now? 45? 48?', asks Jeff, a slightly sleazy executive at 'Miramax' Studios, played beautifully by Danny Huston. '44', replies a defensive Robin Wright, who plays an alternative version of herself. In this film, Robin Wright, rather than continuing her ascent to stardom following her portrayal of Jenny in the 1994 film *Forrest Gump*, has stagnated; let down by her quick temper and neurosis, she has made a series of poor decisions and even poorer films, that eventually lead her to the door of Miramax Studios.

It is here that she is offered a deal she cannot refuse: the studio will scan every part of her, completely owning her image, and freezing her at the golden age of 34, but in return she will be banned from acting for the next 20 years. Fearing for the financial security of her children, one of whom is going slowly blind and deaf, Robin agrees, allowing her essence to be condensed into a computer chip. For the next 20 years the studio make films using this 'virtual Robin', catapulting her into the 'highest-earning computer star' in the world, until she is invited back to the studios for the 'Futurological Congress' alluded to in the film's title. This congress is a chance for Miramax (who have since made a move into pharmaceuticals and changed their name to Mramax-Nagasaki) to show off their latest creation - a hallucinogenic drug that sends users into

the 'animated zone', where everyone is free to live out their wildest desires.

It is at this point, around the halfway mark, that the film takes a sudden left turn, plunging us into an animated world of rainbow seas, robot butlers, and famous personalities; as Robin enters her hotel, she sees Frida Kahlo taking a bite of Magritte's apple, while Ziggy Stardust chats to John Wayne, and the receptionist informs her that she is the sixth Robin Wright today. Such mediations on who owns a person's image may seem abstract, but raises important issues about whether the actor is a person or a brand. This idea is taken further when the head of Miramax - who I suspect is somewhat based upon Steve Jobs - reveals that the next step in their development is to distill 'Robin Wright' down into a single molecule, which can then be ingested, allowing the consumer to place the character in any situation they can think of. Although this is clearly extreme, it draws a parallel with how much free choice the actors actually have, and how much is dictated by the studio.

When all these philosophical quandaries have been stripped away, what we have left is a breathtakingly gorgeous film; the animation style is somewhere between 1930 Disney, George Dunning's *Yellow Submarine*, and Satoshi Kon's *Paprika* - a beguiling mixture of whimsy, humour, and riotous colour, that stands as a marked contrast to director Ari Folman previous film *Waltz With Bashir*, a gritty, stark feature about the Lebanon War. *The Congress* is a feast for the senses, with an incredible attention to detail that merits it a second viewing.

However, in making a film with such a complex and meta plot Folman seems to have stretched himself a little thin; towards the end of the film things are left unexplained, and major plot points seem to pass us by too quickly. Despite being over two hours long, *The Congress* leaves us with more questions than answers, but perhaps this is to be expected in a work so wide in scope. It still remains that *The Congress* is a film that isn't afraid to bite the hand that feeds, working as a vicious satire of the movie industry, while boasting some of the most trippy visual feats this side of the 80s, and a powerhouse performance by Robin Wright - A definite must-see.


Michael S. Martin

Writer

Sunshine on Leith

Director: Dexter Fletcher
Writers: Stephen Greenhorn
Starring: George MacKay, Jason Flemyng, Antonia Thomas, Peter Mullan, Freya Mavor, Jane Horrocks, Kevin Guthrie, Paul Brannigan
Runtime: 100 minutes
Certification: PG



Musicals based on a band's songs - 'Jukebox Musicals' as they are known - have become a staple of the musical scene since ABBA-based *Mamma Mia!* debuted at the West End in 1999, having since grossed \$2 billion worldwide and \$610 million with its 2008 film adaptation. *We Will Rock You* (based on the songs of 'Queen' and written by Ben Elton) and *Jersey Boys* (based on the songs of 'The Four Seasons') have since followed to enduring success. *Sunshine on Leith*, originally a 2007 Dundee Repertory Theatre production, takes on the more modest body of work of 80s Scottish band 'The Proclaimers'.

The film starts in a grim land torn apart by religious sectarianism. No, not Scotland; Afghanistan. David (MacKay) and Ally (Guthrie) are soldiers sitting inside an armoured vehicle that takes a hit from a roadside bomb. It then cuts to David and Ally returning to families and friends in their hometown of Leith in north Ed-

inburgh. The film focuses on the tribulations of Ally's resumed relationship with David's sister Liz (Mavor), David's new one with Yvonne (Thomas), and David's parents Rab (Mullan) and Jean (Horrocks) 25 year old one.

It's an interesting second effort from north London actor-turned-director Dexter Fletcher; a Scottish musical isn't a natural stepping stone for someone best known for his role in cockney crime film *Lock, Stock and Two Smoking Barrels*. As far as musicals go, it's a competent attempt. He gets the characters broadly right, though the only one who stands out - Art museum manager Harry (Lock, Stock co-star Jason Flemyng) - gets far too little screen time. On the other hand, a friend of David and Ally's who lost both legs in the roadside bomb (Brannigan) is a misguided attempt at hamfisting an extra dose of drama into the film.

The film does succeed where far too many jukebox musicals fail: the transition into song feels natural, as opposed to going to ridiculous lengths to fit in as many of the band's songs (*We Will Rock You* has characters named Galileo Figaro and Scaramouche).

It presents itself as a tongue-in-cheek take on Scottish culture; with jokes on Scottish nationalism, Leith-based football club Hibernian, Anglo-Scottish relations and a liberal use of "Aye". But beneath this charismatic Caledonian veneer; at the film core's is a standard musical with all of its quirks, tropes and style, a bombastic Broadway style that The Proclaimers' folksy songs do not lend themselves well to.

If you dislike musicals you might take solace in the snappy dialogue and chemistry between the characters, but ultimately it's an fulfilling outing. For musical fans it's an enjoyable, albeit forgettable musical. Unfortunately for me, I am in the former.

Imperial Cinema

We've got a busy week planned for you! First up as a special postgrad screening night-including a free bag of popcorn/ice cream may I just add-we'll be showing the newest adaptation of *The Great Gatsby* with an all-star cast featuring Leonardo DiCaprio as Jay Gatsby and Carey Mulligan as Daisy Buchanan. Baz Luhrmann brings plenty of glitz and dark to this classic tale about the dark trappings of a life of luxury.

Next up is the visually awe-inspiring *Pacific Rim* for your viewing pleasure. Guillermo Del Toro (creator of the extraordinary gothic fairytale *Pan's Labyrinth*) brings his unique blend of visceral imagery and technical brilliance to life in a huge blockbuster with spectacular results. And as for the plot, in brief: cities across the globe are coming under attack by mythical beasts so mankind creates colossal robots to fight back. If this all seems a little similar to a certain Michael Bay franchise, think again; *Pacific Rim* is devoid of the cynicism of recent blockbusters: it's irresistibly fun as an overt ode to Del Toro's love of anime as well as having a heart of gold.

And now for something a bit different: we'll be screening a documentary of the documentary *Project Wild Thing* by local filmmaker David Bond. We follow Bond as he explores the growing disconnection of British Children from nature. As he witnesses the detrimental impact that marketing and endless hours of TV have on his own children he decides to take action with simultaneously humorous and shocking results.

We're showing a free screening of *The Gamers: Hands of Fate*, for anyone not familiar with *The Gamers* series, they're a series of comedies set in the role-playing gaming universe with plenty of in jokes about the gaming world. If you're a gamer or this has interested you come along, remember it's free!

The Great Gatsby (Free Ice Cream/Bag of popcorn): Monday 21st October 19:00pm Tickets £5 online/£6 on the door

Pacific Rim: Tuesday 22nd / Thursday 24th October 19:00pm £3 for members and £4 for non-members, buy on the door.

Project Wild Thing: Friday 25th October 17:00pm Tickets £5 students/£7 others

The Gamers: Hands of Fate: Friday 25th October 19:00pm Free screening

£5 Membership includes one free film and cheaper ticket prices all year! Buy it here: tickets.imperialcinema.co.uk

Next Week: *The World's End*/ Thrillseekers Adventure Film Festival





2012-13 Television



Scandal: Season 2



John Park Television Editor

There is absolutely nothing Olivia Pope (Kerry Washington) and her team of fast-talking crisis management consultants can't handle. Pope rocks her flawless outfits, speed-walks everywhere, goes in and out of The White House as if it was her holiday pad, always with a clear strategy in mind, and ultimately she gets things done. Handling the press? Done. Getting ahead of your opponents? Check. Helping the next President-hopeful secure his votes? Of course. She sure must charge big bucks for her services and she's certainly worth every penny of it.

As with any Shonda Rhimes drama, *Scandal* too, has a flair for the

dramatics, and loves to take absurd ideas and turn them into feverishly entertaining guilty-pleasure. Pope's affair with President Fitzgerald Grant III (Tony Goldwyn) was established early on in season 1, in the show's pilot no less, but the follow-up season takes on a whole new level of scandalous (pardon the pun), as Pope's past involvement in a deep-level political conspiracy comes back to haunt her.

Whereas the first season was mostly episodic in nature, the series renewal must have given the writers confidence to build in a large season-long story-arc into the show, thus forever ending episodes in cliffhangers, making its ever-growing audience figure beg for even a minute more of the next episode. Olivia's big secret involving several powerful figures in the government is the main focus, and the more ridiculous everything gets, the more irresistible the show becomes. Almost everyone is somehow connected in this vast deception, and remember the season 1 finale in which Quinn Perkins' (Katie Lowes - increasingly more useful as the series progresses) identity was left up in the air? This is also a part of

what Olivia is trying to keep buried.

It's no secret the show wouldn't be able to survive without Washington's non-stop confidence and charisma, which explains her Emmy nomination for her work on the series (although her deserving win was snatched up by Claire Danes). No matter how ludicrous the dialogue, no matter how uncomfortably invasive the close-up, Washington truly is a force to be reckoned with, and not many actors would be able to handle the dizzying amount of machine-gun-like script constantly firing off words in endless arguments.

Pope's team of self-proclaimed "gladiators" consist of Harrison Wright (Columbus Short), Abby Whelan (Darby Stanchfield), Huck (Guillermo Diaz) and Quinn - all of them doing their bit to chime into the rapid game of who can say the most words as dramatically as possible in the least amount of time, and it's not only her employees who can speak like there's no tomorrow. Within The White House itself is an internal power struggle that is happening that involves the President, his Chief of Staff Cyrus Beene (Jeff Perry), the First Lady Mellie Grant

(Bellamy Young), and the Vice-President, the bible-bashing, rigorous Christian Sally Langston (Kate Burton) who is constantly plotting to overtake the Presidency. All of them truly excellent in their roles, making their endless juicy drama all the more watchable.

The constant plot twists and reveals make it difficult at times to fully keep up with everything that is going. Someone you believed to be a traitor one week is quickly exonerated the next, and the entire plot moves at warp-speed. Those who don't appreciate the pathetic President of the United States never coming to grips and always aiming his tired puppy eyes to Olivia will not find their little high-school romance drama in the least bit entertaining to watch, but "Scandal" has a whole lot more to offer that more than makes up for the little strands that it could do without. It's no wonder the second season finished with a record-breaking high in terms of ratings and audience number. Pope & Associates are here to stay, and they'll keep fixing problems, half of which will no doubt be their own doing through reckless lifestyle choices.





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TELEVISION

Sophomore Spikes



Person of Interest:

Season 2



John Park Television Editor

Whilst most procedural crime dramas start with a body/bodies, Harold Finch (Michael Emerson) devised a clever anti-terrorism machine that sees all acts of potential violence that kicked things off in season 1. What Harold and his ex-CIA buddy John Reese (Jim "Jesus Christ" Caviezel) receive every week is a social security number...and when the writers are feeling extra bold and ambitious, more than one...and with no idea whether this "person of interest" is the victim or perpetrator, it's up to Finch and Reese to track the person down and solve the mystery. The machine is never wrong, and not every case turns out to be as simple as it seems in the beginning, which is why each stand-alone episode takes up 40+ minutes to come to a close.

Putting a nice, original twist to the well-worn genre, *Person of Interest* was off to a flying start on the CBS network up against the long-running ABC's sappy medical drama *Grey's Anatomy*. Throughout season 1 there were plenty of hints and teasing alluding to the characters' origins story: both Finch and Reese had fascinating stories to tell, and season 2 gave the writers a chance to expand

on this more.

With Finch, his relationship with an equally brilliant colleague of his, Nathan Ingram (Brett Cullen), who is now dead, and the many unanswered questions regarding the creation of the machine are fully addressed, with intermittent flashback sequences embedded within appropriate episodes to shine some light on the complicated past. Government secrecy and conspiracy, as well as the powerful people who fear for the legality issues that arise with this all-knowing machine all contribute to create a fascinating season-long story arc that puts both Finch and Reese in danger. Carrie Preston, an underused and under-awarded actress who constantly features in small supporting guest roles, who also happens to be Emerson's real-life wife, features as Finch's rather sweet love-interest, the development of which serves as a nice distraction from the otherwise more serious crime drama.

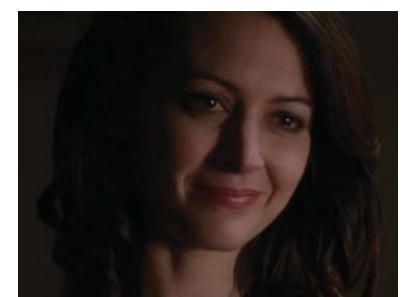
Reese and his darker, morally ambiguous days are further explored here, more specifically relating to the two ladies who had quite the impact on his life; Agent Kara Stanton (Annie Parisse) and Jessica Arndt (Susan Misner). Softly-spoken yet intense in all the right moments with dry, sarcastic humour thrown into the mix, Caviezel is perfectly suited for the role of a skilled agent back in action.

More help is available to them within the NYPD who now know a thing or two about how these two men go about their crime-solving business. Detectives Joss Carter (Taraji P. Henson) and Lionel Fusco

(Kevin Chapman) are both valuable additions to the cast providing solid support in terms of back-up during action sequences as well as when it comes to information-gathering. There is playful banter between all four in the group, although it's the growing bromance between the lead pair that is the most entertaining. The initially mismatched duo of a socially awkward billionaire computer-nerd with an ex-military, ex-CIA agent is a pairing that gets off to an entertainingly rocky start in season 1 but now they operate like a well-oiled machine, having excellent dynamic and chemistry that evolve as each season moves forward.

Recurring guest stars make welcome returns: starting from Zoe Morgan (the excellent Paige Turco - it's always a pleasure to see her back), a helpful, resourceful ally who has many rich and famous friends, Carl Elias (Enrico Colantoni) a crime boss with useful knowledge on many of New York's underground operations who is currently in jail, amongst others.

The complexity and intriguing premise related to every weekly case is variable with some hitting the spot, whilst a couple seem a little too rushed and serve as merely filling in another weekly slot in their 22-episode season. But with its second series *Person of Interest* has certainly gained confidence in its footing and with a helpful introduction of a snarky, psychotic villainess (the wonderful Amy Acker), the climax does start building until a satisfying finale that sets things up nicely for season 3 which is well underway in the States.



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GAMES

Far Cry 3: Pirate Infested Tropical Dystopia

Imran Rashid
Games Editor

Partying. Hostages. Drinks. Machetes. Skydiving. Friends. Pirates. The game starts off with a montage of you (as Jason Brody), your brothers and your friends having the time of their life on a large island in the south pacific. The nightmare quickly begins when Jason wakes up to find himself imprisoned in a bamboo cage by indigenous pirates, and it's not long before you meet the fiend himself, the psycho pirate lord Vaas.

You are now tasked with missions in service of the Rakyat leading to rescuing your friends, taking over the Island, and assassinating Vaas. There is a lot of fun in watching Jason progress through the game as he self-teaches himself ways to survive through the jungle including his extraordinary methods of healing himself! A shot to the arm while driving will prompt Brody to 'bite the bullet' as he clenches the bullet out of his flesh with his teeth and

spit it out all with one hand on the wheel. There are plenty of other reflexes and scenes spread through the game that give the player a feeling that they are adapting better into the environment with Brody.

The overall plot of Far Cry 3 is engaging and the characterisation and development of the cast are impressive. Vaas' famous question on insanity rings in the players ears when we start to see suspicious and creepy stuff around the Island. Insanity permeates through this Island. Those who learn to embrace and adapt to the Island turn more vicious, tribal, angry, dehumanised and animalistic. We follow the once scared twenty-something frightened, Jason Brody turn into a ruthless skilled killer. It is a theme that culminates to an epic conclusion where the player is granted a choice that decides the ending of the game.

Far Cry 3 really beautifully couples the story parts of the game with the non-story parts. Here's why: When you are roaming the Island, you can hunt different animals, forage rare plants that you can use to upgrade your pouches and weapons rucksacks, health potions and other recipes.

You can also hijack radio towers to uncover more places in the map, take control of pirate coves, trials of the Rakyat. The skills, equipment and knowledge of the island you gain from these extra missions undergird the story line missions which become increasingly difficult.



Unfortunately, the weapons and collectibles inventory was difficult to use and this did take a toll on the gameplay as the game progressed into more challenging zones - perhaps most annoying was my mini-expedition to hunt dangerous and rare animals for special leather for a promised upgraded pouch to store four weapons but I could still only hold a maximum of two. The accessibility and simplicity of the rucksack inventory is definitely a room for improvement for the rumoured sequel to this game set to come out in 2014.

Jason has a good range of weapons at his disposal that he can purchase at a Rakyat shop or he can unlock for free by claiming radio towers. There is a huge scope to be clever and creative with how you use weapons to conquer pirate coves or complete missions in general. Take your short-range flamethrower to set nearby enemies on fire or be more strategic and beset pirates by setting a whole cove on fire. The sniper rifle is man's best friend in

this game; it really makes me feel in control when Jason can take out pirates one by one at a distance. There are plenty of other good weapons to purchase and unlock too.

Vehicles can be used in and outside of missions from buggies to cargo trucks to jet skis to handgliders (pretty fun). Your vehicles can take damage from enemy attacks and bashing into trees and falling of mountain sides - a fun experience. Vehicle control is not too demanding to frustrate the game play and not too simple to use to break away from the realism of the game.

The music and sound effects deserve merit too. The realistic and frightening sound tracks truly capture the suspense of the moment and I still find myself listening to some of the legendary soundtracks off YouTube. All this combined with stunning graphics will captivate you for hours of pure joy.

Far Cry 3 was released in November 2012. It can currently be bought for around £16.99 on PS3, £17.99 on XBOX 360, and £12.99 on PC.

"Did I ever tell you the definition of insanity?" - Vaas

Windwaker turns over a new Deku Leaf

The Windwaker HD is a welcome addition to the Wii U

Calum Skene
Games Editor

There are few new games that hold my attention for very long anymore. I'm bored of games like Assassins Creed and Halo with their endless sequels that seem to offer nothing new except better graphics (even though I still buy them). However there is something about Nintendo that makes me forgive them for doing just that. Every new Mario, Zelda and Donkey Kong game that comes out always get me excited, and Windwaker HD is no exception. As a massive fan of the original Gamecube version I was pretty sure I would like this one too, but I didn't expect to like it as much as I do.

Windwaker, for those who didn't play the original, is a game in the Legend of Zelda series. You play as Link, the hero of time, and must complete dungeons and solve problems in order to rescue princess Zelda. Windwaker is the only game

(discounting the DS ones) that uses a cartoon art style, which looks beautiful remastered in HD. Although the game looks different it is still the game many of you will remember and will provide many moments of nostalgia. Everything that originally made this game mothertrucking amazing is still here. There is so much that this game does well; the plot is engaging and often full of humour, the world is open and big and apart from a short "tutorial" at the beginning is open for you to explore right from

the start. All the items you get in this game are used again and again and don't feel like gimmicks, with the best obviously being the Deku Leaf! The combat system is arguably the best of any Zelda game and your character always responds how you would like.

The Wii U version does add more than HD graphics. Link controls even better than before on the gamepad or pro controller. Pausing the game to look at maps or switch items has been made unnecessary as you can do all that seamlessly on

the gamepad screen in the middle of a fight, or sailing on your boat. Sailing around is even more of a joy with the addition of a fast sail that enables you to sail faster, and always have the wind behind you. Fans of the original may be glad to hear that the Triforce collecting at the end has been shortened, causing less frustrating encounters with Tingle (the Jar Jar Binks of Zelda). For the completionists out there, the game offers a gallery where you can turn photos into figurines. When I was young, playing the original, my goal in life was the complete this gallery, but it was frustrating as many of the pictures are missable causing a complete gallery to take many playthroughs (there is a second quest after you finish the game). However, the remake, as well as offering an expanded memory to your camera (12 pictures), has Tingle Bottles: bottles you can throw in the sea with messages and pictures. As well as being a nice and often funny addition to the game, it now means you can get the pictures from other people making the Nintendo Gallery a more achievable and enjoyable experience.

I may achieve my lifelong goals at last!

Despite being amazing in nearly every way I do have some very minor complaints. You can now move while aiming items, which can be great in certain situations but often it can be awkward. Try aiming and shooting an item while moving and the item is not bound to a trigger for example. Also the game is too easy. I completed my first playthrough (around 18 hours) without dying a single time, and I even had my fairy I collected just before the first boss still in its bottle. These problems however are so minor and you could argue aren't problems. The aiming can be made good by binding aimable items to a trigger, and I actually found it extremely useful to move and aim at times. There is also a Hero Mode which makes the game harder and I will definitely be using this during my second playthrough.

Overall I believe Windwaker HD is still the amazing game it was and this version just improves it to near perfection. It is definitely my most played Wii U game already in just a week, and I see myself putting many more hours into it before I get tired. There's just so much to do.



Link realises he's been here before in a previous life.



NSA: Peeling the skin off TOR

Layer by layer, the controversy surrounding the NSA increases!

Osama Awara
Technology Editor

The NSA known for its privacy breaching of internet users across the globe has been found 'peeling' the encryption that Tor provides for its users' information sent online, in order to gain access to sensitive information. Tor is a piece of software, ironically funded by the US government, which enables the anonymity of its users surfing the

web, posting on forums and general internet communication; a great way to aid journalists or even the average person in countries that prohibit certain sites and topics of discussion. The methods the NSA has indulged itself in, in order to circumvent a variety of NET encryptions, are arguably controversial. Hacking into private companies in order to steal their server's encryptions is one example. Another as stated by the New York Times involves collaborating with tech companies to build in backdoors in computing systems and covertly introducing weaknesses in encryption standards.

This all may seem like a far-fetched conspiracy theory but as more and more revelations on the NSA's privacy breaching activities comes to surface, it seems they would do anything to get their hands on sensitive material. Tor, formally known as 'The Onion Router', works by layering signals sent online with encryption, these 'coated' signals are then sent through a random path through a network of routers which in turn, each peel off a layer of encryption until the signal has reached its destination. This method prevents any one of the routers from having access to all the encryptions at once hence the signal can't be tracked back to its original sender. Unfortunately for the NSA this method of 'anonymisation' has foxed their hackers as they stated themselves through documents leaked by Edward Snowden, '...de-anonymize a very small fraction of users.' In a way this is great for a Tor developer, personally if I was one of them I'd have a big grin on my face. When it comes to tackling Tor, the NSA has no reservations, from utilizing flaws in one of the Mozilla Firefox versions to directing user traffic to their NSA operated servers in order to degrade the service to reduce the number of people using

it. The NSA justified its actions by claiming that it only targets criminals such as terrorists and human traffickers. It is without a doubt that certain shady individuals may use Tor or other such online utilities, but claiming that the NSA '...collects only those communications that it is authorized by law to collect for valid foreign intelligence,' as they said in a statement to the Guardian, has been proven to be untrue. It's common knowledge now that the NSA spies on individuals and organizations that have nothing to do with crime. Take Brazilian Oil Giant Petrobras as an example; they've

recently invested in \$9.5 Billion for security alone after their experience with NSA's cyber-espionage. In a statement by a representative of the EFF (Electronic Frontier Foundation) and previously a funder of the Tor product, Cindy John says, 'Of course the government should get to go after bad guys, but they shouldn't be able to break the security and trust promises of the internet to do that.' Indeed the US and any other country for that matter should have the right to defend itself from cyber-attacks or malicious users of the web, however the methods used should at the very least be regulated.



Get rich quick, Youtube style!

Maximilian Eggl
Technology Editor

All of you spend a significant amount of your life on YouTube, be it watching handy tutorial videos, lets-plays, music videos and/or videos of cute-ass kittens (the last being the most time intensive). However have you ever wondered why some of these Youtubers, more often than not just average Joe's, actually do it? Yes of course they are all kind, considerate

people who really just want to entertain you, but apart from that have you ever thought, what's in it for them? Cash. Cold, hard cash. YouTube makes money from ads, and so that they encourage more clicks/views, they need to share some of the loot.

Now I know exactly what you are thinking. You are sitting there reading this, munching on your sandwich/homemade pasta, wanting some of that glorious dough. Well in fact that is not hard as long as you follow this absolutely patented fail safe acme cashtube plan!

Firstly, make yourself an account. Without an account you will not be

able to upload any videos, get on to that. Now think of a creative name that will stick in peoples minds as well as perhaps describing what you do. Therefore don't call yourself Ramalama-dingdong unless you plan to talk about bells or report on the Dalai Lama.

Next you will need to come up with original content. Trust me the people who repost other peoples content will never get to the upper echelons of youtube aristocracy. Think of something that no one has done before. It can be funny (usually the best), serious or something totally weird. It doesn't really matter, as long as its new and you are good at it! However if you do not have any ideas, usually putting up videos of your kittens or puppies doing cute stuff is a good start. If you do not own any pet, you can always try remixing nyan cat!

Once you have a certain amount of subscribers (500) is a good number, and are churning out good content on a weekly basis, you should start thinking about becoming a youtube partner. With this program the money can start rolling in. Depending on your popularity and/or viewing numbers (which are usually very closely related)



The News Bubble

General news from around the tech world, so you can keep up to date with the newest, wierdest and most futuristic things around

Snaphack, saving one pic at a time

If you are a fan of the photo messaging app you should be slightly concerned. The advantage of using snapchat is that your innocent photos and videos (or maybe not so innocent ;-)) are deleted within a set time after being viewed. However with the release of Snaphack this deletion process can be stopped without the knowledge of the sender. This app, currently available in the apple App store. Should worry all those of you who are sending pictures that they actually want deleted!

Maybe color ain't so good after all

Apple's iPhone 5C, the colourful variant of their new generation has not sold as well as their more expensive featured filled brother the 5S. In fact some statistics suggest that the plastic phone is being outsold almost 2 to 1. This has lead Apple to cut orders of their slightly cheaper model. The fact that the 5C does not really offer any difference apart from the exterior to the 5, may explain this disappointing trend in sales.

Maximilian Eggl
Yong Wen Chua
Osama Awara

Technology Editors

you can get anywhere between \$2.5 to \$7 per 1,000 views. While this does not sound like much, it can certainly add up.

So wow, now you are a up and coming youtube celebrity. The cash ain't the only benefit that will come your way. If you are a gamer, you may get free games etc., if you do comedy, you may get offered a movie role (niga higa) or if you sing...oh wait, thats Justin Bieber. Actually please don't sing.

However on a serious note, more than being interested in making

money (where you could just go into banking like most imperialites do), youtube is a platform to put yourself out there and give you the chance to earn a living with what you really love to do. While this may be a very hard thing to do for us socially impaired students, once you have gotten over the trolls and jerks that the internet seems to spawn en masse, it can be an extremely positive experience.

Now I am off to repost that totally hilarious college humour video on my totally successful youtube channel, Peace out!



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FOOD

Winter: Prime Time For Pies

Michael Chung made a classic with organic vegetables from London

A few weeks back we mentioned the Farmers' Market, but that is not the only place to get fresh vegetables on campus! The ICU Co-op has a new partnership with Sutton Community Farm, which is about 13 miles from South Kensington. Fresh, seasonal vegetables are harvested every week and distributed around London via its VegBag scheme. All the vegetables are farmed organically and it is quite environmentally friendly because of the low carbon footprint. The content of the bag is also kind of a mystery - since all the goods is seasonal, but typically it will contain potatoes, onions and carrots at the very least!

Here at Felix Food, we ordered a medium VegBag to try. For £11.50, we also got some kale, half a pumpkin, some pea pods, courgettes, garlic and some lovely tomatoes.

And what exactly can you cook with the VegBag? Let's be honest, winter has arrived. After a long day of lectures, problem sheets and tutorial, all we want to do is to have some hearty warm food and watch the One Show. (Okey, none of us at Imperial will be back at home at 7pm, perhaps just in time for EastEnders repeat at 10...)

One of the traditional winter dishes are pies. The English have been enjoying meat pies since the Middle Ages and there was even a poem written about it in the 14th century. With the lovely vegetables from the Veg Bag, it was easy to make a healthy shepherd's pie - which in fact dates back to 1870s!

Ingredients: (Serves 4-5)

- Olive oil
- 3 garlic gloves, peeled and finely chopped
- 3 tablespoon of Worcestershire sauce
- 500g lamb mince
- 2 large potatoes
- 3 carrots, chopped
- 2 sticks of celery, chopped
- 400g chopped tomatoes
- 1 red onion, peeled and chopped
- 110g butter
- 200ml milk
- 250g grated cheese

Preheat the oven to 200°C. Heat the olive oil in a large saucepan over a medium heat and add garlic, chilli, onion, celery and carrots. Cook on the medium heat for about 5 mins until soft.

Up the heat and add the mince when the vegetables are soft. Cook for another minute.

Add Worcestershire sauce and tomatoes, season well.

Cook for up to an hour - the longer you cook it, the more meaty and delicious it will taste!

While the meat is bubbling away, bring a large pan of water to the boil and add the potatoes. Cook until soft, around 15-20 mins, depending on the size.

Drain and mash well, add the butter

and milk, season with salt and pepper. Pour the meat sauce into a large ovenproof dish. It should fill about half the dish.

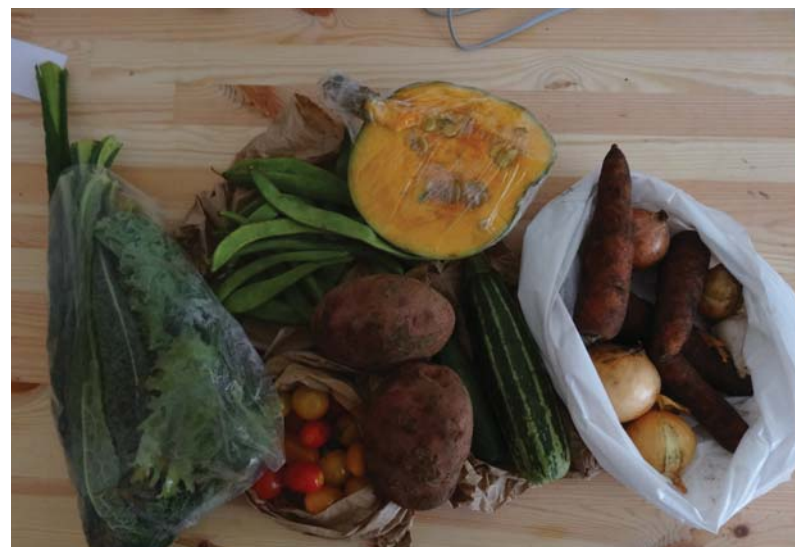
Carefully spoon the mashed potatoes over the top.

Season, then sprinkle with grated Cheddar cheese.

Place on a baking tray in the oven for 30-40 mins until golden and bubbling.

To go with my shepherd's pie, I also stir fried some of the kale with oil and garlic - couldn't be simpler!

And there you have it! And if you don't like lamb, you can also use mince beef to make a cottage pie. You can also add different vegetables into the pie, such as mushrooms and peas. The opportunities really are endless!



What's in the bag I hear you ask? It's full of yummy fresh vegetables!



Warm pies will help you battle the British winter!

Want to try a VegBag?

suttoncommunityfarm.org.uk

Order the bag you want and select ICU Co-op as the pick up point.

You will have to order by **Sunday midnight** for a Thursday pickup at the Co-op in Sherfield Building foyer from 4:30pm.

Any questions please email coop@imperial.ac.uk

Seven More Years of chocolate eating

Soaring demand in emerging markets meets lower production



Might have to stock up while you can!

It is the London Chocolate Week this week and many chocolate-related events took place across the capital. While the public is enjoying the new variety of chocolate, the industry experts who met at the British Library have some bad news for the chocolate lovers. They predicted the world will officially run out of cocoa beans on October 2, 2020 - that is in 7 years' time.

Chocolate taster and expert Angus Kennedy reportedly said there will be a chocolate shortage in the near future since experts have projected that 2.3 globes worth of land is required to accommodate the world's needs of chocolate. Kennedy also mentioned

that much of the space used for cocoa production are replaced by rubber plantation as farmers get a better yield.

On top of that, major cocoa production countries has experienced bad weather, along with growing demand has led to a 17% increase in cocoa over the past 12 months - which contributes to the rise of chocolate bar production cost by 25% in the same period.

In fact, the demand for cocoa beans is so high that it is now the second best performer in the Standard & Poor's GSCI gauge of 24 raw materials, after oil. Euromonitor International has estimated that global sales volume

of chocolate confectionery will gain 2% this year and 2014. BRIC countries takes a major role in this growth, demand in China is projected to expand 11% annually in the next 5 years, 13% in Brazil, 22% in India and also 8% in Eastern Europe.

So next time when you want a Mars Bar with your cup of coffee, you might have to pay more than you think!

Your thoughts?

Email food.felix@imperial.ac.uk

The land where the sun forgets to set

Epic countryside and Reykjavik's charms: a different sort of summer in Iceland

Natalia Petrou

Well, from reading the heading, you might assume that I visited a swanky summer resort somewhere glamorous and warm. But you would be grossly mistaken. This summer, despite my initial reservations (an admission to appease my persuaders, just in case they're reading), we travelled to Iceland.

I initially complained about the lack of sun, summer, and activities on offer, but from the moment I stepped foot on Icelandic soil, I fell completely in love. Contrary to my complaints, the sun stays up in Iceland for around twenty hours per day, and in the summer it never really gets dark at all. The people played a massive part in changing my attitude. Everyone I met was helpful, calm and easy-going. One Icelandic attribute I came to admire is patience, something that is severely lacking in our hectic London lifestyle.

To say that the scenery left me speechless would be an understatement. It's surprising how much green a country called ICELAND can have, and the variety seen across the country is astounding. One can admire the magnitude of the icebergs, which change formations everyday due to extreme weather conditions and global warming. There are also many mountain formations where waterfalls suddenly make their appearance. Iceland is a country susceptible to volcanic eruptions, and volcanoes have contributed to the formation of the ground: rather



LOUKAS PETROU

"Yo listen up here's a story about a little guy that lives in a blue world. And all day and all night and everything he sees is just blue" - Björk, 1999

than sand or rocks, the coastline is a plethora of rich, volcanic ash. Aside from the beautiful countryside I truly adored the capital city, Reykjavik. It's a fairly small city with around 120,000 residents, and everything is within walking distance. The city is comprised of a well-presented centre with many shops and restaurants. There are also two huge shopping malls just outside of the city, ideal for the colder and wetter days and

easily reached by public transport or free minibus. The National Museum one of the most organised and well-presented museums I have visited to date, and it is well worth a visit.

Of course, it would be impossible to talk about Reykjavik and not mention its countless swimming pools. I'm not entirely sure what crazy, adventurous spirit possessed me, but I decided to visit two of them. The water itself is lovely and warm, but it's the transition

in and out that really makes you shiver. Still, it's an unforgettable experience, and one you ought to try at least once. The element of the city that made me fall in love the most with was the seaside. One can walk by the sea for endless hours and admire the mountains that surround the area. There are also boat tours that take you from the city into the more remote areas of the ocean, to encounter whales and Iceland's answer to the

penguin: the puffin.

Overall, it's an experience that will stay with me for the years to come. Iceland is a truly breath-taking destination, and so different to many other places you might encounter. I suggest planning a visit during the summer season, as the cold is more manageable, and the chances of sun are much higher. It might not be your stereotypical summer, but the endless adventure is not to be missed.



LOUKAS PETROU



LOUKAS PETROU

Rumour has it that Björk runs naked across these rooftops, but only when you're not looking And this waterfall: beautiful, right? Think again. It's actually connected to Björk's toilet



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CAREERS

Alumnus Profile

Ravi Pall
Imperial College
Physics MSci
(2007-12)
Unilever



I'm currently a Finance graduate on the Unilever *Future Leaders Program* (UFLP). At Imperial I studied Physics (MSci) which isn't necessarily the most intuitive career fit. Not really having any financial background hasn't been a hindrance though, where the view is you can learn finance, but your attitude and way of approach is something you as an individual

bring to the table. As I'm sure a lot of students at Imperial find when it comes to making your first career choice, it's incredibly tempting to go and work for a big city bank or continue into further study. I personally wanted to work in an interesting sector that made a real tangible impact on peoples everyday lives. Not many companies can say over 2 billion people use one of their products on any given day. Unilever could, and that's something I wanted to be a part of.

My first role on the UFLP is business partnering for Brand Building in Ice Cream. I'm going to say right now that this is literally the most fun thing I've ever done. I work with brand managers every day to make sure that

the decisions we make together have the greatest impact they can, as if we were spending our own money. When you consider we own brands such as Ben & Jerry's, Walls, Magnum etc you begin to realise that the responsibility you're given from day one effects how well we do in such a competitive and large category. I cannot stress enough how much this job is basically the win-win scenario of corporate finance without "selling your soul."

When applying for the job, like any job, it's important to highlight your strengths as a rounded individual. It's hard to come across arrogant when you simply talk through a experience or story which you know like the back of your hand. It's also important to

relate these narratives to the core competencies of the company you're applying for. Unilever has 5 and in every answer to a question I thought about not only how to answer the competency they're asking for, but the other 4 as well. Many people are well rounded, especially if you've been active outside of academia, and it's just as important to demonstrate this as it is to align with a company's core competencies. As always it's also a wise idea to read as much about the company as possible. I had Google alerts set up just on the word "Unilever" for example. What's also important is how you highlight that as a student from Imperial (predominantly STEM) you have strong analytical reasoning and logical

approach. In fact I'd say that this is the strongest thing my degree gave me, so be sure to draw from it.

In the future I look forward to working in different parts of the organisation, working on both a global and national level. There's also potential to work abroad, which in itself bring a new challenge and breadth of experience. I'd highly recommend applying now if you're interested in working on something different yet career building. Unilever invest a lot in you (for example paying for you to qualify in CIMA) and this in turn really helps place you in a great position by the end of the scheme, where you're placed in a management position.

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Project Nepal

Ben Fernando

Charity Editor
RAG Treasurer



It seems that most Imperial students have some sort of pipe dream about being able to travel the world and help people. The huge costs and overheads in fundraising, as well as the need to give up an entire summer are off-putting factors, and it seems to have taken a while for charities to get their heads around this.

Project Nepal was set up in 2011 with the aim of offering an alternative –exciting, low-cost volunteering opportunities to help out with school building in Nepal. Situated in the Tanahun district of Nepal, their chosen school, the Maya Universe, offers education for children up to age of 12 from local villages.

The Maya Universe group of schools operate in rural areas where access to education is limited and the incidence of poverty is highest. Their philosophy is that parents should not have to pay for their children's education, but rather can contribute to the cost of running the school by doing maintenance, cooking, gardening and cleaning. Whilst this maximises educational opportunity, it does mean that there is very little money available for expansion.

This is where Imperial's volunteers come in. Throughout the year, they fundraised through a number of events, from Mulled Wine evenings to charity collections and Krispy Kreme sales. The £8,000 that they raised went toward the cost of construction materials and supplies for the three classrooms that they built over the summer whilst in Nepal. Project Nepal is different from most overseas projects in that the volunteers pay for their own flights, and all the money raised goes straight to the people who need it. This transparency and efficiency is sadly lacking in other, similar trips.

Over the course of three weeks, the volunteers stayed with local families, who they say were incredibly friendly. During the day they worked on the classroom building, and the evenings were left for socialising. Paul Zhu mentions that one of the highlights of the trip was playing a sort of version of 'capture the flag' on the mountainside, in the middle of the jungle covered Himalayan foothills. Weekends were left free for travelling, including a trip to the amazing town of Pokhara in the Annapurna Range.

This year 17 volunteers went out with Project Nepal and the team hope that even more will be able to go out next year. Flights were around £600, so the cost to each person was minimal compared to similar trips that Imperial students go on. If you are interested in going, or just looking for a small and friendly group to volunteer with, why not contact them?

pnepal@imperial.ac.uk

Go west, young student



IC ENTREPRENEURS

Patrik Lei
Writer

In April 2013, a study trip was organized jointly by the Imperial College Entrepreneurs Society and the Kings College Business Club to allow a delegation of students of which the author was part of to visit startup companies and educational institutions based in Silicon Valley in California, the world's foremost IT cluster. The purpose was to allow the students to educate themselves about the way innovation is managed in large and small technology based companies as well as in the design of university curricula in the hope of bringing back the knowledge to enhance our remaining time at university as well as to explore potential future career paths.

After descending upon San Francisco after a long flight from London during a weekend, many were keen to visit the Haight-Ashbury area of downtown San Francisco, famed for the summer of love in 1967 as described in the song "when you are going to San Francisco, be sure to wear some flowers in your head" by Scott McKenzie in the hope of immersing ourselves in the pioneering spirit and get in the right mood before the long week of activities began. It was disappointing to see that the famed hippie district of decades past was only a reminiscent of its former self, with tourist shops dominating the street front. If the city still had its pioneering and liberal spirit intact, it was not to be found here.

The week started with a visit to Microsoft in Silicon Valley. Retaining the spirit of innovation as a small company expands into a big one is a challenge facing many fast growing startups and corporate divisions. Microsoft has attempted to solve this problem by keeping product divisions separate from each other and housed in small and open office buildings around its campus as Barry Castle; the product manager for Skype explained on our tour of their Silicon Valley facilities where Skype and Xbox technologies are developed.

This technique is also used by other companies we visited such as Google and Facebook, housed on large corporate campuses in Mountain View. As these two companies are barely older than a decade, great efforts have been invested to retain the feel of a small company. Both companies offer a great wealth of employee benefits including vehicular maintenance, free food and computer gadgets as well as laundry services in order to incentivize and motivate employees to stay late and to work hard, just like back in university. Google have their unique office design with colorful plastic slides replacing stairs between building floors and colourful bikes used as campus transportation in Googleplex; and tFacebook have their fortnightly hackatons for sparking new ideas and to keep the creativity flowing.

We also had the opportunity to visit some small but up and coming companies to witness the inner workings of a company in the transition stages between being a venture capital funded small firm that is just taking off and a profitable large corporation. Dropbox Inc. that is based in the downtown harbour area of San Francisco is the typical example where the interiors are full of gadgets, game consoles and musical instruments lifted straight out of your average boys childhood room. The company has expanded so fast after its recent breakthrough that the helium balloons hovering over a new employee's desk, which were the majority of desks; were still floating in the air during our visit. It was also especially inspiring to visit the offices of Inkling, a producer of digital interactive science textbooks for university students; of which the founder is a recent Imperial College graduate that moved west to the valley where VC funding and IT expertise were more plentiful than in the UK.

The backbone of Silicon Valley are the people working in the various companies, and the valley would not be the IT supercluster it is today without the educational institutions present in the local area such as Stanford University and the University of California Berkeley that produces a significant part of the human talent and spinoff companies present in the valley today. We had the opportunity

to participate in a joint discussion session with the Business Association of Stanford Entrepreneurial Students and were impressed by the way the university has managed to integrate entrepreneurial skills training and projects into its core engineering curriculum in a close-knit collaboration between students, faculty and local companies; something that British universities have a lot to learn from.

The flow of people into and out of universities and between companies also helps to foster a relatively stable working environment by American standards, as well as ensuring that skills, ideas and know-how are channelled to the right location in the technological ecosystem where it has the most potential to succeed.

The great journey west to Silicon Valley has been very inspiring and taught me to dream big and to think and approach general problem solving in a hands-on and entrepreneurial minded way. It will greatly enhance the way I do things in my future student and engineering career. As I return back to Imperial College to finish my education, the experiences and lessons I bring back will have a real impact in aiding me to think and work in a more innovative and free minded way in my involvement with projects in the Mechanical Engineering Department. As I write these lines and reflect upon the trip in a corner of the Vesuvio Café where Jack Kerouac and the beat generation movement met and on my last day in the city, it seems after all that the revolutionary and pioneering spirit that could not be found in Haight-Ashbury has moved across town to SOMA (South of Market Street) and Mountain View, living on alive and well in the many innovative startup companies and educational institutions based there that are driven by the desire to make a profit and the aspiration to have an impact on the world.

**The author would like to extend his gratitude to the sponsors of the Imperial College Entrepreneurship Society and Kings College Business Club, as well as the International Office at Imperial College London for providing financial support to realize the study trip.*

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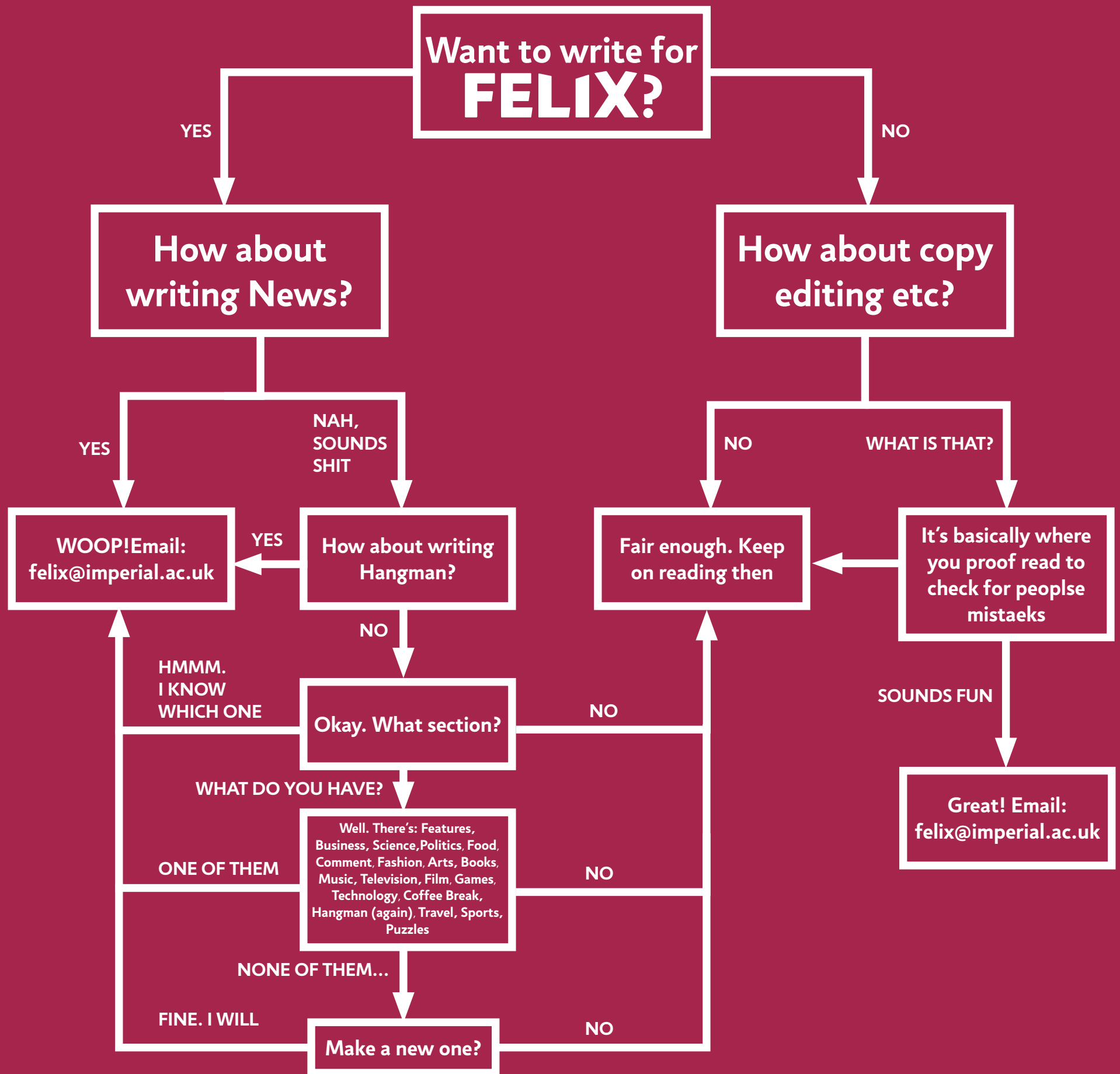
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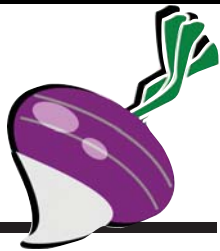
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IC UNION MEDIA GROUP PLOTS WORLD TAKEOVER

After the success of the SubStream event the IC Radio and STOIC societies take on Hollywood

After this week's SubStream event (October 18), IC Radio and STOIC managers began a plot to take over the world. Our reporter overheard the following conversation between the managers of the media outlets:

ICR: Now people have seen how successful our events we can be, hopefully we'll break the 100 listener barrier and move onto bigger and brighter things.

ST: True, but we must tread carefully, our step should be to neutralise our closest opponents which means that we need to take over the TV signal that broadcasts to the televisions in the Student Hub as well as changing the speakers in all public areas on campus so they only play the IC Radio audio.

ICR: But what next? We have to have a grander plan, after taking over the Imperial campus next week we'll need something to keep us busy between lectures..."

Meanwhile in the West Basement, the Felix team carefully planned the next steps of it's goal to become "the Voice of the Students" by subverting the Union Council to their will. To highlight his dislike of magenta and cyan the Editor decided to run for every possible position in the Elections, writing manifestos for each role including a unique headshot for each role and an amusing anecdote involving a cabbage, a shoe and a copy of the movie *Helvetica*. Meanwhile PhotoSoc and A Global Village preferred subliminal messaging.

UNION SOC OFF EVENT GENERATES NUISANCE COMPLAINTS

After a mix-up in communications, Thursday's "Great Soc Off" event at the Union deviated from it's usual programme as several confused engineers and mathematicians used a more liberal interpretation of the event.

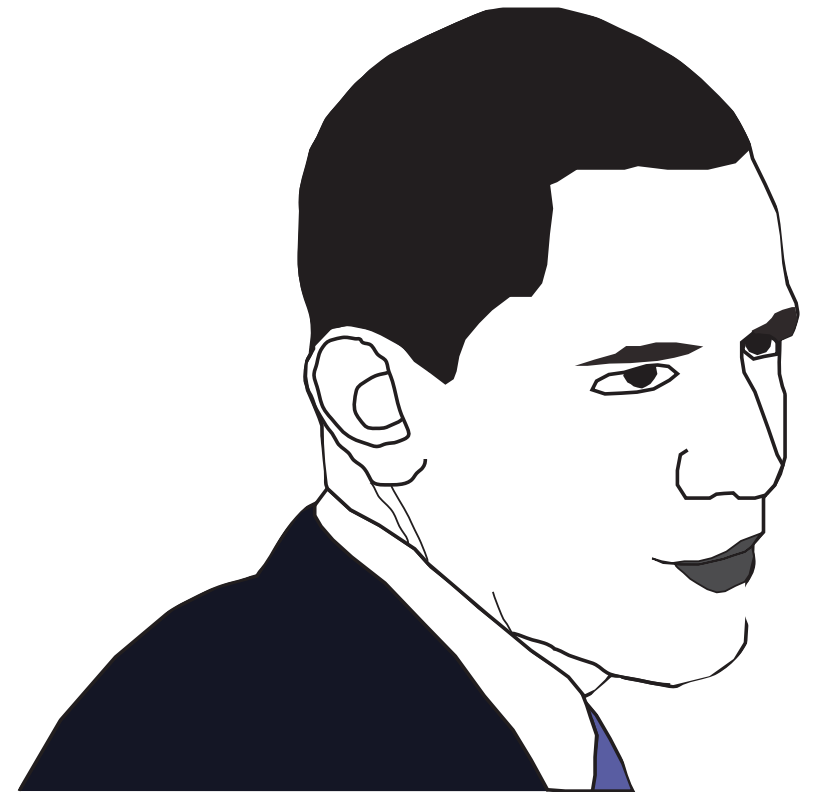
200 undergraduates from the department of Civil Engineering arrived wearing their Personal Protective Equipment, including their steel reinforced boots. After an hour of mild dancing in Metric the students decided to take of their shoes and socks, waving their socks in the air with wild abandon.

The poor mathematicians, bewildered by the crowd and lack of decent wine, followed suit, also removing their socks to take part in the Civils rave dance.

As more students participated in this new dance, an opportunistic member of the bar recorded the video while a less than impressed Deputy President of Education hurried to the exits to open the windows.

Despite the DPE's swift response Metric proceeded to smell worse until eventually the Embassy of Rich Country made an official nuisance complaint. The police, unable to stand the smell referred the case to the RSPCA.

USA's Student Overdraft increases by \$400



REPUBLICAN'TS TO PAY COUNTRY'S COUNCIL TAX.



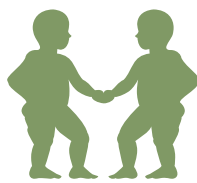
ARIES

This week, you decide that you've had enough of imperial, and try your hand at being a beach bum. After hitchhiking to Spain, you lay down in the warm sand, just to be decapitated by a horde of sea gulls. Maybe your coursework wasn't that bad after all...



TAURUS

This week, you have to decide on having Uggs as ears or having Crocs as hands. While the Uggs are certainly comfortable, they would make finding a potential make out partner nigh impossible. On the other Croc, self-pleasure would surely be painful with plastic appendages.



GEMINI

This week, some drunk idiot breaks into your flat. You try to fend him off with your penis statue, and kill him in the process. Next thing you know you have to pick up the soap in a women's prison. Pint?



CANCER

This weeks, you forgot your abilities using good grammar. However as no one saying anything to you ever, you not notice and end up writes a autobiography no ones could ever understanding. Well, at least you does not have croc's for hand.



LEO

This week, still suffering from fresher's week hangover, and tired of the horrible headaches you decide to check out a "cure" you found on the internet. It consists of chewing on the ears of every fresher. After going through the gruesome task you find that it hasn't helped at all, and instead just down a galleon of milk. (Responsible drinking!)



VIRGO

This week, you cannot seem to stop talking in rhyme. I mean it happens all the time.

After you've lost all your friends and your sexless spell extends, you decide that you have had enough, I mean Imperial is just too tough. The only option is hermit life, ending your rhyming strife.



LIBRA

THISWEEK, THEWEEKYOUHAVE TO H A N D I N S O M E I M P O R T A N T C O U R S E W O R K, H A P P E N S T O B E T H E W E E K W H E R E Y O U R S P A C E B A R A N D C A P S L O C K D E C I D E S T O B R E A K. Y O U H A N D I N Y O U R W O R K - A N Y W A Y A N D Y O U R S U P E R V I S O R F A I L S Y O U O N T H E S P O T.



SCORPIO

This week, after a particularly long dry spell and reading 50 Shades of Grey, you decide to accept the male strip club voucher the Felix Editor offers you. You go there half naked, ready to be pleased, and find out that the address is actually an old persons' home. Well you think, while you're at it...



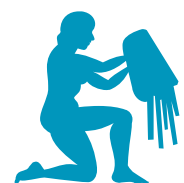
SAGITTARIUS

This week, after splashing in the Ethos pool, you decide to join your scaly brethren. As a medicine student, you know exactly how to surgically add gills to yourselves. You jump into the Atlantic, marry a wonderful Blue Tang called Dory and live happily ever after.



CAPRICORN

This week, a demon granny stabs you to death with her knitting needles because you didn't give her your seat on the bus. GET THE FUCK UP, MAN. You also have no money on your oyster card. Ever. Because you are shit at life.



AQUARIUS

This week you come back from the Gloucester Arms mildly tipsy and armed with a fantastic array of Fluid Mechanics puns. You laugh to yourself merrily as you unlock your room door. Unfortunately you trip as you go inside, fall on your viscosity constant and end up phoning an ambulance with a pitot tube in an uncomfortable area. Your injury is classified as sub-critical.



PISCES

This week you try to get in to see Prince Harry's speech on campus. As you try to sneak in you are greeted by HRH himself who promptly stares at you with hearts shining in his eyes. As you jump into his arms you slip but he catches you anyway. You both smile as you ride of into the sunset,



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SPORT

Imperial trounce UCL in friendly

Jack Robinson reports as Imperial's 1st XI football team put UCL to the sword.



ICUAFC

The Imperial 1st XI arrived at Harlington for their final pre-season friendly with one objective: annihilate the opposition. The opponent in question was UCL's 2nd XI. Extra emphasis was placed on this fixture, as the 1st XI would be playing UCL at least 3 times this season. A message needed to be sent out, loud and clear. However, not even Mystic Meg could predict what happened next.

The pitch was in good condition, despite being as damp as Omar Amjad's back after a brisk walk, due to heavy rain the night before. Imperial kicked off, and initially UCL were strong, battled well, and held their ground admirably. However their resistance was ended as early as three minutes into the game. Good work from Pete 'iNuge' Nugent released winger James Murphy down the left wing, who ate his opposition right back for breakfast, before putting in

a delightful left-footed cross to an unmarked Dale at the back post, who calmly nodded it in without even nodding. The pace had been set.

The floodgates immediately opened, and before the UCL keeper could even wipe the sweat off his brow, Murphy had put 4 past him. One in particular was an exquisite first time curler into the bottom right-hand corner, reminding spectators of Southampton forward Ricky Lambert. Fresher Alexis Bellot switched up from his handy hold-up play up front to latch on to a through ball, reaching it just before the chasing keeper and dinking it through his legs and into the net. The game had been set up as three 30 minute thirds, and when the whistle blew to signal the end of the first period, the score stood at 6-0. Talk could be heard amongst the UCL players – they may as well have been debating whether or not to abandon

the usual 11-man set up so that one of them could be situated in their goal as a dedicated ball boy to fetch it out of the net.

The next third wasn't quite as riveting, as Captain Robinson took the opportunity to try out an untested 3-5-2 formation. Only two goals were plundered. The first came from Murphy once again skinning the right back alive, before going down in the box in a way that would bring a solitary tear to Gareth Bale's eye. Some say Mick the groundsman had picked him out with a rifle all the way from the Pavilion, others say he had a sudden ridiculous urge to take a closer look at the diverse range of wildlife in the grass, which he had so informatively told us about many a time last season. Will Wilson was handed the ball and stepped up to do the job. After checking his hair was in

order, he calmly slotted it in the bottom left hand corner to finally open his account for ICUAFC. Unfortunately he immediately closed said account, stating on the form that he couldn't accept the goal due to the fact that it was a friendly. Whether he will regret his decision later in the season remains to be seen. Later in the third, midfielder Ahmed Cherif received a swift but brutal knee to the buttocks from an understandably aggravated UCL player, ending his afternoon, and forcing two squads of players to watch him hobble off the pitch, whilst trying to hide his identity. Another goal soon came as a result of an absolute blunder from their keeper, spilling a simple pick up, allowing Bellot to pounce and send him back into his net to pick the ball up for an eighth time.

Due to the fact that only two goals had been put past them in the second third, UCL went into the break

reasonably happy, with something approaching a smile appearing on some of their faces. Captain Robinson noted this and told his team that he wasn't having any of it, before subbing himself on to score four goals in the last thirty minutes. Amongst Robinson's run of goal-scoring form, fresher Maximilian Vieweg scored a lovely goal on the turn, beginning with his back to goal, swiftly pivoting 180 degrees before burying it in the bottom corner.

The match ended 13-0, with UCL sent packing with their tails firmly between their legs. Some say it was comparable to the mating of ducks. There may have even been a few retirements from association football that day.

As for Imperial, it was job done, and they head into their first competitive match of the season in the best form possible.



Imperial slot 13 past hapless UCL

Imperial rally in defeat to UCL

Luke Armitage reports as Imperial's 6th XV rugby team lose 42-12.



ICURFC

Playing for the first time as the newly branded Imperial 6th XV, ICURFC's 3rd team made a slow start to the season, suffering defeat at the hands of an organised UCL outfit.

Scoring from their first attack of the game, UCL immediately put Imperial on the back foot with strong running and good link-up play. Despite brave defensive work the pressure did not let up and Imperial went into half time four tries down.

Putting the result out of their minds, Imperial's players refocused in the second half and, with the help of senior players coming off the bench, produced a much-improved performance. Organisation and discipline paid off as Imperial scored twice late in the game and at the final whistle left the field in positive spirits. Following this summer's BUCS ruling that forced the merger in name of Imperial and the Medics, Imperial College 3rd XV arrived at Shenley Sports ground in their new guise as Imperial 6th XV shortly before the monstrous convoy of UCL coaches.

The Imperial line-up featured many fresh faces, all of whom were keen to prove their credentials. After a warm up led by new captain Luke 'The Angel of the North' Armitage and part time rugby coach/full time Techtomic crooner James Hayward, the game started. Imperial kicked off

but were pegged back by their main rivals almost instantly. UCL made around 40 yards and, after some savvy offloads, scored their first try. The Imperial back line was overwhelmed by the strong running of the huge centres who looked as though they were capable of playing higher level rugby. The first half was a generally disheartening encounter for Imperial, with UCL running in 3 more tries to leave the score 26-0.

At half time some impact substitutions were made, with the chemical (engineering) brothers themselves - 'flair pair' Colin Matthews and Alex Ruffman - coming on as the two centres to give some much-needed experience and attacking prowess. Imperial showed signs of improvement, but despite this UCL managed to score again.

With heads going down, singer/songwriter Hayward stepped in with some rousing words and stirred the boys up for a final push. Prop Hugh MacKinnon had to come off injured, forcing disgruntled Italian bus driver Edoardo 'Bunga Bunga' Cavallazzi to come on as a replacement Loosehead Prop. This was despite his pre-game declaration to his captain that if he were forced to play in the front row he would resign.

The forwards pulled together and started to play the famous 'Imperial

Pattern' making full use of the pitch. After some clever kicks from Fly-half Alex Leonard, Imperial found themselves inside the UCL 22m line. After many strong phases of traditional attacking rugby later, a ruck formed close to the UCL try line. A crash ball from Jasper popped by the 'short controller' Armitage was enough to send UCL defenders flying and Jasper touched down to give Imperial a consolation try. With spirits visibly lifted Imperial gave everything in their power to not concede any more points and pushed hard again. Some minutes later IC constructed a rolling maul very near to the UCL try line, with Jonno 'top scorer' Stancombe holding onto the ball like a bear to honey at the back. As he has done so often for Imperial, Stancombe spotted the big white line, and made a dive for it, putting the ball safely on the floor. Leonard slotted the conversion, leaving the final score 42-12, a better-looking score than what looked likely at half time.

An unfortunate result to open the season but with plenty to build on, Geordie Captain Armitage congratulated the team on a 'canny decent' performance.

Congratulations on an encouraging performance to all the freshers, including debut flanker and man of the match Yix Lin.

BUCS Home Fixtures 23rd October 2013

BADMINTON

MEN'S 2ND VS SUSSEX
13:00
ETHOS

MEN'S 3RD (MEDICS) VS CHICHESTER
17:00
HARROW CLUB

BASKETBALL

MEN'S 3RD VS WEST LONDON
15:00
ETHOS

FENCING

WOMENS 2ND VS QUEEN MARY
14:00
ETHOS

FOOTBALL

MENS 1ST VS ESSEX
14:00
HARLINGTON SPORTS GROUND

MENS 4TH VS BUCKINGHAMSHIRE
14:00
HARLINGTON SPORTS GROUND

MENS 6TH VS CARDIFF MET
14:00
HARLINGTON SPORTS GROUND

GOLF

MIXED 1ST VS MERRIST WOOD COLLEGE
11:30
EALING GOLF CLUB

HOCKEY

WOMENS 2ND (MEDICS) VS UCL
TIME TBA
INDIAN GYMKHANA

WOMENS 5TH (MEDICS) VS BRUNEL
TIME TBA
INDIAN GYMKHANA

MENS 1ST VS CANTERBURY
13:30
HARLINGTON SPORTS GROUND

MENS 5TH VS READING
15:00
HARLINGTON SPORTS GROUND

MENS 6TH (MEDICS) VS SURREY
16:30
HARLINGTON SPORTS GROUND

MENS 7TH VS LSE
18:00
HARLINGTON SPORTS GROUND

LACROSSE

MENS 1ST VS ESSEX
14:00
HARLINGTON SPORTS GROUND

WOMENS 2ND VS ESSEX
14:00
HARLINGTON SPORTS GROUND

NETBALL

WOMENS 4TH VS HERTFORDSHIRE
17:00
ETHOS

WOMENS 5TH (MEDICS) VS
QUEEN MARY
TIME TBA
VENUE TBA

WOMENS 6TH VS BRUNEL
TIME TBA
VENUE TBA

RUGBY UNION

WOMENS 1ST VS CHICHESTER
14:00
HARLINGTON SPORTS GROUND

MENS 1ST VS BRIGHTON
14:00
HARLINGTON SPORTS GROUND

MENS 5TH (MEDICS) VS
ST GEORGE'S
14:00
HARLINGTON SPORTS GROUND

MEN'S 6TH VS
BPP UNIVERSITY COLLEGE
14:00
HARLINGTON SPORTS GROUND

SQUASH

MENS 2ND VS SURREY
14:00
ETHOS

MENS 3RD VS QUEEN MARY
16:30
ETHOS

TENNIS

WOMENS 2ND VS LSE
13:00
BISHOPS PARK

MENS 3RD VS UCL
13:00
BROCKWELL PARK

WATER POLO

WOMENS 1ST VS SOUTHAMPTON
TIME TBA
VENUE TBA

MENS 1ST VS SOUTHAMPTON
TIME TBA
VENUE TBA