FELIX

The Student Newspaper of Imperial College London



FELIXEDITORIAL



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FELIX, Beit Quad, Prince Consort Road, London SW7 2BB Tel: 020 7594 8072 Printed by lliffee Print Cambridge, Winship Road, Cambridge Registered Newspaper ISSN 1040-0711 Copyright © FELIX 2015 B limey, what a year it's been. For me, and presumably, for you too. I can only speak for me though, so I will. It's my editorial, mate. When I woke up on New Year's Day 2015, I didn't think I would still be at Imperial by the end of it. I was due to graduate, I certainly wasn't up for further, further education, and I assumed I'd be spending Christmas 2015 on a houseboat in Berlin, just working on my poetry or trying to learn to code.

Alas, I am not on a boat. I'm not in Berlin (most of the time). I'm sat in a subterranean office in Beit – a hall I was not cool enough to get a room at in first year – living my actual dream. I get paid to write a newspaper for you lot.

There's a theme at Imperial. We arrive, we want to get the best out of our time here, so we put our heads down and work solidly for four years. We are occasionally distracted by general elections, rugby clubs or giant desks, but apart from that, we don't pay much attention. And FELIX is as guilty as anyone for contributing to this narrative. Imperial students do a tonne of stuff. I should know, because it gets sent to me every week, and I publish it.

This week's issue is a bumper Christmas special, and if you flick to the middle for your beloved centrefold, you'll find art, photography, poetry and prose from some of Imperial's finest, in the form of Phoenix. It's beautiful, the arts editors who put it together are beautiful and don't worry, there's still a tasteful nude of the swimming and waterpolo teams on page 14. Phoenix is a termly endeavour, so give the arts editors a buzz if you want in next year.

The art supplied for this issue is just one way Imperial students continue to display how freaking cool they are. Where else would you have physicists writing theatre reviews, medics mulling over think pieces and the programmers of tomorrow coming out with pieces so inflammatory, Owen Jones would be jel? Loads of places, you might respond. Nah mate, not like this.



Soppy editorials are not myjam, but it's due. I'm constantly astonished by the quality of content that hits my inbox, the time my section editors dedicate to fine-tuning their work and the general support I get from a team of students who before the summer holidays, I only knew from stalking their Facebook profiles and Twitter accounts. What a bunch. Merry Christmas to you all, but especially them. Thanks guys.



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In response to 'Problematic yet representative?', Issue 1620

Dear Chief Editor,

In the 4th of December edition of FELIX, your music editor published a piece criticizing the current Union president's political views and the political apathy of the student population. I wish to respond to that article.

I agree with the author's contention that, prima facie, some of the president's views are incendiary and alienating. At Imperial College we have much to appreciate, especially the diversity of our student body. Facile and defamatory comments about the beliefs of fellow students not only causes harm to the targeted individual(s), but divides and degrades the rich social tapestry endowed upon us by this learned institution. In this day and age, it is too easy to disseminate thoughtless, harmful comments via the Internet, in this case blanket accusations of treason against patriotic Scots.

Whilst one must decry ill-judged comments whenever they appear, I believe that the author has also committed errors of judgement. It is fair to question the impartiality of the concerned individual given their past comments, especially when such comments would likely offend

Letters (kinda)

several students. Nevertheless, the author implies that this individual is unqualified to perform her duties as president on the basis of her political beliefs. I have seen no evidence to support this insinuation; the overwhelming majority of tweets by the account in question promotes student engagement, college outreach programs and diversity, no less than what one would expect. It seems that the author wishes to decry an elitist vibe in the president and hence sets her up as an anathema of the student body. In this country it is common to succumb to class-based prejudice; a rational person would not resort

to judging someone for their socioeconomic status. Such conduct is most primitive and unscientific, undeserving of Imperial's reputation as a center of learning.

To add insult to injury, the author concludes by lambasting Imperial's student population for political stupor, subtly alluding to the well-worn jibe of ICL insulting UCL. Evidently Imperial is less politically-active than other universities, for the simple reason that we are a technically-oriented institution. Nevertheless, it is false to say that we are apathetic about our welfare and self-governance. We care deeply. It's just that at the moment we're simply too busy with our coursework and studies to wade into the bewildering world of activism, rallies and power politics.

We shouldn't let petty, polarizing and introspective distractions clutter our media. We should however be discussing thorny and uncomfortable issues, such as addressing gender imbalances, living conditions and profligacy with our dear tuition fees. FELIX's investigations of these issues and attempts to bring greater transparency to the autocracy imposed on us are much appreciated. Kind regards,

Daniel Williams

FELIXNEWS



Imperial network brought down by cyber attack

Ours was one of hundreds of university networks attacked this week

Grace Rahman Editor-in-Chief

n Tuesday, Office 365 email accounts, TurnItIn, and other online services at Imperial were disrupted due to a DDoS attack on the national network for universities.

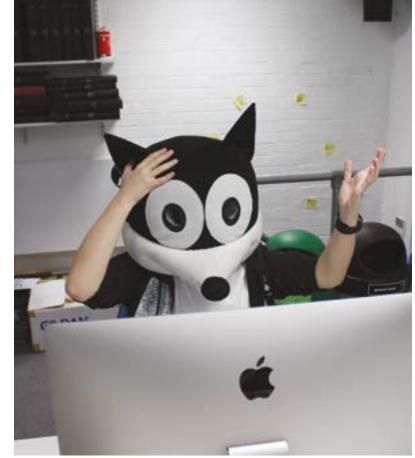
Janet, which runs *.ac.uk* domains, reported "disruption" from 9:24 onwards on Tuesday, causing "intermittent service" to users throughout the day.

Students across the country were prevented from submitting work on time, using some library services, and watching Netflix on college grounds.

A DDoS attack involves the installation of malware on multiple computers before instructing them to access a site simultaneously, causing failure due to the volume of traffic. 'Botnets' of malwareinfected computers can range from thousands to millions for one attack. These Distributed Denial of Service hacks account for up to a third of outage incidents, and experts estimate that 2000 occur per day. Such attacks can be purchased for as little as \pounds 100 online.

The academic network stopped updating the situation on its major incident Twitter page as it believed these details were aiding hackers. The Joint Information Systems Committee, which runs Janet, was forced to shut down its own website

Students across the country were prevented from submitting work on time



There was carnage in the FELIX office. Photo Credit: FELIX

when it too was subjected to another DDoS attack. This made it harder to update IT departments and students on the network's status.

By 5pm, Imperial's ICT Service reported that network services had been restored in college.

A representative from ICT told FELIX, "The disruption was patchy; it was often the case that only one critical component of a service was unavailable – the sign on process for Office 365, for example – but the rest was fine. We were able to put in place a number of work-arounds to overcome these situations".

"There is not a great deal students can do apart from making every effort to ensure their personal machines do not get enrolled into bot-nets through the accidental installation of malware. Install security patches ASAP and keep virus and malware-checkers up to date!"

This news comes after Office 365 went down in parts of the UK and Europe last Thursday, due to an outage with Microsoft's cloud platform, Azure.

IBM in sexism row over #hackahairdryer

Female scientists wondered whether men would be asked to hack a beard trimmer

his week, a misjudged campaign on the part of IBM to get women into science faced backlash online after being dubbed sexist.

The initiative focussed on getting women into STEM subjects by encouraging them to "hack a hairdryer". Many women argued that by playing up to the gender stereotype of women caring more about their looks, the campaign had lost sight of the gender stereotype it was trying to lambaste.

Many female scientists on Twitter adopted the IBM's #hackahairdryer hashtag to point out the contradiction.

"That's okay, IBM, I'd rather build satellites instead, but good luck witht that whole #HackAHairDryer thing," said one user. IBM said afterwards that the campaign had "missed the mark for some"

"I leave hairdryer fixing to the men, I'm too busy making nanotech and treating cancer" said another . The mocking continued throughout the day, until IBM eventually decided to pull the campaign. By then, even the London Fire Brigade had chipped in on Twitter, saying: "We're staying out of the sexism debate, however, we'd suggest that it's generally a bad idea & possibly a bit dangerous to #HackAHairDryer".

IBM said afterwards that the campaign had "missed the mark for some". They'd been running the initiative since October, but began publicising it again on Monday.

On a webpage for the scheme on IBM's website, the company described the "hair-raising misconceptions" about women in science that were putting women off. This has since been removed.

another. This misfire makes a change for continued IBM, who are known for being

Dean Burnett Operwooy Dec 7 I look forward to the next sexist-butalliterative STEM campaign #HackAHairDryer #LaserSomeLipstick #DissectADress #TurboChargeATampon

The internet had a whale of time over this one. Photo Credit: Twitter

a relatively diverse company. They have a female CEO, Ginni Rometty, and have always claimed to have paved the way for women in technology, saying on their website: "Where many companies proudly date their affirmative action programs to the 1970s, IBM has been creating meaningful roles for female employees since the 1930s." This is the second time this year a company has gone awry in its PR pursuit for women in STEM. EDF Energy's 'Pretty Curious' campaign encouraged young girls to get into science.

Despite controversy, the campaign continues.

FELIXNEWS



Pig's head found in Australian university mosque

Student makes gruesome discovery in mosque toilets before prayers last Sunday

Grace Rahman Editor-in-Chief

ast weekend, a student at the University of Western Australia discovered a decapitated pig's head in the toilets adjacent the University's Muslim prayer rooms.

Majdi Fal, a Tunisian PhD student, came across the gruesome object when preparing for prayer in the bathrooms near the prayer rooms. He photographed the pig's head, which had been left face down in the bowl of a squat toilet, and posted it to Facebook, adding "If this happened at a university, then THINGS ARE ESCALATING". The post has since been removed.

Fal told ABC News that the fact that it was a pig's head wasn't the problem, saying, "it can be anything, any other animal; it was the message that was clear". "It was not the best start to the day," he said.

The University's guild, an organisation equivalent to our student union, condemned the act, calling it "damaging and offensive" and "designed only to incite religious and racial hatred" on their Facebook page. Garnering over a thousand

"It was not the best start to the day," the student said



The strikes have been suspended for the time being. Photo Credit: FELIX

likes, commenters on the guild's post pointed out that footpaths through this part of the university are fully accessible by the public, and that it may not necessarily have been the action of a student.

The leader of Western Australia's Muslim Youth group, Shameema Kolia, described the difficulty of being a Muslim after Islamistmotivated terror attacks, saying: "We're grieving for the loss of human life, but before you can even get through and process that, you're already expected to condemn what happened, answer for the actions of people you have no idea about."

After the mass shooting in San Bernardino last Wednesday, where fourteen people were killed, there were fears of revenge attacks on the Muslim community.

Last week, the President of Liberty University in the US, encouraged a crowd of students to get permits to carry concealed arms, saying that if more people did, "we could end those Muslims before they walked in". The University, which is a private Christian college in Virginia, swiftly released an official statement clarifying his use of "those Muslims" to mean "the Muslim terrorists who attacked innocents in San Bernardino, California, and Paris, France".

Donald Trump this week called for a "total and complete shutdown" of US immigration of Muslims. This would include Muslims from abroad attempting to get tourist visas. One Scottish University has since revoked an honorary degree they awarded him in 2010. He remains ahead of his Republican counterparts in the polls.

RCSU Science Challenge launches

The RCSU initiative is now in its 9th year

tudents from all faculties flocked to the RCSU Science Challenge Launch on Monday evening to meet this year's star judges and hear how they could get their hands on the $\pounds4000$ prize pot.

The informal event kicked off with demonstrations from the physics outreach team before Saima Seer, this years Science Challenge Chair, introduced the judges, the questions and the prizes.

Addresses from Dr Aarathi

Prasad and Dr Eric van Sebille were definitely the highlights of the Launch. Dr Prasad reflected on how nature can be a invaluable source of inspiration for scientists and sciencecommunicators, whilst Dr Sebille made an impassioned case about the need for clear and simple arguments when communicating science to general society. The buoyant crowd of sixthformers, Imperialites and sabbs then descended for the finest of catering college could provide and to mingle with the speakers.

The Royal College of Science Union: Science Challenge is the UK's largest student-run science communication competition and has developed a reputation for A-list judges, extravagant prizes and the annual final which is held at a swanky central-London venue. The competition is traditionally open to all students of Imperial and UK sixth formers, however this year the RCSU were delighted to announce that they are taking submissions from sixth form-aged students from around the globe! After all, scientific discovery has no borders. Entrants are required to submit a short essay (or video) in answer to the judges' questions before the judges present the winners with their prizes at the Grand Final.

To find out more and enter please visit: *sciencechallenge.org*. And in the words of Raven: "Let the challenge begin".

Judges and Questions

Dr. Aarathi Prasad is a writer, broadcaster and Imperial alumnus!

"Throughout human history we have taken inspiration from the natural world to invent and innovate. What would you would mimic to improve our health or capabilities? How would you do it?"

Prof. Sir Brian Hoskins is Professor of Meteorology at Reading University and Director of the Grantham Institute for Climate Change.

"As uncertainty is often used as an excuse for inaction, how should scientists communicate without compromising their science?"

Prof. Sir John Pendry is a condensed matter theorist, famed for making the first 'invisibility cloak'.

"Describe the various ways in which invisibility has been sought and briefly explain the science behind them."

Alok Jha – journalist, author and broadcaster. ITV News Science Correspondent.

What is the best story you've heard about science? Why? (video)



James Stirling introducing last year's winners. Photo Credit: RCSU

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All I want for Christmas is the truth

Not excited for Christmas? Maybe it's because your parents lied to you



Vivien Hadlow Comment Editor

Very year, a strange phenomenon occurs: trees are decorated, gifts are exchanged, and the world decides that it is again time to deceive millions upon millions of impressionable children.

Whenever someone discovers that I've never believed in Santa, the customary reaction is to lament my poor, deprived childhood, which must have been so dull without the magic of Father Christmas. It is as if I had revealed that my parents used to give me a lump of coal, a slice of bread and lock me away in my room for the day. In fact, I was positively spoiled at Christmas; I got to spend time with my whole family, make and eat delicious food, and exchange gifts with people I love, things which I used to get excited for and still do, because none of those things was pulled out from under my feet when I discovered it wasn't real.

Few sentences inspire more sorrow in me than "I don't get

excited for Christmas any more." It is a sentence you hear from more and more people growing up, and is invariably, in my experience, said by people who used to believe in Santa. This is no coincidence – when most of your excitement for a festive day stems from your absolute belief that a quaint old man with a beard will miraculously appear in your home and leave whatever you wish for at the foot of your bed, it is little wonder that when the illusion is killed, so is most of your buzz.

On a more sinister level, the belief (or lack thereof) in Santa creates a weird power dynamic between older and younger children, especially siblings. Having never believed, I can't be sure, but I imagine that most children don't find the truth in a "the talk"-esque chat with their parents. It could be a school friend who found out early accidentally blurting out the harsh reality – or worse, it could be deliberately revealed in spite. Either way, it is an embarrassing and awkward moment



Whatever happened to stranger danger? Photo Credit: Huffington Post

which wouldn't have to be endured if people stopped lying to children and let them enjoy the story of Father Christmas for what it is – a story.

These practical considerations aside, the crux of the matter is that children shouldn't be lied to unnecessarily. I don't want my children to grow up not trusting what I say, and although leading kids to believe that Santa is real is seemingly innocuous, it is still a lie. It still teaches them that their parents don't think it's important to tell them the truth.

Thatcherites of the world, unite!

Political diversity is to be cherished, not shouted down as "problematic"



Christopher Whitehouse Writer

ast week, FELIX Music Editor, Cale Tilford, complained that our Union President, Lucinda Sandon-Allum, had expressed admiration for Margaret Thatcher. He went as far as to say that her comments were "problematic" and displayed "...a complete lack of empathy".

Thatcher is not some fringe character like Donald Trump or Stalin; the British people elected her three times in a row. It's easy to forget how low Britain had sunk: reduced to working by candlelight and three-day weeks by cynical union leaders who held the British economy hostage. We were considered so weak that a third-rate military junta in Buenos Aires dared to invade sovereign British soil and subjugate British citizens. Thatcher defeated both through sheer force of will, and the world took notice; it was the Russians who christened her the "Iron Lady".

Thatcher took a sledgehammer to a post-war consensus that had existed for 25 years. Her legacy is divisive but undoubtedly revolutionary. She may have been an enemy of the miners, but for the aspiring middle classes who kept returning her to Downing Street, she was something of a saviour. To get there, she fought her way to the top of the ultimate Old Boys Club, flattening any poor bastard who stood in her way. She was Britain's only ever female Prime Minister and probably the most powerful woman in our nation's history. Why shouldn't she inspire politically-minded women today?

Tilford later writes with regret: "If a sabb at any other university described Thatcher in the same way there would be a wild uproar... sometimes I wish I'd gone to UCL."

That's almost certainly true. A new wave of small minded, left wing intolerance has infected campuses all across the UK and US.

At Yale, a professor who gently questioned involving the university to pass judgement on "offensive" Halloween costumes was subjected to the most horrible invective, and has resigned from her position. At Oxford, a debate on abortion was cancelled, because both speakers being male was considered "problematic". At UCL, the Union saw fit to ban the Nietzsche club. Only non-problematic philosophy here, kids! On campuses all across the country, pro-Israel students face widespread hostility and disruption from both other student groups and their academics. Indeed, the NUS (with whom we are thankfully no longer affiliated) voted to boycott Israel, yet failed to pass a motion condemning ISIS.

When these groups seek to silence or punish other opinions, they do it by weaponising the language of the victim. Assert that something is "problematic" or demand a "safespace", and there is no further debate necessary, just skip straight to SUapproved silencing or shaming. This is a terrible trend, and will stunt the intellectual development of a whole generation of students.

We should appreciate the political environment here at Imperial, a rare oasis of sanity surrounded by hysterical student activism where students of all political persuasions feel free to express their views, but generally can't be bothered because they have too much work to be getting on with.

Imperial, a rare oasis of sanity surrounded by hysterical student activism

FELIX COMMENT



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Britain's off the rails

Perhaps it's time to renationalise our railways and combat unacceptable service



Samuel Lickiss Writer

n 1910, E.M. Forster described trains as "our gates to the glorious and the unknown. Through them we pass out into adventure and sunshine, to them, alas! we return."

He makes our railways seem so romantic. There's palpable excitement in his words for getting on a train and having a wonderful adventure. Over a hundred years have passed and our trains aren't going anywhere.

I'm writing this from just outside East Croydon, stuck at a red signal, while the conductor apologises for the signal failure holding us up. I live in Horsham, West Sussex. It's an hour south of London, and I take the train to Victoria and the Tube to South Kensington.

Apparently operating a series of lights defies engineers' best efforts

Studying for an MSc is an expensive investment and financial support is limited to career development loans and non-existent scholarships. Since I have neither, I'm self-financing my MSc from savings, part-time jobs, and inheritance money. The only way I'm able to make this work is by living with my parents – I'd much rather live in London.

Around half the trains I catch to London with Southern Rail are late or cancelled. According to Which? surveys, Southern scored worst for customer satisfaction and 39% of passengers reported being late on their most recent journey. It's worth mentioning that official statistics only record 'late' as 10 minutes or more.

Southern are full of excuses: insufficient staff (maybe they're trying to catch the train to work), emergency engineering works, lines blocked by broken-down trains, and even signalling failures – apparently operating a series of lights defies engineers' best efforts.

There are legitimate reasons too. Extreme weather (I'm not talking a dusting of snow or leaves) such as the flooding occurring in Cumbria, and people who sadly take their lives on the railway lines (this isn't as unusual as you might expect) are unavoidable.

Most problems, however, are down to incompetence of rail companies themselves. I pay $\pounds 28$ every time I go to London (with my one-third railcard discount). It's a lot of money to me and probably one of the least enjoyable ways of spending it. It's hard to see where my money goes when I'm crammed into a carriage with thousands of other miserable-looking commuters on a broken-down train.

I've been late for lectures, missed appointments for my Imperial internship, and been late for social functions, meetings and extra curricular activities I'm involved in – all due to incompetent rail operators.

I've spent more than one night at Gatwick Airport. Once, I cut short a holiday in the west country to attend a job interview. My First Great Western train from Taunton ended up stuck behind a slow stopping service all the way to London, I missed the last train to Horsham (though I should have arrived in plenty of time to catch much earlier trains), and could only get as far south as Gatwick.

I hung around the terminal building all night attempting to get some sleep before buying another ticket, catching the first morning train home to shower, change and eat, then catching another train to my job interview (ironically, at the airport). I was exhausted and didn't get the job.

I've never received a refund. because it's a complicated pain, and operators don't issue refunds unless the train is either cancelled or more than 30 minutes late. I once applied for a refund and was refused because Southern said it wasn't clear which train I was trying to take, so they couldn't ascertain if I was telling the truth. I've not bothered since, though I must be owed hundreds of



Delayed trains cause dangerous overcrowding. Photo Credit: mirror.co.uk

pounds.

The cost to me and everyone else who commutes is more than just the ticket price. I spend £9000 on tuition fees, and I travel up to London three or four times a week. I worked out that I have roughly 7.5 hours of contact time with my lecturers each week. A back-of-theenvelope calculation suggests that I am paying approximately 33p for every minute of my education.

For every minute I am late, I am wasting money. Thirty-three pence may not sound like much, but over a year, it adds up.

I contacted Southern with my concerns, and have not been dignified with a response. I've tweeted them multiple times to no avail. Their arrogance and lack of consideration for the people who pay their salaries (and substantial bonuses) is astounding. They know they can get away with operating a shoddy service. While my rail fares are expensive, they're cheaper than renting in London. The only

For every minute I am late, I am wasting money realistic way of getting to London is the train, but there's no competition – we can't boycott the train as we might with other companies. We have no option but to keep paying extortionate sums of money for substandard service.

I have several part-time jobs and spent four years employed as a teacher before coming to Imperial. For most professions, punctuality and organisation are essential. If we don't deliver our services on time, we don't get paid – simple as that. We're also likely to get sacked. When I buy a train ticket, I should expect to receive the service as advertised by the timetables.

The Conservative MP for Horsham, Jeremy Quin, said this as part of his Action on Railways campaign: "There are thousands of people [...] for whom a regular, reliable rail service is absolutely critical. Due to [...] poor performance by Southern and Network Rail, rail users have not been receiving the service they deserve or should expect. Cancellations, timetable changes, poor communication and inadequate compensation have all led to significant frustration."

While the Government has frozen fares, this doesn't 'compensate for poor performance'. Rail Minister Clare Perry is said to be addressing these problems. I remain unconvinced anything will change. I'm still waiting outside East Croydon, wishing I possessed E M Forster's optimism.

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FELIX SCIENCE

Bad diets?

The health police are turning in their graves as novel research suggests sugary foods may not be all that bad for you

Madeleine Webb Writer

t's almost that wonderful time of year again. Everyone goes home, remembers how boring most their extended family is, and starts panicking about January exams. But it also means New Year. And what is New Year, if not an opportunity to make empty promises that never stick about getting in shape? While the second week of January is the busiest week of the year in the gym, 80% of new members drop off by mid-February.

Well, for anyone counting calories this January in a bid to get healthy, researchers at West Virginia University have some news that is either good or bad – depending on your biology. New research suggests that most people's blood sugar levels rise and fall irrespective of what they eat. After monitoring the blood glucose levels of 800 people who were on exactly the same diet, it was found that levels varied dramatically from person to person. Furthermore, the blood sugar spike associated with eating foods like cookies was not observed at all in many test subjects, whereas in others, even eating 'healthier' foods like bananas resulted in such spikes. Clay Marsh, an epigenetic researcher at the university, argues, "findings indicate that blood sugar spikes after eating depend on not only what you eat, but how your system processes that food." And it turns out that how your body processes food is largely out of your control. Your gut microbe mix, otherwise known as the gut 'microbiome', is heavily involved in digesting food, and has been implicated in previous studies to be integral to causing diabetes and obesity.

So what can you do to eat healthily? An earlier study showed that personalized diets can help control blood sugar levels. A group



Turns out those lucky few can eat candy and gut away with it. Photo Credit: Wikipedia

at the Weizmann Institute in Israel produced diets unique to each person, but containing the same number of calories and levels of nutrients. For ten of the twelve diets created by the nutritionists, they were able to correctly predict the blood sugar level response of individuals, something that couldn't be done when all subjects ate the same thing. So, in February, when people like myself lie in bed eating buttercream icing out the tube, we can take solace in the fact that it might not be as bad as we think.

Climate change and conflict linkage?

Jane Courtnell Science Editor

t's the 30th November, and the Paris Climate Change Conferences commenced only weeks after Isis' attacks on the city. Both events represent momentous global issues plaguing today's society. Much debate has arisen over their linkage. That is, does climate change lead to conflict? If so, will the resolution of one help bring about a resolution to the other?

As David Cameron streamlines his efforts to "keep Britain safe" via pursuing a campaign of bombing in Syria, his lack of progress towards meeting targets proposed by the 2008 Climate Change Act seems to undermine his commitments. The UK is the only G7 nation in the process of increasing its investments in fossil fuels. £1.7 billion has now been spent financing oil extraction in the North Sea, a venture executed by George Osborne. In addition, Cameron has shut down developments of offshore wind farms and plans for large scale solar-power plants, concentrating efforts towards natural gas while discouraging competition in

discouraging competition in carbon capture and storage. A study published in Nature last month indicated that with absence of efforts to reduce the degree of climate change, temperatures in parts of the Middle East such as Yemen and Iran will soon reach levels uninhabitable for human beings. It is certainly not a formula for achieving world peace. But how has climate change contributed so far to Syria's civil war?

Last month, the U.S. Secretary of State said that 'Primary to the problem in Syria, the country has succumbed to its worst drought in record'. Reports from 2006 to 2011 document the migration of 1.5 million Syrian farmers to inner cities, intensifying political unrest. The droughts brought about failing harvests, tripling food prices and subsequently social strain.

However, climate change as a causal factor for the conflicts in Syria is subject to much controversy. For one, estimates of relocation to urban environments are provided from

Is climate change contributing to Syria's conflict?

a single media report. The Syrian government and UN estimate that there were only 250,000 migrants. Migration seems to have occurred overnight following the cancellation of diesel and fertiliser subsidies, with no evidence of any discontent towards these migrants.

In my view, conflict analysis should not be so black and white. A multitude of complex interacting relationships need to be considered to inform efforts to reduce further conflict risks. Suggesting climate change as one contributing factor towards Syria's civil war is not suggesting it as the sole cause. It's common sense that water shortages caused by climate change threaten the basic survival of Syrian citizens, and thus trigger a deterioration of the country's economic health. Any political and economic volatility will aid exploitation of the Syrian people by ISIS groups.

All this has been seen before. A sudden escalation in the actions of the terrorist group Boko Haram in Nigeria came after years of severe drought and the inability of the government to deal with its effects. 1933 saw the rise of Hitler, following a period of severe food shortages. A 30% drop in rainfall since 1998, with a chronic hunger issue effecting 1.8 million people has been implicated in violence plaguing Northern Mali. One meta-analysis looked at 60 rigorous studies focusing on criminology, economic, geographic, archaeological, historical, political science, and psychological factors, and concluded that there was a strong link between extreme climates and conflict.

We live in a broken economic system, whereby 85 families own 85% of global wealth, and 80% of the world's population own only 5% of global wealth. It is this 80% majority, contributing the least to climate change, that is most vulnerable to its consequences. So, to return to David Cameron, how can he commit so strongly to bombing campaigns, while barely targeting climate change? Regardless of the answer, his policies will have little effect until he starts addressing the underlying causes of the Syrian conflict.

FELIX SCIENCE



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What do you know about anorexia?

Utsav K Radia Writer

norexia nervosa is potentially lifethreatening eating disorder that is characterized by a psychological disturbance in the perception of a person's own body weight. People with anorexia nervosa have a devastating fear of weight gain, and subsequently adopt damaging dietary habits in order to prevent it. For this reason, they are unable to maintain a minimal normal body weight. Although anorexia nervosa most commonly affects women in their mid-teens, there has been a recent increase in the number of cases seen in young men. Prevalence of anorexia nervosa is hard to identify since a large proportion of people affected choose not to seek help, and therefore remain unidentified. However, the Department of Health estimates that the total number of people affected is approximately four million.

A typical case of a patient with anorexia nervosa is that of a teenager

who may be of average weight or slightly overweight, and decides to begin a new lifestyle plan to lose weight. As they lose weight, they receive feedback from others that further stimulates the weight-losing behaviour – positive reinforcement. The dependence on the reward for this behaviour becomes so strong that even when an ideal (or desired) weight is achieved, the anorexic person is unable to stop their weight loss.

Anorexic people usually have an unforgiving diet, with obsessive behaviour regarding the avoidance of fatty food, strict calorie counting and persistent weight monitoring. They may also take appetitesuppressants, self-induce frequent vomiting, and abuse laxatives. Physically, patients may not appear to be starving. However, there are some characteristic features of people with anorexia that include lanugo hair, callouses on the dorsum of the dominant hand with enamel erosion (due to purging) and swelling of the parotid and submandibular glands. The primary metabolic problem in patients is that of malnutrition due to starvation-induced changes.



From the catwalk to reality; the new size six sets an unhealthy "perfectionist" body image. Photo Credit: David Shankbone



Unforgiving diets plague the lives of anorexic people. Photo Credit: Benjamin Watson

The long-term health implications of anorexia nervosa include both somatic and psychosocial effects. Somatic effects, largely due to the malnutrition, include osteoporosis, infertility, anaemia and poor organ

Anorexia Nervosa is hard to identify as a large proportion of people affected choose not to seek help

function (particularly dental and renal). The psychosocial effects, also well document, include poor social functioning, sexual disinterest and suicidal thoughts. As anorexia nervosa is considered primarily a psychological disorder, it requires a clinical diagnosis. There are no definitive diagnostic tests, however a medical evaluation can be made of the multi-organ effects of starvation. Common tests would include a full blood count, urine analysis, metabolic panel, electrocardiogram and physical and mental status examination.

The main goal in management of anorexia is restoring adequate nutrition in patients. Ideally, intervention should occur before the malnutrition precipitates any secondary physiological and psychological problems. In most patients, refeeding is done slowly (to reduce the risk of refeeding syndrome). Fluid and electrolyte replacement is also very important, as patients are often dehydrated and have lost a lot of electrolytes through vomiting and purging.

Psychological therapy has proven to be the most successful treatment for patients so far, according to National Institute for Healthcare and Excellence (NICE) guidelines. It focuses on promoting weight gain and healthy eating and promotes psychological recovery. A variety of psychological therapies are used in practice and include: cognitive behavioural therapy (CBT), group therapy, family therapy, dietary counselling and interpersonal therapy. Patients often respond best to family therapy, which is proven to achieve as well as maintain remission.

Pharmacological

in anorexia nervosa includes antidepressants (tricyclic

therapy

antidepressants and selective serotonin reuptake inhibitors, SSRIs), antihistamines and antipsychotics. However, there is insufficient evidence to suggest that these have any significant effect on weight gain compared to placebo during multi-modal inpatient treatment. Limited current evidence suggests that fluoxetine (SSRI) may reduce the likelihood of relapse after inpatient weight restoration.

Overall, the current clinical picture is not optimistic. Although various forms of psychological and pharmacological treatment for anorexia are useful in the induction and maintenance of remission, evidence collected by NICE suggests that long-term benefits may not be sustained. Often, the focus of treatment shifts in the long term towards improving quality of life through managing the secondary complications of anorexia nervosa.

Perhaps, if it were possible to identify at-risk individuals at an earlier stage, and implement measures to prevent the onset of the secondary complications of anorexia nervosa, a lot of the disease burden on the individual (as well as the healthcare service) could be alleviated?

Although it has been over 150 years since French neuropsychiatrist Ernest Charles Lasègue first described anorexia nervosa, we are still far away from being able to help patients either before they develop secondary complications, or even to help them recover from those complications in a timely and efficient manner.

FELIX SCIENCE

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The launch of LISA Pathfinder

In the search of gravitational waves 100 years after the the birth of general relativity

Miquel Sureda Writer

ne century ago Albert Einstein predicted the existence of gravitational waves in his General Theory of Relativity. However, they have not been directly detected yet, as their effect is tiny and can only be appreciated when looking at huge bodies such as planets, stars or galaxies. The successful launch of LISA Pathfinder, carried out on the 3rd of December, is the first step of an ambitious project to finally confirm their existence.

Gravitational waves are supposed to be ripples in the fabric of spacetime, generated by accelerating massive objects. If they do exist, their nature would be analogous to that of electromagnetic waves (light, microwaves, X rays etc), which are the result of accelerating electrical charges. Einstein's theory predicts that gravitational waves transport energy as gravitational radiation, and that when passing a distant observer, that observer finds spacetime distorted by the effects of strain.

Let us think of the explosion of a distant star at the very end its life (a phenomenon known as a supernova). Gravitational waves from this violent explosion travel across the Universe almost unimpeded, unlike light, which gets absorbed by gas and dust. When they pass thought the Earth they produce minute changes in the size of our planet, but only by about a millionth of the size of an atom, making them almost impossible to measure.

European Space Agency's LISA Pathfinder is the first gravitational laboratory for fundamental physics that has been launched into space and will test the cutting edge technologies needed to detect and measure gravitational waves in the future. The spacecraft will operate at a distance of 1.5 million kilometres from Earth, between our planet and the Sun, orbiting a stable virtual point called the first Sun-Earth Lagrange point (L1). There, an experiment will attempt to demonstrate whether it is possible to free a pair of test masses from all forces except gravity. This is an essential underlining condition to detect gravitational waves in space.

LISA Pathfinder will do so by monitoring the motion of two identical 46mm gold-platinum cubes that will be free-floating in space, 38 centimetres from one another. Between them, a laser interferometer will measure the relative separation of the two cubes to unprecedented accuracy as external and internal forces disturb the spacecraft around them. If the experiment proves to be sensitive enough, it will be able to measure the tiny movements of the



Mission control teams in the main control room at ESOC. Photo Credit: ESA/K. Siewert - CC BY-SA 3.0 IGO

It is paving the way for a future large space observatory

masses caused by the passage of a gravitational wave.

Scaled up, it is like tracking the distance between the tops of the Shard in London and the One World Trade Centre in New York, and noticing any changes down to just fractions of the width of a human hair. "We use the laser interferometer to bounce light between the proof masses and the optical structure that we built in Glasgow," says Dr Harry Ward from Glasgow University, UK.

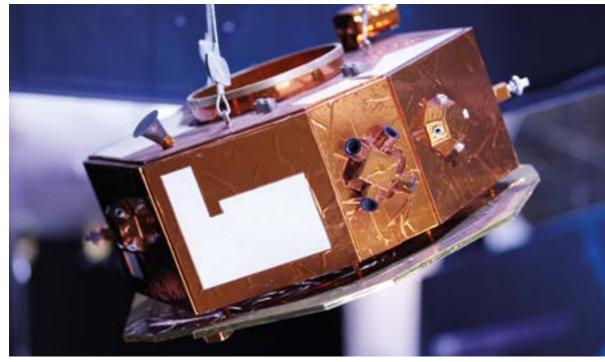
However, to ensure that the experiment works correctly, it is crucial that gravity is the only force acting on both cubes. This means that they must be able to float in their respective vacuum chambers without being in contact with any part of the spacecraft. This is extremely difficult as the spacecraft will be subjected to perturbing forces that, if not cancelled, will force it to move and hit the cubes, ruining the experiment.

In order to avoid this, a precision propulsion system with several micro-thrusters will have the mission to keep the spacecraft in perfect position. Thus, for every little perturbation that affects the aircraft the micro-thrusters must produce an identical reaction to cancel it, allowing the cubes to float undisturbed.

"LISA Pathfinder is paving the way for a future large space observatory that ultimately will directly observe and precisely measure gravitational waves," said François Auque, head of space systems at Airbus Defence and Space. "These minute distortions in space-time require very sensitive and highly precise measuring technologies, the performance of which can only be tested in a space environment."

When and if LISA Pathfinder proves the effectiveness of this innovative technology, the next step will be another, much bigger mission involving up to three spacecraft separated by five million kilometres. Each spacecraft will carry a cube inside and again, a laser will be used to monitor their relative position. The huge distances between the spacecrafts, will allow scientists to detect very low frequency gravitational waves from very large objects such as supermassive black holes at the centres of galaxies.

If everything goes well, this future mission, named 2034-LISA, will open a new window to our gravitational universe. "LISA Pathfinder is a mission looking into a new science, a new way of doing astronomy," explains Cesar García, LISA Pathfinder project manager (ESA). "And this new era in space science, first predicted by Albert Einstein just one hundred years ago, will change forever the way we see the Universe around us."



A look inside LISA Pathfinder. Photo Credit: DLR German Aerospace Center

FELIX SCIENCE



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Cosmonauts at the Science Museum

Celebrating the birth of the space age

Lef Apostolakis Science Editor

t seems that space is becoming more and more part of our daily reality. Last year we landed on a comet, the creation of Interstellar produced the most accurate representation of a black hole to date, Pluto's beauty was finally captured by New Horizons, there's serious talk about sending one-way manned missions to Mars further fuelled by the discovery of liquid water flowing on the surface of the planet, space planes are officially a reality and in less then a week we'll be casually sending a UK astronaut to the ISS. No biggie.

The list of achievements goes on and on, ranging from the unthinkable to the outright bizarre. Yet what's truly amazing is that

After succesfully orbiting the moon, this manequin is back home, currently hosted at the Science Museum Photo Credit: Lef Apostolakis

our love affair with space only blossomed about 60 years ago.

Indeed, 1957 was the year that marked the birth of the space age. On the 4th of October, the Soviets took the world by surprise when they announced that Sputnik 1 had written history by becoming the first artificial satellite to be launched into orbit around the Earth.

The launch of Sputnik 1 initiated a long line of Soviet firsts, that included first human launched into space, first human to spend 24 hours in space, first two simultaneous space missions, first woman in space, first three-member crew in space and so on and so forth.

The rapid development of Soviet Russia's space program fostered a climate of anxiety and fear on the other side of the world. The USA, weary of the potential of the new technology in warfare, intensified space research entering the 20th century space race.

All this and more is packed in the Cosmonauts exhibition, running at the Science Museum till the 13th of March next year. The exhibition takes visitors on a journey spanning over a century, introducing us to



A peak inside the space shuttle used by the first woman in space, Valentina Tereshkova, currently in the Science Museum. Photo Credit: Lef Apostolakis

the forefathers of space travel, the mysterious mastermind behind the successes of the Soviet space program, the Soviet cosmonauts – icons like Yuri Gagarin (the original Gaga) who filled the peoples eyes and dreams with stars – and much, much more.

The exhibition contains some of the era's most iconic artefacts, such as artwork inspired by our achievements in space exploration, the actual spacecraft that took Valentina Tershkova (first female cosmonaut) into space and a mannequin that successfully orbited the Moon, to name but a few.

It also offers an interesting insight on the effect of imperialism on research and innovation, as well as parallels between 20th century Soviet and modern day Russian imperialism and the whole political tension between the east and west. So get your space mojo on and

immerse yourself in one of the coolest exhibitions within a onemile radius from college.

Food on Mars!

Blurring the boundries between science and fiction through radio

Natasha Khaleeq Writer

ithin the first 15 seconds the listener is transported to outer space by the highly recognisable Space Odyssey theme tune accompanied by presenter Simon Jack, announcing it's 2075. 'Ground control to Major Tom' by David Bowie is also used towards the end as it's a song everyone associates with outer space. Transporting the listener into an alternate, futuristic reality creates the ambiance needed in radio to enhance auditory images and make up for the lack of visual stimulation. Simon then asks his co-host, a robot called Emily to go into the archives to find these following sound-bites,

allowing the audience to travel back to the present.

A clip of excited NASA scientists from 2015 sampling red romaine space lettuce through their experiment, introduces the main topic of survival on Mars. Dr Richter explains how a box

Everything is set for planetary migration then has been created in order to grow plants on our neighbouring planet's surface. Of course, if astronauts are consuming food then waste will be produced, which Dr Lasseur from the European Space Agency (ESA) explains will be recycled to produce water, oxygen and food, creating an artificial ecosystem. Plants could also be grown all year round, as demonstrated by Tom Webster's commercial scale urban aquaponics program. Furthermore, according to Dr Mahmoud Solh different food will be available as 150,000 specimens can be stored in a seed bank vault which could be used to transport various species into space. Although astronauts will survive

with diverse diet, I for one wouldn't want to spend the rest of my life as a lone wolf. For example, in the Martian, Matt Damon is alone,



The Nili Fossae system on Mars. Photo Credit: ESA

showing how daunting socialising in space can be. However, if astronauts were able to cook in space it would give them an Earthly aspect keeping the communication alive. So, it seems like everything is set for interplanetary migration then. Would you go to Mars? This podcast succeeds in communicating a futuristic space environment throughout its duration, through the use of atmospheric sound and scenic descriptions. Yet, it still enables the audience to relate to the world crafted by Simon Jack, through music and sound bites from the past and present.

FELIXARTS

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70s Lewisham hits the Young Vic in Barbarians

Max Falkenberg Arts Editor

Barbariansissublime.Understated, individual, with a sharp, current text, Barrie Keefe's 70s classic is touching and tempered, tackling the young and deprived and discussing race and war with unique care.

The trio... show real emotion and admirable authenticity

Despite a slow first half, the play hits a magnificent climax and a serious moral tone. It isn't overpowered by a political agenda and it succeeds at drawing parallels between the 1970s and modern Britain – a triumph in subtleties.

Set in dingy Lewisham, three unemployed, unruly youngsters leave school with no hopes and no prospects, with wonly crime to



Fisayo Akinade in rehearsal. Photo Credit: Will Patrick

and women to worry about, the tottered between excellent and relationship between the friends is lacking, the trio of Fisayo Akinade, challenged by the dream of a better Alex Austin and Brian Vernel

turn to. With nothing but football life. Although the performances

show real emotion and admirable authenticity. Directed by Liz Stevenson,

winner of the JMK award

recognising the best young directors in the country, this production is simple and energetic. The stage is bare and positioned between two wings of seating with rafters above and behind the audience. The actors thrive in the space and their movement in and around the audience heightens our focus.

It is classic, simple theatre done well

Little strikes me as or boundary pushing in this production - it is classic, simple theatre done well. While I'm left wondering where Stevenson will go next, \overline{I} admire her choice of a classic, well-constructed, and most importantly, exciting play. Too many directors thrive early and then produce boring, uninspired scripts so I commend Stevenson for her gripping production. The play will offend and the play will divide, but the end result will remain impressive. Although you knew that already... when is the Young Vic ever not fantastic?

Woke up this morning with a terrific urge to lie in bed all day and read. Fought against it for a minute.

Then looked out the window at the rain. And gave over. Put myself entirely in the keep of this rainy morning.

Would I live my life over again? Make the same unforgiveable mistakes? Yes, given half a chance. Yes.

-Raymond Carver, "Rain"

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FELIXARTS

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Architects, not artists win the Turner Prize

Indira Mallik Arts Editor

ou know it's time to worry about the state of contemporary art when the judges decide award the $\pounds 25,000$ prize to a group of architects. Has the prestigious award, no stranger to controversy, finally jumped the shark in the most spectacular style possible?

The truth is, the group of 20-somethings, none of whom are even fully qualified as architects, have created in the Granby Four Streets Projects, work that is head and shoulder above the rest of their competition.

The other nominees included, Nicole Wermers. Her installation Infrastruktur, featured vintage fur coats stitched onto steel designer chairs. It is an installation so devoid of real concept or power of execution that to muster any emotion other than abject apathy towards it requires Herculean power of will. Bonnie Camplin's work, a room filled with television screens blaring out amateur videos from conspiracy theorists, was more engaging than Wermer's, that is to say, it barely limped over the ridiculously low bar that Wermer had set. Janice Kerbal shunned the visual to favour a cacophony of noise and discordant voices, composing an operatic performance of a series of mishaps that occur to the fictional, hapless Doug.

In order to compose the pieces, she undertook extensive training in musical theory. Theoretically foolproof it may have been, but by all accounts the practical version left much to be desired. Each of these artists produced highly academic work, work that few outside the rarefied world of the upper echelons of art can relate to, work that is ultimately rendered cold and sterile compared to that of Assemble's.

The group undertook the urban regeneration of a series of terraced houses in Toxteth, Liverpool. The four streets that make up the Granby neighbourhood had been left to rot since the riots in the area in the 1980s. The neighbourhood, large enough to house 200, now only contains 70 residents.

Until ten years ago, the area was akin to a ghost town. Council after council had promised to turn the



The Cineroleum, an abandoned petrol station was transformed into a cinema by Assemble. Photo Credit: Assemble

situation around but nothing had ever been accomplished. Finally, the residents took matters into their own hands and formed The Granby Four Streets Community Land Trust and began to paint the abandoned houses, plant the streets, and run a community market to breathe life back into the derelict streets.

Assemble have taken this further, and have dared to dream bigger. They have offered their expertise in renovating unusual spaces to the residents to renovate the houses with gathered materials. Assemble's previous work includes creating a pop-up cinema from an abandoned petrol station, and creating a public arts space under a motorway in North London. These have been fairytale like constructions, beautiful, surreal spaces that leave a lasting impression, Assemble have built something of a reputation of turning all they touch to gold; their HQ at Yardhouse, once just another part of a grey and tired looking set of factories in the East End, has now been transformed into a building covered in ice cream coloured concrete tile; something of a Instagram mecca.

The renovated Granby Four

Streets houses have the same magic about them; where a floor was missing, they have simply created a double height space. As a result, unexpected spaces have sprung up: towering ceilings, cathedral like hallways. The project has been an exercise in creative thinking and ambitious vision.

Unexpected, magical spaces

It's not just about the eye candy though, in Granby Four Streets, Assemble have created a plan for a sustainable future. They have established the Granby workshops, employing local residents to create handmade home furnishings from scavenged materials.

Assemble's work may not be art as we know it, but revolutionary work rarely fits snugly in one box. The Granby Four Streets Project has changed real lives, and created something beautiful and lasting. I would be hard pressed to find a better definition of what art should be.



Interior from a Granby Four Streets home. Photo Credit: Assemble

SWIMMING AND WATER POLO: HAVE YOU SEEN THEIR WET BALLS?

FELIX MUSIC



Cale Tilford Music Editor



Photo Credit: Deafheaven

8. New Bermuda

Gone is the warm pink of Sunbather now replaced by dark uneven strokes. Whilst the album feels angrier and more abrasive, the overall structures and sounds that **Deafheaven** use have changed very little. Thrashing black metal always seamlessly transitions to the uplifting melodies that band are famous for. You'll need a lyric sheet to discern Clarke's screeching, but when you do everything begins to make sense: "A multiverse of fuchsia / And violet surrenders to blackness now.'



time and love in an hour of fantastical musical arrangement with the help of members of the Prague Philharmonic Orchestra. On 'Leaving The City' she plays the harp and piano, interspersed with metallic flutters of a marxophone and proggy guitar. Yet somehow her breathless singing is not drowned out. And she wonderfully contrasts this with moments where it's just her and the harp.



Photo Credit: Björk

FELIX's top music picks of 2015

Our Albums of the Year

6. Vulnicura

An album infused with the sounds of electronic producer Arca, Vulnicura is heavily influenced by the modern electronic scene and hip-hop. Like Arca's recent work, there are times where the album is wonky, mixing stretched synths with violins. Throughout the record, **Björk** voice seems a perfect match

For some, Arca's odd sounds might be alienating so Björk released an acoustic version. It's listenable, but feels oddly empty in comparison to the original.



Photo Credit: Kendrick Lamar

5. To Pimp A Butterfly

Kendrick Lamar's groundbreaking hip-hop album (which has seen him nominated for eleven Grammys) was released at a time of resurgence for radical Black politics in the US. It's an incredibly confident record; he reads lines of a poem at the end of each song before reciting the whole thing again on 'Mortal Man.'Then at the end of the album he interviews Tupac by inserting himself into a recording. Kendrick seems intent on trying to change the world: "As I lead this army make room for mistakes and depression."

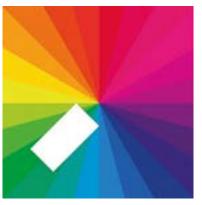


Photo Credit: Jamie xx

4. In Colour

Earlier this year, our Editorin-Chief called the album: "a masterpiece in execution of a widespread appeal, boys in ironic Adidas, white people at carnival vibe." So, I guess it has to be on our list. Steel pans were essential to Jamie xx's early solo work. While he's come a long way since the sublime 'Far Nearer,' this steely sound still permeates his music like a weird, translucent Instagram filter. If you haven't vet, listen to the xx-esque 'Loud Places' and 'Good Times,' two defining songs of 2015.

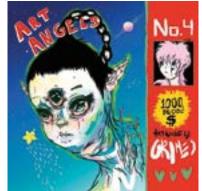


Photo Credit: Grimes

3. Art Angels

A vastly different album to Visions yet infinitely superior. Grimes' music is now more guitar driven and borders on bubblegum pop. Like an angel from heaven, Art Angels, glows with a radiance. It stays within the confines of pop music but transcends the tired tropes of the musical industrial complex. There's a hate track aimed at Pitchfork and a song "written from the perspective of Al Pacino."While it might not be coherent as Visions, the songs stand on their own: catchy, uplifting, and accessible.



Photo Credit: Sophie

2. Product

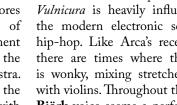
While not technically an album, Product, a compilation of a SOPHIE's singles so far, is an astonishingly bold effort for an artist who has barely existed for longer than two years. The fact that it could easily be mistaken for a 'best of' when it's essentially everything the electronic producer has ever released speaks volumes about SOPHIE's work. He uses sounds in weird and wonderful ways, creating high-pitched, squeaky club bangers. It might be too sweet for some, but it's worth it for that "fizzy feeling."



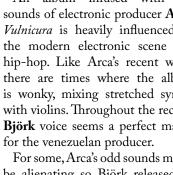
Photo Credit: Sufjan Stevens

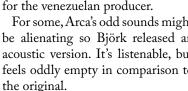
1. Carrie & Lowell

Introspective and hauntingly beautiful, Carrie & Lowell is a stark contrast to the explosive The Age of Adz. It's as raw as Sufjan Stevens' early classic, Seven Swans, with sparse yet vastly improved instrumentation. Since his last album five years ago, Stevens has seen the passing of his estranged mother - Carrie & Lowell recounts this event, but isn't defined by it. On every of listen 'Fourth of July' I try not to cry as Stevens whisper-sings "We're all gonna die" in conversation with Carrie on her deathbed.



for the venezuelan producer.





FELIXMUSIC

FELIX PAGE 45

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Our writers pick their Albums of the Year

JULIA HOLTER HAVE YOU IN MY WEIDERNES

Photo Credit: Julia Holter

Have You In My **Wilderness**

For the last four years, Julia Holter has kept on getting closer. Her 2011 debut, Tragedy, was an abstract tone-poem, influenced by experimental electronica, and inspired by Euripides' Hippolytus; her 2012 follow-up, Ekstasis, seemed more assured, the mumbled lyrics replaced with clear-cut vocoders, Holter singing as if through a crystal microphone; 2013's Loud City Song - as well as being a highlight of that year - showcased her aptitude for

jazz, with bombastic sax and drums kicking her baroque pop styling up a notch. And now we have Have You in My Wilderness, and a sense that Holter has finally arrived.

From the opener, 'Feel You', with its harpsichord opening line, and punchy drums, we are clearly made

She has never sounded poppier

aware that Holter is more present in this album. She has never sounded poppier; the track 'Silhouette' builds up around piano harmonies and beautiful backing vocals, to reach a haunting crescendo; 'Everytime Boots' is a rag-time number, with a

The Best Songs of 2015

skittering drumming propelling the clarity of Holter's vocals.

However, things have not all changed. Holter has retained her incredible skill with instrumentation - there is never a sense that any element is wasted; every blast of strings and piano interlude is calculated with extreme precision. Elsewhere she explores her lower register, sounding like a present-day Nico, all chilly elongated vowels. Her lyrical content, although more up front, remains as dense as ever. 'Vasquez' is named after a 19th century bandido from California, while 'How Long?' sees her inhabiting Christopher Isherwood's character of Sally Bowles. The album closes with Have You in My Wilderness', where Holter finished with the repeated refrain, 'Tell me, why do I feel you running away'. Nothing could be further from the truth - Have You In My Wilderness cements Holter's place as one of the great musicians of our generation, and I await with bated breath what closer contact will bring.

FRED FYLES



Photo Credit: Self Defence Family

Heaven Is Earth

My favourite album of the year has to be Heaven Is Earth by Self Defence Family. Featuring weird half shouted vocals, layered jamming guitars and wonderfully simple lyrics (as well as their confrontational internet presence) that have made Self Defence such a strong force in the post-punk scene. This album itself shows the full emotional variety that SDF are capable of, with the uplifting 'David Sim' cohabiting within the same album as the austere 'In My Defens

Self Me Defend,' creating a varied interesting experience from start to finish. My favourite track on this album is the poignant 'Basic Skills' which shows SDF at their very best. The minimalist krautrock-esque

Jamming guitars and wonderfully simple lyrics

riffs punctuated with poignant impassioned vocals leave so much space that every introduced line or note has a real impact. If simple guitar music is your thing look no further than this album. **ROB GARSIDE**

EP of the Year

IOTLINEBLIN HOTLINEBLI HOTLINEBLI HOTLINEBLI HOTLINEBLI HOTLINEBLI 800-HOTLINEBLII

Photo Credit: Drake

f I Know There's Gonna Be (Good Times)' isn't your song of forever then you've certainly haven't had a good time this year. I get into daily arguments with my housemate over whether 'Good Times' or 'Loud Places' is best song on In Colour. After years of excessive steel pans, Jamie xx delivers, with help from Young Thug and Popcaan, one of the greatest collaborations of the 21st Century. As a side-note, for nearly half a year I thought Popcaan was talking about drinking Ka in his intro, which resulted in a personal obsession with the soft drink. A



Photo Credit: The Weeknd

few weeks ago, someone told me he actually saying "cah." Embarrassing.

The newly crowned king of hiphop, Kendrick Lamar, gave us one this year's best singles with 'King Kunta', an empowering, hip track that takes aim at "the power that be" and maybe Drake too."But a rapper with a ghost writer? What the fuck happened?" There's no doubt Kendrick is authentic. There's so much hidden meaning in his music, and yet it still manages to be the most funkalicious thing I've heard this year.

With their follow up to critical darling Lonerism, Tame Impala



Photo Credit: Kendrick Lamar

crafted something that felt too perfected. Currents doesn't have the same sort of raw psychedelia as its predecessor, but it's still full of memorable singles. 'Let It Happen' opens the record with deep lyrics, groovy hooks and a brilliant electronic breakdown (for a minute I thought my record player had broken).

Until now, nothing The Weeknd has released since his trilogy of mixtapes in 2012 has particularly excited me. 'The Hills' harks back to Tesfaye's earlier music; it's a dark, lustful and drug-induced. On the other hand, 'Can't Feel My Face' is



Photo Credit: Tame Impala

face-numbingly upbeat and fullon pop. Comparisons to Michael Jackson are apt. Amazingly, the two singles have managed to rack up around ³/₄ Billion views on YouTube. Fucking memes. That's really the only reason I included Drake's 'Hotline Bling' on this list. I guess the beat's pretty infectious too. I don't think anyone ever expected Drake's dance moves to break the internet. The song has inspired some pretty rad covers, including Erykah Badu's epic 'Hotline Bling But U Caint Use My Phone Mix'.

Photo Credit: FKA twigs M3LL155X

After two EPs and an LP, FKA twigs released M3LL155X, forgoing previous naming conventions to deliver a new, distinct sound. The jaw-dropping release is seductive yet self-doubting; on 'Glass & Patreon' she sings "Am I dancing sexy yet?" But, it's obvious Barnett doesn't need our approval. On 'In Time' she explores the universal desire for change and growth in relationships: "I will be better / And we will be stronger." We can only hope that her next LP shows the same level of **CALE TILFORD** | growth.



FELIXFILM



The epic tale Scotland deserves

Agyness Deyn shines in this luminous film from masterful director Terence Davies



Dir: Terence Davies. Script: Terence Davies. Starring: Agyness Deyn, Peter Mullan, Kevin Guthrie, Ian Pirie, Niall Greig Fulton. 135 minutes.

> Fred Fyles Film Editor

hanks to Terence Davies, the idea of a Scottish epic film will no longer be intrinsically connected to the thought of Mel Gibson cavorting around the highlands in a kilt; instead, it will conjure up the image of Chris Guthrie, the central character of *Sunset Song*, lying in a field of wheat, thinking about what the future could possibly hold for her.

With life throwing a relentless stream of abuse, grief, and death at Guthrie, who wades through it all in her quest for independence, it would be easy for Davies to create a dour, gloomy film; instead, what we have in Sunset Song is an intense focus on a landscape indifferent to the trials of our hero, one that remains pastorally bucolic in the face of the evil of humanity. As Guthrie repeatedly says throughout the film, "nothing endures but the land," a line lifted from Lewis Grassic Gibbon's classic novel, adapted masterfully by Davies for the film.

These spoken word interludes, where we are granted access to the workings of Guthrie's mind, mark off chapters of her sad life: the death of her mother, who poisons herself and her baby twins after finding out she's pregnant again; the debilitating stroke that leaves her dictatorial father bed-bound; being made an orphan at the tender age of 18; her marriage to Ewan, cut short by the inevitable announcement of the commencement of WWI. Sunset Song hits the audience again and again with emotional turmoil, flooring us with its power.

As Chris Guthrie, Agyness Deyn is simply luminous; she is a revelation. She brings to the role a brute physical force, inhabiting it completely; from the pains of



Agyness Deyn as Chris Guthrie, and Kevin Guthrie as Ewan, in Terence Davies' masterful Sunset Song. Photo Credit: Dean MacKenzie

As Chris Guthrie, Agyness Deyn is Iuminous; she is quite simply a revelation childbirth, to the blossoming effect young love can bring, Deyn is completely present in every single scene. There may have been some complaints about the veracity of her accent (*Sunset Song* is set in northeast Scotland; Deyn is from Manchester), but for me the pleasure of watching her on screen came from the powerful nuance she brought to the role; as we follow her over the years, there is a real sense of Guthrie coming out of her shell, and seeing her develop and flower in front of our eyes is a joy to watch.

Peter Mullan is terrifying as the patriarch of the Guthrie household; from the first time we see his face loom into view, furrowed with years of anger, we know things are not going to end well. The effect he has on his character is palpable, and Mullan brings with him a chilly atmosphere that immediately sets us on edge. As Ewan, Kevin Guthrie shows off his acting range, starting out as a blushing lad who can barely make eye contact with Chris, before being transformed into a man possessed by images of trenches churning up the soil of northern France, swallowing comrades in a war orchestrated by English generals.

Where the film really shines, however, is in Michael McDonough's gorgeous cinematography, which makes use of a multitude of lighting conditions: seeing Guthrie bent over a single candle, it's like watching a painting by the Dutch masters come to life; a scene in church is flooded with a seemingly righteous white light, blinding the parishioners as much as the pastor's sermon on cowardice and German sympathy; multiple sweeping landscape shots drink in the highlands of Scotland, revealing more than a touch of Terence Malick's influence. It is obvious that adapting the novel for the big screen has been a labour of love for Davies, and yet there is the sense that perhaps he has agonised too much about keeping close to the source material. At 135 minutes long, the film is no short watch, and yet an issue with pacing means that characters and events come and go like cars on motorway, whizzing past us with enough force to make us dizzy. This, combined with Davies' beautifully portentous filming style, one that borders on the laconic, means that the film has the unusual quality of being both too slow and too fast.

But still, the film would have to go far to lose its charm. With a stunning central turn from Agyness Deyn – surely one to watch out for in the future – and beautiful camera-work throughout, Scotland has finally received, in *Sunset Song*, the film epic it so truly deserves.

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FELIXFILM

The Lesson

Dir: Kristina Grozeva, Petar Valchanov. Script: Kristina Grozeva, Petar Valchanov. Starring: Margita Gosheva, Ivan Barnev, Ivanka Bratoeva. 105 minutes.

> Fred Fyles Film Editor

relentlessly bleak morality tale from Bulgaria, *The Lesson* starts off immediately by showing us the upright character of our antagonist, Nade (Margita Gosheva), a secondary school teacher with a troublemaking thief in her class.

n an effort to enforce the seriousness of stealing, she gives them the chance to return the money in secret, threatens to report them to the police, and even has everyone in the class chip in to replace the stolen money, investing their interests in catching the thief. But her

professionally stern attitude towards right and wrong is in direct conflict with Nade's personal life, which is rapidly spiralling out of control.

Upon returning home one day, she finds bailiffs ready to repossess the house; it turns out that her husband (Ivan Barnev) has been spending the money ring-fenced for mortgage repayments on restoring a camper-van, and Nade must resort to a crooked loan-shark in order to save the house.

Like the Dardenne brothers' excellent *Two Days, One Night*, this is a damning exploration of the pressures debts can place on the individual. Nade is constantly living under a burden, one that – as we see by the ending of the film – cannot be scrubbed completely from her conscience.

This life, one of crushing debt, is a regular occurrence in a world still bleeding from the financial crisis, and directors Kristina Grozeva and Petar Valchanov do well to follow the extraordinary twists and turns of such a mundane happening. There are dramatic moments in *The Lesson* that feel more taut than any recent thriller, and instances of



Margita Gosheva in the bleak, hard-hitting Bulgarian film The Lesson Photo Credit: Eye On Films

injustice that sting more than those found in political dramas. This is a film that revels in the minutiae of everyday oppression, of bank transfer charges and washing up left undone; Gosheva is magnetic as Nade, imbuing the role with a near-autistic sense of justice that is steadily eroded over the film's 105 minutes, which just fly by.

The details of her personal life

are initially left largely implied (an old photograph of her dead mother; her smelling her husband to detect fumes of alcohol), and while things are brought to light in a spectacular argument between Nade and her father's new chakraloving girlfriend, on the whole the film – like Gosheva herself – keeps its cards close to its chest.

Shot in a naturalistic style, with

astute use of natural light, and a largely-bleary colour palate of muted grey tones, *The Lesson* is an audacious piece of filmmaking; it lifts the lid on the grimy world of personal debt that underpins society, forcing us to watch until uncomfortable, and further still. Grozeva and Valchanov are bringing a sense of European neorealism to the Balkans; I cannot wait to see what they do next.

Documentary corner: March of the Penguins

Ben Collier Film Writer

o, the thinking behind the segment on this final week is that penguins equal snow, ۰L and snow equals Christmas. • It's a little tenuous but, to be honest, •it's as good an excuse as any to • finally feature this film. Up there • with Disney's Chimpanzee and • Attenborough's *LIFE* television • series, March of the Penguins, a • French feature-length nature • documentary, is one of the most • famous of its kind. As the name • suggests, March of the Penguins • tells the story of the annual single-• file trek of the Antarctic Emperor • penguins towards their breeding • ground. Unlike many of their • winged relatives, penguins must • make their migrations (in this case, • over 70 miles) on foot. Morgan • Freeman narrates the journey as • the natural phenomenon unfolds, • and we are treated to classic and • memorable scenes of the penguins • protecting their soon-to-be new-• borns from the harsh cold of their



Antarctic beauty: penguins making the perilous journey in March of the Penguins. Photo Credit: March of the Penguins PR

continent.

The film is not as light-hearted as its posters and adverting may lead you to believe. For a Frenchdirected/produced story there is remarkably little romanticism or sentimentality – the audience is left to feel for the penguins through an objective lens that showcases their unique methods for survival with a professional distance. Unlike many other nature documentaries – the aforementioned *Chimpanzee*, for example, is an offender in this regard – anthropomorphism isn't a staple here. This, however, does not stop the film from being an emotive and genuinely beautiful in places. Some of the scenes that the filmmakers and cinematographers spent weeks freezing in tents to capture are

wholly awe-inspiring.

The penguins themselves are painted as almost a single organism. The extreme conditions of their environment mean that they must put the interests of one another above selfish individuality; without this comradery the penguins could not survive. In this way one begins to appreciate the razor-sharp honing these birds have undergone in order to perfect their survival tactics over a vast number of years. However, a focus on the individual is key for the narrative here and at times, drama on the individual level is the focus with the 'whole' merely providing a back-drop. Penguins practice monogamy, which entails them mating and caring for their offspring with only one other, and this aspect of caring parenthood is one of the only times the objective lens of the documentary is allowed to be lifted.

The pacing of the movie is the key to its success. As a viewer, one is easily able to lose themselves in the shot-by-shot flow of the story. An excellent rhythm is set up as we cut from group to individual, experiencing all the highs and lows of these animals' time-old expedition.

As a nature-loving biologist my opinion may be biased but I cannot praise this film and the team behind it enough. *March of the Penguins* is the first of the documentaries covered in this section which I cannot see anyone not enjoying at least to some extent.

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The top three Chistmas films that aren't Elf

've made somewhat of a faux pas this year: I peaked too fast and have already completed my annual viewing of *Elf*. It's the newest entry to the essential Christmas watch list – but it is only one of a long list of films. Let's take a look some others:

Grandma Got Run Over by a Reindeer (2000)

I'm just going to get this one out of the way. Grandma Got Run Over by a Reindeer is a straightto-video Christmas special based on a novelty song of the same name. I have now seen this film fifteen times - that's once a year since I started primary school. I personally blame early 2000s Cartoon Network - and their annual showing of the film – for its entry to this list. Best utilised in Christmases spent with younger relatives, the film should serve as enjoyable cheesy fun one late December afternoon.

Love Actually (2003)

It's a very British Christmas. Richard Curtis' story of love in the Christmas season, told through several characters, could be considered simultaneously amongst the best rom-coms and Christmas films. Each story featured in this film - with the exception of that sodding drummer kid - can be considered classics in their own right. Colin Firth and Emma Thompson's stories stand out to me but the charm here is that everyone has their own favourites.

It's a Wonderful Life (1946)

Come on you whippersnappers. It's a Wonderful Life is rightfully supposed to be the quintessential Christmas film. A worrying number of my contemporaries go against all laws of the universe and fail to watch this annually if at all! George Bailey's life story, with its highs and deep lows, is the perfect reason, during Christmas, to remember the importance of good things in life.

BEN COLLIER

Our writers' top film picks of 2015



Photo Credit: PA

- The Lobster Carol

• the only film this year that kept •me frozen in my seat until the •end. Leaving the viewer with that •feeling of uneasiness, common to •pretty much all his films, director •Yorgos Lanthimos really makes you •ponder "What is this thing we call •love?", the question Sophia Loren •sings as the credits roll. Having • seen *Dogtooth* and *Alps*, we need to • praise Lanthimos not only for the recognition he has obtained, but •also for his characteristic style that

Photo Credit: Sony Pictures

- It Follows
- Ex Machina 2. 3.
 - Mad Max: Fury Road Inside Out
 - The Martian

4.

5.

Taking the top spot, horror film It Follows has haunted me since I first saw it earlier this year. The superb yet terrifying cinematography (including some sick 360-degree pans) and ominous electronic score from video-game composer Disasterpeace, result in the best horror film this side of The Badabook. As a computer scientist, films

about artificial intelligence have a special place in my heart, and Ex Machina is easily the best yet, thanks to an intelligent script and an appropriately robotic performance from rising star Alicia Vikander (even if it was basically a TED talk about the Turing test).

With Mad Max: Fury Road, George Miller flipped the bleak, male dominated action film industry on its head. Unbelievable stunts and excellent editing were overshadowed by underlying feminist(-lite) themes and the badassery of Charlize Theron.

Inside Out provided laughs, tears, and relief from Pixar's recent lineup of awful sequels. It perfectly captured the emotional turbulence of moving school, leaving old friends behind, and the struggle to • fit in (just thinking about the film • makes me sad).

The Martian, a film as funny as it was scientifically accurate, proved after a series of disappointing films that Ridley Scott was still capable of creating a brilliant blockbuster (maybe the next Alien might • actually be good).

CALE TILFORD

- 1. 2. 3. Brooklyn
- 4. Macbeth

The Lobster was pretty much •he's preserved, distinguishing him as a bona fide auteur. The Lobster is bold, thought-provoking, and unnerving. Lanthimos fabricates a surreal world, which the audience is lured into sooner or later, left to wonder how pure and harmless a feeling love really is.

Onto Carol: you had me at Cate Blanchett, but lesbian period drama shot in 16mm? Sold. As well as being a beautiful film to watch, Rooney Mara exceeded all my expectations in her role as Therese, and I thought the chemistry between her and Blanchett was extraordinary.

One of the sweetest films I've seen this year, Brooklyn, focuses on the idea of home, through the story of Eilis (Saoirse Ronan), an Irish immigrant who moves to 1950's

Mad Max: Fury Road

In all, I would say 2015 has been

another great year for cinema. The

films I've chosen represent a mix of

those I found to have that unique

balance between entertainment

value and also technical merit.

Wild Tales

Inherent Vice

Sicario

Carol

Love

Steve Jobs

Ex Machina

The Lobster

Macbeth

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New York in search of a better life. Her first love interest, Tony (Emory Cohen) is possibly one of the most likable protagonists in recent film history. For its beautiful, unforced telling of a story so relevant even in our days, Brooklyn is definitely worth a mention.

I admit that I didn't catch every single one of Shakespeare's verses in Macbeth (the Scottish accents made it pretty hard), but Fassbender and Cotillard both delivered extremely powerful performances. I won't pretend I knew who Justin Kurzel was before *Macbeth*, but if every movie he directs is as majestic as this one, I'd like to believe that his best is yet to come.



DIEGO APARICIO

My top 3: Wild Tales in particular was the biggest surprise and had the most impact; an Argentinian black comedy film written and directed by Damián Szifron, Wild Tales is an anthology, composed of six standalone shorts united by a common theme of violence and vengeance. It produced the biggest grin I've had this year after I left the screening - it was so much fun. If Tarantino made a Latin-American film this would be it.

Sicario was beautifully shot and choreographed with a haunting soundtrack. The night vision scene and Benicio Del Toro's incredible

performance were standouts.

Mad Max: Fury Road showed us once again what makes the film medium so unique by being able to tell and world build the story through visual design and costume rather than endless exposition (plus there's a dude playing a guitar with flamethrowers in chase - what more could you want?).

Note: Special mention and shout out to films yet to be released in UK like The Revenant, Hateful Eight, Anamolisa, Son of Saul, and many more – curse you distributers!

ARNOLD DURRALIU

FELIX FILM

••		lacksquare		ullet		lacksquare	ullet
•	1.		Th	e L	obs	ter	

- The Lobster
- 2. Listen Up Philip
- 3. The Duke of Burgundy Carol
- 4.
- 5. Inherent Vice
- Wild Tales 6.
- 7. Whiplash 8.
- A Girl Walks Home Alone at Night
- 9. Inside Out
- 10. World of Tomorrow
- When I ran back through my • favourite films of the past year, the •trend that stood out immediately •was an abundance of refreshing • comedy. It's something that my • pick of the bunch, The Lobster, has •in spades. A deadpan vision of •a dystopian future in which not

finding a suitable partner results in being transformed into an animal of your choice, the films starts off at a specialised hotel where Colin Farrell's David is given 45 days to find a match after his wife leaves him. The perpetually bemused and bumbling David is a great foil for the audience as he journeys through the daily routine of his new prison; the dialogue is dry and the absurdity of the world that Lanthimos creates is played for laughs with a dark undercurrent.

 $\bullet \bullet \bullet \bullet \bullet \bullet \bullet \bullet \bullet$

• • •

As David falls in with rebels, the imagination and mischievous spirit are kept, and the film ends on a high-note reminiscent of a memorable scene from the director's breakout 2010 film Dogtooth. Rarely

Carol

The Falling

The Duke of Burgundy

A Girl Walks Home Alone

Mommy

at Night

The Tribe

Timbuktu

Tangerine

The Lobster

Foreign films dominated this

year for me. Abderrahmane

Sissako brought us Timbuktu, a

powerful exploration of growing

Islamist threats in Mali; an urgent

film at its release, the increasing

restlessness of global politics has

just made it more relevant. Ana

Lily Amirpour impressed with her

debut feature, the western Persian

45 Years

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does a film so oddball feel so fullyformed and that's what makes *The* Lobster stand out amongst a crowd of gorgeous and clever films.

Other highlights of the year included Alex Ross Perry's razorsharp portrait of a self-centred author, Listen Up Philip. The Duke of Burgundy, Peter Strickland's second straight smash, is a beguiling, tender and surprisingly funny look at a strained master-and-servant relationship in a world inhabited solely by women; the stylish monochrome vampire flick A Girl Walks...; and a pair of delightful animations in Pixar's Inside Out and World of Tomorrow, an inscrutable yet gorgeous short from the mind of the essential Don Herdzfeldt.

••••

vampire feminist horror A Girl

Walks..., while Ukrainian Myroslav

Slaboshpytskiy shocked us with his

film The Tribe - set in a school for

deaf children, the only sound was

the shocking attacks of violence.

The Lobster saw Yorgos Lanthimos

making his English-language debut,

Several directors made their

welcome return to the screen: Xavier

Dolan picked up the Jury Prize at

Cannes for his fifth film since 2009,

the heart-wrenching *Mommy*, while

British auteur Peter Strickland

mined the rich seam of 1970s film

he explored in his previous feature,

Berberian Sound Studio, in the richly

realized The Duke of Burgundy.

Andrew Haigh's long-awaited

follow up to his debut Weekend

was released: 45 Years, an evocative

retaining his jet-black humour.

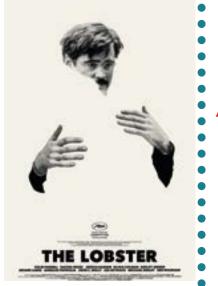


Photo Credit: Picturehouse Cinemas

MAX LEWIS-CLARKE

exploration of an aging couple, with stunning central performances.

Elsewhere, Tangerine broke new ground with its central duo of trans women smashing down barriers – the fact that it was filmed on an ullet iPhone was just by the by.

I have already spent enough words on the beauty of *Carol*, so I will not dwell on it here. Suffice to say it is one of the most ravishing,• emotionally layered films I have seen in recent years.

Speaking of Carols, Carol Morley's film The Falling is perhaps the film • that has stayed with me the longest; ever since I saw it in April I've been thinking about it, not least due to the beautiful cinematography, and haunting score from Tracey Thorn.

FRED FYLES

Hot or Not? 2015 Edition

film.felix@imperial.ac.uk

Noah Baumbach

This year saw the fêted director release not one, but two films into the cinemas. While We're Young garnered rave reviews, and Mistress America saw him teaming up with Greta Gerwig again.

Streaming Sites

Netflix has been changing the game for years, but Amazon Prime got in on the action this year. Beasts of No Nation and Chi-Raq are two critically-acclaimed upcoming films produced by streaming sites.

Cate Blanchett

Blanchett gave four critically acclaimed performances this year, including Carol and Truth. She's well on target for the Best Actress Oscar come February.

Ryan Gosling

Poor Ryan. After a string of acclaimed roles, the actor has tried to take a turn in the director's seat, writing, producing, and directing his feature Lost River. Booed at Cannes, the film completely flopped at the box office, and had overwhelmingly negative revies. Next time, eh?

Bradley Cooper

Cooper may have started the year stong, with a Best Actor nod for his role in American Sniper, but he saw out the year with a main role in Burnt, a film that was widely condemned. Peter Bradshaw, writing in The Guardian, called his charater "a fantastically tiresome prat".Ouch.

Lad films

The fact that an *Entourage* film was made is a blight on humanity. The fact it was completely panned is our redemption.

Photo Credit: Wilson Webb

1. Whiplash

- 2. Me & Earl & the Dying Girl
- 3. Inside Out
- 4. Hinterland
- 5. Inherent Vice
- 6. A Most Violent Year
- 7. Mad Max: Fury Road
- 8. Straight Outta Compton 9. Macbeth
- 10. Dope

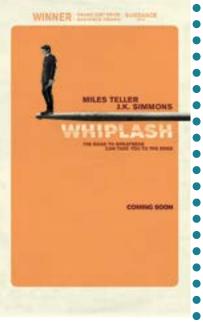
2015 in film wasn't quite the stellar run of masterpiece after masterpiece • that 2014 turned out to be, and as •a result it's felt like something of •a comedown. However, as truly •excellent films have been fewer and •far between this year, standouts •from the slew of weighty bravura •pieces and lacklustre blockbusters •have appeared all the better – and

have been all the more appreciated. These standouts came in all shapes and sizes, from the beautifully intimate and atmospheric Hinterland and the sprawling, hilariously hazy Inherent Vice, to the epic, fist-pumping sweep of Straight Outta Compton and the thick, brooding darkness of Macbeth and A Most Violent Year

There were even some decidedly mainstream films that knocked it out of the park: Inside Out is possibly Pixar's best film of the past ten years. At a time when action franchises have in essence started taking the piss (Ant-Man, Terminator: Genisys...), the latest Mad Max emerged as the most visceral and breath-taking action movie in recent memory, and a milestone in

masterful action filmmaking of The Dark Knight-like proportions.

Best of all was the kooky, hilarious, and yet genuinely touching $Me \ \mathcal{E}$ Earl & the Dying Girl, and Whiplash. It would feel like cheating to include Whiplash in this year's top ten list if it wasn't just such a damn great film - it hit UK cinemas way back in January, but nothing this year (or indeed last year) has topped it. It's a genuinely thrilling dual-character study of a boy who wants to be the best and a man who thinks he knows what it takes to be the best, with pitch-perfect performances and an ending more stunning than any ending has any right to be even the thought of it will give me chills for years to come.



TOM STEPHENS Photo Credit: Cold Open

FRIDAY 11 DECEMBER



COMING UP - SEE OUR WEBSITE AND NEWSLETTERS FOR MORE DETAILS!

Date	Event	Time	Location
Every Tuesday	Super Quiz	20:00 - 22:00	FiveSixEight
Every Tuesday	Cocktail Night	18:00 - 23:00	Metric
Every Wednesday	CSP Wednesday	19:00 - 01:00	Metric & FiveSixEight
Every Wednesday	Sports Night	19:00 onwards	Reynolds
Every Friday	PGI Friday cocktails	16:30 onwards	h-bar
Friday 11 December	Reynolds Christmas Cocktails	18:00 - 00:00	Reynolds
Friday 11 December	iPop	20:00 - 02:00	Metric & FiveSixEight



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FELIXGAMES



FELIX's top four games of 2015

Because I couldn't think of five

Undertale

In videogames, the act of killing is almost universally rewarded; yet, in reality there is no worse crime one can commit. There are many games, particularly when stealth is involved, where entirely pacifist playthroughs are possible (although this rarely beneficial to the player). Undertale gives a certain humanity to its enemies through humour and charm. It doesn't actively encourage you to spare those you encounter, but I've never felt worse murdering something digitally before.

Tobyfox's debut is a shining gem in an endless stream of unimaginative indie games and an industry obsessed by open worlds. By twisting JRPG mechanics, it's a game that feels instantly familiar

while still pushing the tired genre forward. Other than the ability to be merciful, Undertale will be remembered for its hilariously sad script and fourth-wall breaking mechanics (this is a game which could only work on PC). Even the presentation of the game, from the beautiful Earthbound-inspired graphics to the genre-spanning soundtrack, is flawless.

Undertale recognises that understanding and compassion are essential if we truly wish to resolve conflicts - a message that is all too obvious and yet so commonly ignored.

Instead of trivialising death, it makes it a core theme of the game. If Jeremy Corbyn played a single game this year, this would be it.

Photo Credit: Toby Fox

Photo Credit: Konami

Metal Gear Solid V

Metal Gear Solid franchise has always been that it relies too heavily on drawn-out cutscenes and a nonsensical plot.

largely devoid of the problems that plagued the series' past, and as a result Kojima has created arguably

his greatest game yet.

The Fulton surface-to-air recovery system introduced is probably the best innovation in a gaming this year. Take someone (or something) out non-lethally and you can attach a balloon to their back to send them to Mother Base, the central hub of your operations.

incredibly Angola-Zaire, it's

satisfying to quietly take out an entire outpost of soldiers and then have them all join your army as researchers, medics or foot soldiers. With each extra recruit, you really feel like you're making progress. This is one of the many ways the world feels incredibly reactive; each small decision you make causes a ripple, large or small. You can approach each mission (or side-

mission) in seemingly infinite ways. I can't think of a single time where I felt restricted by the tools available to me, which is often the case even in games labelled as open world • sandboxes.

The Phantom Pain is what all future open-world games should • aspire to be: responsive, lifelike, and beautifully rendered. Kojima, take a 🔎 bow.

3

Photo Credit: Nintendo

Splatoon

Nintendo created one of the greatest first-person shooters of all time when they released Metroid Prime for the GameCube in 2002. However, since then people have rarely associated Nintendo with the genre. In 2015, with Splatoon they innovate yet again, producing a third-person shooter that attempts

to redefine what a competitive shooter can be.

There is no death in Splatoon, only the sudden explosion into a pile of ink. The aim of the game is to cover as much of the map in your team's colour. So, rather than being a game about taking down the opposing team, it's more about taking control of the map. Paint a surface with your ink and you can turn into a squid

and swim through the map, vastly increasing your speed.

This is certainly a game for all ages; violence is nowhere to be seen. In the absence of blood there is nothing but paint and it's all the more fun for it. Maybe other developers should take note.

At first, the game's art style will probably remind you of an awful nineties cartoon. It's Nintendo's

weird attempt at trying to look cool, but it seems to have succeeded. Someone's even made a whole zine ● dedicated to the fashion in the game and the weird half-human halfsquid hybrids that you play as. The • soundtrack is similarly 'rad' and like all Nintendo games you'll quickly . be humming along.

The only problem is that you'll • have to buy a Wii U to play it.

Americans from misusing the term). It's miles better than both Fifa and PES, two games which have had years to evolve. Somehow, as a car you feel more like you're actually playing football. There's a large focus on positioning and strategy, and it's certainly no good to just chase the ball around. To save goals you have to perform almost impossible acrobatic maneuvers. You can

perform all sorts of tricks thanks to the rocket boosters attached to your car. You can even fly if you want, but you'll only embarrass yourself.

Developers, Psyonix, add another layer of complexity by allowing you to blow up your opponents if you ram into them hard enough. So, just when you're about to score a goal you can be temporarily taken out of the game.

The thrill of speeding from one end of the pitch to the other is unlike anything I've ever experienced in a sports game. If you thought Walcott was fast, Rocket League will blow you away. It's refreshingly fast, which often results in goals scored seconds after the game starts.

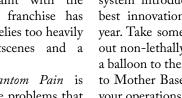
This holiday, don't ask for Fifa and put Rocket League on your wish list instead. **CALE TILFORD**

Photo Credit: Psyonix

Rocket League Rocket League is the sequel to Supersonic Acrobatic Rocket-

Powered Battle-Cars, a name which, while a bit of a mouthful, is a fairly accurate description of both games. It's essentially a football game, but with cars. Obviously, cars don't have feet so they couldn't call it that (although that doesn't stop

A major complaint with the Luckily, The Phantom Pain is



Afghanistan or Whether in



FELIX FOOD



How to build a gingerbread house... out of science

This is Imperial, and we can't just build something without thinking it through

Tessa Davey Comment Editor

re you impressed by the gingerbread towers on the right? Do you want to bake a slightly less time-consuming version of it to impress your friends and family this Christmas? Well, you can.

The design

First, you need to decide what you want to make. I suggest sketching it out and using your high school geometry skills (or CADing the design if you're taking this really seriously). Keep in mind that gingerbread expands slightly when you bake it, so leave some leeway in your design. Once you've got the shapes for all of your pieces, cut out templates, and start cooking.

The recipe

I could convert all measurements to sensible units, but instead I'm just going to give you a conversion rate: 10z=28.34g

- 16oz flour
- 1 tbsp dried ground ginger
- ¹/₂ tbsp ground cinnamon
- 60z butter or margarine
- 80z soft brown sugar
- 1 egg
- 4-6 tbsp golden syrup

The method

Place the flour and spices in a bowl with the butter and rub the butter into the flour to form a coarse crumb. Then add the sugar and combine, before adding the remaining ingredients and mashing together with your hands until it forms a dough. Start with 4tbsp of golden syrup and add more if it won't come together.

Roll out the dough to around 0.5-1cm thick on a floured surface (alternatively do this between sheets of greaseproof paper to stop it sticking), and then cut into the desired shapes. For building, precision is key, so keep it as neat as you can.

Bake on a baking tray lined with baking paper at 180°C for 6-8 minutes, or until the gingerbread is an even brown colour. Once it's out the oven, let it cool completely on a wire rack while it sets.

The science

For sturdier constructions, roll any load-bearing pieces slightly thinner, and bake them for a bit longer at a lower temperature so that they are extra stiff. After a day or so they'll soften again so that they're actually edible. The wheat starch will undergo a transition from a crystalline to a glassy state during baking and cooling – this is what



This undeniably vaguely resembles the Basilica of the Sagrada Familia (completed design). Photo Credit: Max Hunter

gives it its strength.

If the gingerbread is too soft, it may buckle under the weight of anything on top of it. Gingerbread is also much stronger under compression than in tension (I've got the data to back it up), so bear that in mind in your design.

The glue

For construction, use royal icing sugar (or a mix of normal icing sugar and powdered egg white) and a few drops of water or lemon juice to bring it into a paste. You need to be able to pipe the icing, but the stiffer it is, the better it will hold your gingerbread together. Put it in a piping bag (you can make these out of baking paper or even ziploc bags, just Google it) and you're good to go.

The construction

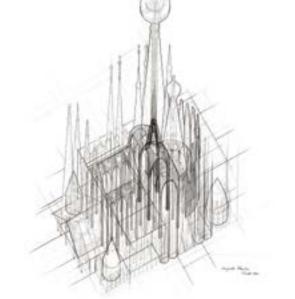
It will take at least two people to assemble your gingerbread masterpiece, depending on the The wheat starch will undergo a phase transition from a crystalline to a glassy state design – one to hold the pieces in place, and the other to pipe icing into the joint. Don't forget to use the icing to stick the gingerbread down too, or it won't be as strong. Once some pieces are in place, add more pieces that support each other, or place something to hold the gingerbread while the icing sets a bit before adding more. Try and let each layer set as long as you can before building up.

The decoration

Once you've built your masterpiece, you need to make it look extra beautiful. Simply take more icing and bejewel your gingerbread with sweets and chocolate and whatever you like. You get bonus points for integrating the decoration into the design rather than making it look like you've thrown a sweetshop at it.

The eating

This is the best part. You don't need my help.



This design may be a little too sophisticated for a first try. Photo Credit: risd.edu

FELIXWELFARE



Christmas Cheer – Have yourself a merry little Christmas!

Noor Mulheron Welfare Editor

ehold, it's Christmas time already! Soon, University shall be finished for the term, and we will all be facing the holidays. Between relatives, revision, and exhaustion from the final weeks of term, now is the time of year that can end up more stressful than enjoyable. So whatever your situation, be it visiting home or staying in London over the winter break, remember that you are allowed to take some time out for yourself. So here are some seasonal self-care ideas to get you through the holiday!

Mint candy cane hot chocolate:

Ingredients:

- 2 tablespoons cocoa powder 1-2 tablespoons of sugar (to taste)
- ~1 cup of milk/soy milk/almond milk
- 2-3 drops peppermint essential oil 1 candy cane
- Optional:
- Whipped cream
- Crushed candy cane

Pour a little milk, the cocoa and sugar into a saucepan and mix to a paste. Then add the rest of the milk and heat it over the saucepan until sufficiently hot. Add a few drops of peppermint essential oil. Stir the mixture and then pour into your mug of choice.

If you like, you can now add whipped cream to the top and sprinkle crushed candy cane on top. Finally, stir with the candy cane and enjoy!

Orange pomander decoration:

2 oranges 1 handful of cloves 6-8 rolls of cinnamon 1 red ribbon 1 needle some thread

Take one orange and cut it into slices. Bake these in the oven on a low heat until they dry out. Meanwhile, tie the ribbon firmly around the



A warm hot chocolate makes all the difference! Photo Credit: Flickr

second orange, so that you can hang the orange from the ribbon. Then poke the cinnamon end-first into the orange – if piercing the skin is hard, poke a hole with the needle first.

Take the needle and thread it, making sure to loop the thread several times so it is strong enough to hang the orange and spices on it. Then alternate the dried orange slices with rolls of cinnamon, stringing them on the thread. Tie off the thread in a loop at the top and then tie the other end of the thread to the ribbon. Finally, hang the orange by the loop on the thread.

DIY Christmas tree:

1 piece of card (A4 or A3 depending on how large you want your 'tree') Several sheets of tissue paper in green, brown, red and yellow (and any other desired colours) 1 hole-punch (if desired) Scissors Glue 1 string of fairy lights Sellotape

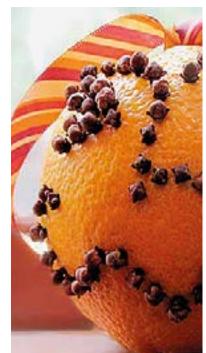
First, draw the outline of a Christmas tree on your card remember to include the trunk and **Christmas to me.** Photo Credit: Flickr

base of the tree! Now cut out the tree and either hole-punch or cut holes in the tree where you want the lights to go. Now take the tissue paper and scrunch it up into small balls. Glue these onto the tree to fill in the main section of the tree, leaving some gaps for any other colours you want to put in to represent baubles, and leaving out the very top of the tree. Use scrunched-up brown tissue paper for the trunk, and use red paper for the base/pot for your tree. Finally, take one scrunched ball of yellow paper and stick it to the very top to represent the star. Fill in any spaces you left with baubles. Make sure to avoid sticking paper directly over any holes you left for the fairy lights! Wait for it to dry.

Now you can push the LED lights through the holes in the tree so they poke out amongst the tissue paper. If you need to, use sellotape to secure the lights in place on the back. Now you can prop up the tree, turn on the lights, and you have a small DIY Christmas tree!

Mobius strip paper chains:

Lots of coloured paper (red, green, gold and silver is suggested as seasonal) Scissors Glue



Orange pomanders smell like



"Oh Christmas tree, you stand in verdant beauty!" Photo Credit: Flickr

Cut your paper into strips. Then take one strip and twist it once, before securing the ends together to form a Mobius strip. Take the next desired colour strip and do the same, but link this Mobius strip with the first. Continue to make a paper chain that is decorative and a bit geeky (like all the best things!).

Fir tree diffuser:

1 packet reed diffuser sticks 1 small bottle ¹/₄ cup water ¼ cup alcohol/vodka 20-25 drops fir tree/pine essential oil

Mix the water, vodka and essential oil together, and pour into the small bottle. Then rest the diffuser sticks in the bottle. The scent should wick up the reeds and diffuse into and around the room. Special tip: if you turn the reeds upside down regularly, the scent keeps stronger and fresher.

I hope that you remember to look after yourselves as well as your other commitments this holiday.

Christmas time can be difficult, whether or not you are with family. So remember, have a fun time and treat yourself to some TLC!

felix@imperial.ac.uk Mental health

helplines and resources

If you are concerned about your own mental health or that of a loved one, there are people out there you can talk to who can give you advice, or will be there to listen.

> Helplines and Online Resources

If you are distressed and need someone to talk to:

Samaritans Phone: 08457 90 90 90 (24 hour helpline) www.samaritans.org.uk

For issues with anxiety:

Anxiety UK Phone: 08444 775 774 (Mon-Fri 09:30-17:30) www.anxietyuk.org.uk

No Panic Phone: 0808 800 2222 (Daily 10:00-22:00) www.nopanic.org.uk

For eating disorders:

Beat

Phone: 0845 634 1414 (Mon-Thurs 13:30-16:30) www.b-eat.co.uk

For addiction:

Alcoholics Anonymous Phone: 0845 769 7555 (24 hour helpline)

Narcotics Anonymous Phone: 0300 999 1212 (Daily 10:00-midnight) www.ukna.org

College Resources Student Counselling Service Phone: 020 7594 9637 Email: counselling@ic.ac.uk

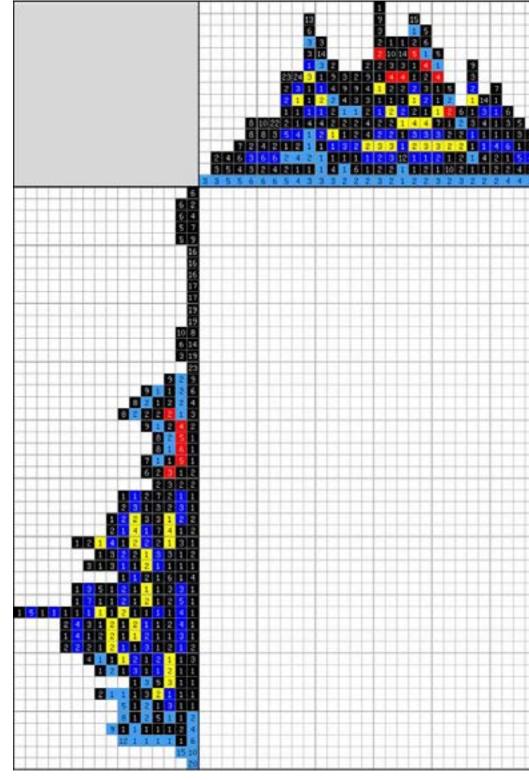
Imperial College Health Centre

Phone: 020 7584 6301 Email: healthcentre@ic.ac.uk

You can also go to your academic or personal tutor regarding pastoral issues, especially if you think your mental health might be affecting your academic performance.

fsudoku@imperial.ac.uk

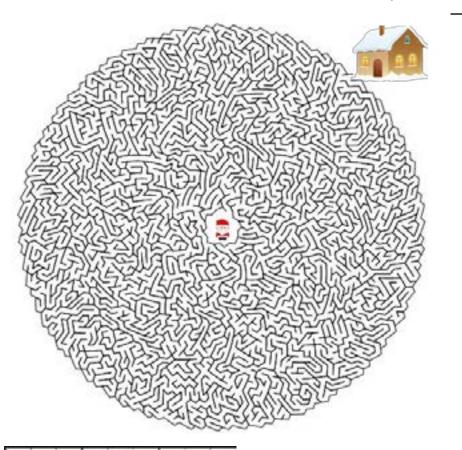




Across

- 1) Physicist with the reputation of being 3 (7)
- 4) Keeping milk safe since 1864 (7)
- 6) For bigamists who are afraid of commitment (8)
- 8) Kensington has one, Bill Clinton used to have one (4)
- 9) Gamete, tasty if fowl (4)
- 11) One of three traditional Japanese theatre styles (3)
- 13) Sumerian city or not knowing quite what to say (2)
- 15) Bi-winning follows in father's footsteps, as infantryman (7)
- 16) The root of all evil (5)
- 18) K, P, C, O, F, _, S (5)
- 20) News agency, with a financial slant (7)
- 21) Chinese/Singaporean Jet (2)
- 22) The Old ____: One's mother country or irritating man (3)
- 23) To defend against plagiarism, a paper author will do this (4)
- 25) Eastern European Chicken City (4)
- 26) Spicy Chinese cuisine (8)
- 27) Extremly important German mathematician, also female (7)

28) Substance favourite of students, often imbibed, never drunk (7)



				1			1	
5	1			-	8			
	2	3	7					
				5			1	
8			9	3	1			4
Ì.	9	6		8		5		
			8			1		
9			8 5			8	2 9	
	5			6			9	

Email your solutions to *fsudoku@imperial. ac.uk* before midday on Wednesday! About the solutions for the last week, we lost them. Just kidding, if you really want to see them, send us an email and we'll show you.

1	1	2				3	4				5	
			Ì									
				6					7	1	-	
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			26									
27		-					28	10-1			-	

FUCWIT

Solo Et	fforts	
1^{st}	Nicholas Sim	109
2 nd	Cherry Kwok	104
3 rd	Greg Poyser	42
4^{th}	Ayojedi 28	
$=5^{th}$	Jan Xu	13
$=5^{th}$	Sach Patel	13
6 th	Harry Secrett	10
7^{th}	Joshua Wan	8
8^{th}	Ho Chin 7.5	
$=9^{th}$	Grace Chin	3
$=9^{th}$	Jeremy Ong	3

Groups

	Groups		
S	1 st]	Pufuletzi	54
0	2 nd	CP Fanclub	51
	3 rd	Gap Yahhhh	44.5
⊒.	4 th]	Parmesan	9.5
0			
Ξ	Points A	vailable	16
ns	Points A Crosswor		16 5
su			
SU	Crosswor		5
SU	Crosswor Sudoku Maze		5 2

Down

2) Metallic element named for Swedish town (7)3) Aged resident of Lapland has two lists, one entitled...(7)

- 5) Hindi's counterpart (4)
- 7) 8 down's antonym (8)
- 8) Name of medical department for elderly (9)
- 10) Russian creator of famous regular table (9)
- 12) You can't be Bonnie without...(5)

14) Politicians and horses equally fond of these (8) 17) Trusted authority on film, sadly died of thyroid cancer (5)

- 18) Sounds like: Postman Pat's cat+Routine household task (7)
- 19) Element used in semiconductors (7)
- 24) Shakespearian anti-hero, probably wouldn't visit Morocco (4)

Crossword by Mr. Nice Gaius

hangman@imperial.ac.uk

FELIXHANGMAN

NEWS WITHOUT THE NEWS





TRUMP FORCED TO APOLOGISE FOR CALLING KATIE HOPKINS "RESPECTED COLUMNIST"

"Culprit behind the DDoS attack still at large"

Π



This week you give your grandma your old iPod to listen to; however, a few days later you remember you forgot to take all your music off and when you visit next, your grandma is telling you that she just fucked your bitch in some gucci flip flops.



This week you realise you will probably have to do your looking forward to christmas share of the cleaning soon, as - the baubles, the tree, the the mould you left on that turkey, the christmas pudding plate has become sentient. the star - there really is no Eventually you name it better time to stick things up Jeremy and feed it your your ass. leftovers.



This week you are really



HOROSCOPES

This week at your course's Christmas party your lecturer really pulls through and brings a Christmas cannabis cigarette. He does get a bit too touchy when he's high though.



Π

CAPRICORN

This week you discover that Kendrick Lamar is playing Hyde Park next summer so you send an invite to him for your after exams party; however, you don't expect his whole production crew to come and now you're smuggling cocaine in every orifice.



This week you are Donald Trump. Sorry about that.



VIRG

This week in an attempt to not turn on your house's heating, you put all of your jumpers on and go to college. Unfortunately, your appearance looks like you're concealing something and you're tackled on the tube. You submit your coursework late.



This week you remember that Christmas is the time for sharing, goodwill and general generosity of spirit. Bless you horoscopes writer, we love you.



that your secret santa gift will be appreciated and you wrap it up immaculately; however, you accidentally swap the packages and you give your Mum the Assdestroyer-3000 with desensitising lube.



This week you really hope This week you are invited to go ice skating; however, your eyes glaze over and you remember being escorted off the ice last time in the Eden Project for endangering other customers. You never did forgive the staff. Yes ok this did actually happen to me.



CORPIC

This week you decide to Unfortunately, when you to avoid having to work. bring it in, its protuding Unfortunately, this backfires wires frighten your lecturers, and you are arrested. You get invited to the White House, and live out your life happily in Qatar.



SAGITTARIUS

This week you DDoS #hackahairdryer. attack the college's network when you realise the only thing you had to attend today was Mech Eng life drawing. You can't hack your way out of that shit.

FELIX SPORT

sport.felix@imperial.ac.uk

Hertfordshire Hurricanes beat Imperial

Panukorn Taleongpong Writer

he Immortals travelled to Hertfordshire for their penultimate game this calendar year against the Hurricanes. After suffering a defeat against this very team the previous weekend, the Immortals were desperate to turn their season around, but it wasn't enough. The game ended with a disappointing result of 37-0 to the Hurricanes.

The first quarter started out strong as the defence took to the field. Run and pass plays were shut down effectively, and with the help of multiple false starts from the opposing team the game was looking positive. Offence also came out strong, with Emanuel 'is going fishing' Olagbaju bulldozing through their defensive lines. However, our recurring issue of pass protection resulted in a couple of sacks on our quarterback. The second quarter was a tough time for the offensive team, as we weren't able to earn many much-needed first downs to advance downfield. The defence nevertheless were firing,



Are they queuing? Photo Credit: Imperial Immortals

with Rayane 'tie-red' Jackson flying all over the field making massive tackles, supported by the rest of the front seven flowing heavy to the ball and our defensive backs being able to stop catches downfield. With one minute left in the first half, Emanuel Olagbaju once again bulleted through their defensive lines, gaining significant yards. The second half seemed like a different game for the offence overall. With the help of our offensive linemen, we were able to open up a gap for our running back, Emanuel, which then proceeded to tear through their defense. At one point, he was dragging one of the Hurricane's players with him as he was sprinting downfield – a

nightmarish flashback to training for 'Spewy' Will Coidan. Reese 'Killem' also turned on his wheels and sprinted downfield with the ball as if he were, for some reason, lighter than he was a few days ago. A special mention to David 'reckons he can truck Spewy' Rovick, coming on for the first time this season as our quarterback. Defensively, we The first quarter started strong as the defence took towards the field

were consistent and executed our assignments really well.

Yet another disappointing day for the Immortals, however, this season has not ended yet, and with the uncertainty of the premiership league this year, it is definitely not too late to turn our season around.

We would like to thank everyone on our sideline who came down to support us at Hertfordshire and we hope they return this Sunday when we face the newly-promoted Kingston Cougars on their grounds.

Basketball Girls Can

Imperial smashed East London 107-20 last week

Alina Walch and Danielle Pettis Writers

n the middle of #ImperialGirlsCan week, we made our way to Heston Sports Centre last Wednesday to face East London. Having lost against them by very few points in our first game, we were all excited and motivated to win this match!

Upon receiving our new ImperialGirlsCan warm-up shirts, we witnessed our Imperial Men's 2^{nd} basketball team, who are defending the 1^{st} rank in their division, confidently beat West London. Then it was time for us to compete.

East London came to Heston Sports Centre with a reduced squad, and we used the advantages that this gave us within the first few seconds of starting the match. We started with a 14-0 run in the first few minutes of the game – this gave us great momentum to execute our game strategy! All game we kept up defensive pressure, rotated all our players regularly and ended up finishing the first half with a lead of 44-11.

The second half continued just as successfully: we started with a 12-0 run in the first three minutes, and the score kept going up as the girls from East London became more and more tired. Just seconds before the end of the game the score was 99-20, but then Kylie (eight points) finished with a buzzer beater and got us into three digits!

As if this wasn't enough reason to celebrate, we also showed a great team performance – five of our eleven girls scored double-digits: Olga (22), Danielle (21), Alina (15), Sophia (13) and Jenny (10). All game we kept up defensive pressure and rotated all our players regularly

With this win we're finishing the calendar year as 2^{nd} place in division 1A, a great position to start into the second half of the season. But not only the Women's basketball team had an excellent first half of



The t-shirts swung the match. Potentially. Photo Credit: Imperial Women's Basketball

the season: Our undefeated Men's 1st team and the Men's 2nd team are both top in their league and have high ambitions to get promoted.

So keep your fingers crossed, and stop by some time to see our three teams compete in Ethos and Heston next term!