



Felix

The Student Newspaper of Imperial College London



EDITORIAL

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Felix Office
Beit Quad, Prince Consort
Road
London, SW7 2BB

Tel: 020 79548072
Email: felix@ic.ac.uk

felixonline.co.uk
@feliximperial

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New Year, New Me

Andy Djaba – Felix Editor



HAPPY NEW YEAR! For those of you that have the misfortune of actually reading this, I hope you've missed me as much as I've missed you. You won't believe what time I'm writing this editorial. It's not even 10pm. New year, new me, for real! One of my New Year's Resolutions was to become more organised and not be so stressed out on a Thursday night and I'm succeeding so far. Let's see how long this lasts...

I'm not usually one to write New Year's Resolutions but I was in a reflective mood on New Year's Eve. Looking back at my 2018, I'm pretty sure I flopped all the resolutions I had at the start of the year. 2019 will be different.

During the Christmas break, I watched a YouTube tutorial titled, "How to write an editorial". As you can probably tell, the video was useless. It started with a warning about the importance of a good editorial in establishing early credibility as an editor of a publication. Too late for that at this stage! Anyway, the 'proper way' of writing an editorial is dull and I much

prefer rambling until I hit a page. This editorial has almost become a personal diary for me, where I can reflect on my week and get the inner workings of my mind down on paper. In fact, due to the fact I can't count, we almost went without an editorial this week (I'm not sure if there are rules against this). To be perfectly honest, I'm not sure what the rules are. They seem to just leave me in the basement and let me get on with it.

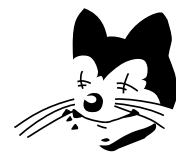
This week's issue sees Deputy Editor, Joanna, take control of the News section while I continue my assault on the Music

section. The News article highlighting the potential impending crisis in Higher Education is a must-read! My Music article is decent too if you happen to flick to page 8.

As usual, the Arts section continues to go from strength to strength. This week, there's five pages of #content. I'm struggling to choose my section of the week. (I'm also struggling to fill the space in this editorial, but that's another issue). I'm in two minds. On the one hand, the Arts section has the most pages and the Arts Editors' wholesomeness warms my heart

every Wednesday. On the other hand, I wrote a Music article so obviously I'm that way inclined. In the interest of fairness, I'm going to go against my bias and give Section of the week to the News section. Joanna's hard-hitting journalism takes the W this week. Congrats!

This editorial has been a real struggle. If, for some reason, you're still reading, please don't let this deter you from continuing to read the paper. I promise we have an excellent issue for you this week. In fact, I have very high hopes for the paper this term. Everybody knows what they're doing now, my early teething problems have all been worked out and there promises to be some very interesting stories on the horizon. This term, *Felix* is all about cultural enrichment; we will be showing you how to get to the bag all throughout 2019. Ok, I've rambled enough. See you next week.



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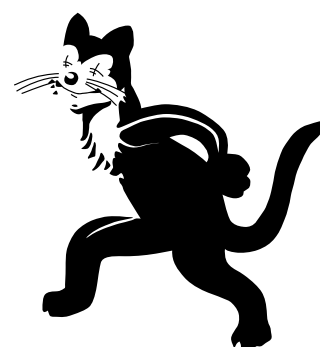
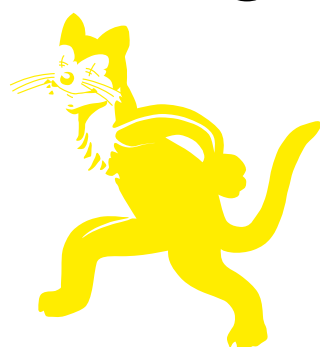
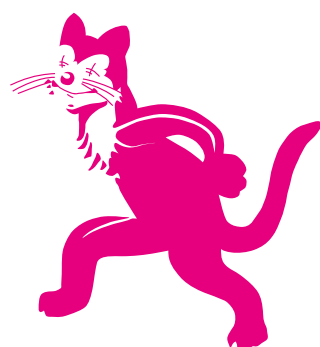
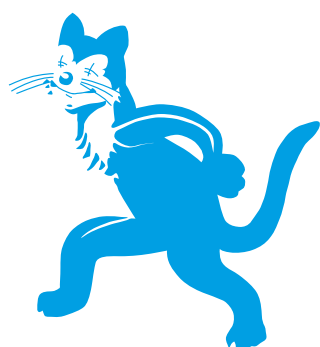
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NEWS

news.felix@imperial.ac.uk

President's pay protected as debts double

NEWS

Joanna Wormald
Deputy Editor

Universities risk a credit crunch in bid to compete for students

Imperial President Alice Gast has been named as one of the highest paid university heads in the country. The disclosure came shortly before it was revealed that Imperial has more than doubled its borrowing, giving it the largest debt of any British university.

Professor Gast receives a salary of £433,000, according to the College's latest remuneration declaration, and reported in the *Financial Times* last month. She also collects deferred compensation of \$375,000 (just over £294,000) each year in her capacity as director of multinational energy

company Chevron, in addition to \$10,000 from the Singapore Academic Research Council, and more than £9,000 from the UK Research and Innovation Board. This latter amount was donated to the College, which claims to have received £50,000 in donations from Professor Gast in the past financial year.

The disclosures included more detail than is required by regulatory standards. "Transparency is welcome," Professor Gast said.

"I'm surprised by all the focus on money. I do my job because I'm passionate about it, she added.

Universities have recently come under fire for excessive vice-chancellor pay, sparked by the news that the former vice-chancellor of Bath University, Dame Glynis Breakwell, received a salary of £479,000. Imperial's remuneration committee, which approved Professor Gast's salary, justified the amount, saying it was "appropriate given the

size, profile, and impact of the work of the College".

On top of her annual income, Professor Gast has an official residence on Queen's Gate worth £120,000 each year. As *Felix* has previously revealed, Professor Gast's expenses are also among the highest in the country. In the past year, Professor Gast claimed almost £44,000 — more than the median salary for Imperial employees. Most of these expenses related to overseas travel, with the remainder claimed for taxis, gifts, and hospitality. The average expenses claim for Russell Group vice-chancellors over the same period was less than £10,000.

"Transparency is welcome"

At the same time, Imperial more than doubled its borrowing, taking it from £207 million in 2015/16 to £471 million in 2016/17. This means

the College has the largest loans of all higher education institutions in the country, according to a *Times* report using data from the Higher Education Statistics Agency.

"I'm surprised by all the focus on money"

Some of the money was used to fund the College's expansion developments in White City. Following the opening of the Molecular Sciences Research Hub last autumn, *Felix* noted a series of complaints from members of the Department of Chemistry, which is now based at the White City campus. The emerging problems included two floors of the building being incomplete because "the whole project overran", and facilities not working, in part because the building had been designed to a 'one size fits all' specification, resulting in labs requiring modifications.

"I do my job because I'm passionate about it"

The university sector now has debts totalling £10.8 billion. Higher education faces "unprecedented uncertainty" in the coming years, with Brexit and demographic changes threatening a drop in student numbers, and potential changes to tuition fees, which represent most universities' main source of income. Numbers of EU students at Russell



Professor Gast is amongst the highest paid University presidents // Imperial College London

Group universities have dropped by 3% this year. Masters' degrees numbers have decreased by 5% and there has been a fall of 9% in terms of PhD students.

"Higher education faces 'unprecedented uncertainty' in the coming years"

Higher Education Policy Institute director, Nick Hillman said that "too many institutions are borrowing too much" and warned that some universities may face a "credit

crunch" this year. Head of the Office for Students, Sir Michael Barber has stated that the body will not use public funds to provide bailouts for universities facing bankruptcy.

Financial pressure was cited as one of the reasons that universities were reluctant to continue with the current pensions system, which led to industrial action disrupting education across the country. As *Felix* has previously revealed, the College admitted to representatives of the University and College Union that it could afford to maintain its pensions contributions but had decided against doing so.

The ten biggest borrowers

Bank loans and external borrowing for the past two years



Source: Higher Education Statistics Agency

The ten biggest borrowers // Higher Education Statistics Agency

NEWS

news.felix@imperial.ac.uk

Bright Network Society of the Year Awards 2018

NEWS

Kathryn Jaitly
Energy Journal

Energy Journal in Top Three Societies for Innovation

Imperial's Energy Journal Team were amongst teams from universities across the country to be

nominated for the Bright Network Society of the Year Awards.

"They were shortlisted due to their concept for a cross-university collaboration"



From L-R: Ayrton Bourn, Irene Escobar, Kathryn Jaitly and Gabriel Yoong // Energy Journal

The Energy Journal was shortlisted in the Innovation category due to their unique concept for a cross-university collaboration, their use of technology for publication and advertising, and their ambitious plans for future

growth. Other award categories included Diversity and Representation, Impact on Campus and Community Outreach. Societies from across the UK were invited to the awards ceremony, held in the Rumpus Room on the

South Bank.

The Energy Journal is a biannual publication about current affairs in the energy industry, built by a collaborative cross-university team from Imperial College, London School of Economics

and University College London.

Want to learn more? Read our latest edition: energyjournalonline.wordpress.com



Pension deficit down but doubts remain

NEWS

Joanna Wormald
Deputy Editor

The university pension deficit has more than halved since 2017, according to a report released last week. A phased increase in employee contributions is due to begin in April. The news coincides with the beginning of a

consultation to determine how much financial risk universities are willing to take on, as well as the views of lecturers and other staff.

The Universities Superannuation Scheme (USS) to which most staff belong last year claimed to be operating with a £7.5 billion deficit — a figure disputed by Universities UK (UUK), which represents employers. As of March 2018, the deficit has been valued at £3.6 billion, following bet-

ter-than-expected returns on the Scheme's assets and investments.

The 2018 valuation takes into consideration some of the recommendations of the Joint Expert Panel (JEP), which was set up last year and tasked with reviewing the 2017 valuation as part of a deal to resolve industrial action. The Panel returned a series of proposed changes, overwhelmingly supported by UUK members.

USS has indicated it is

prepared to accept two of the JEP's six proposed adjustments but claims that implementing the remaining adjustments would pose too much risk, even if additional contingency support were to be introduced. In December Dennis Leech, Emeritus Professor of Economics at the University of Warwick, reported that attendees of a USS Institutions meeting were told that adopting all of the JEP's proposals would create a surplus of £0.5

billion and allow contribution rates to drop below the current level of 26%

of an employee's salary. As things stand, contributions will be gradually increased to 36.6% by April 2020.

JEP Proposals:

Accepted:

- Increasing the reliance at 20 years from £10bn.
- Reducing the deficit recovery contributions (by allowing for investment out-performance or increasing the length of the recovery period).

Rejected:

- Increasing the reliance at 20 years above £10bn in real terms.
- Deferring when de-risking starts.
- Smoothing contributions over future valuation cycles.
- Allowing for out-performance in the recovery plan.

COMMENT

comment.felix@imperial.ac.uk



Positive Peace

Comment writer **Fatima Ali** discusses the importance of achieving longstanding peace and the methods by which to achieve it.

COMMENT

Fatima Ali

Comment Writer

Peace is something you give, not something you ask others to give you.” This is a particularly poignant quote shared by Hyppolite Ntigurirwa when describing the harrowing experiences of growing up in the middle of the Rwandan genocide. During the United Nations Peace Summit of Emerging Leaders 2018, which took place in Bangkok from November 28-30th, I was able to hear the innumerable accounts of incredible struggle and bravery from both the speakers and delegates.

I have been avidly involved in social justice action and health-peace advocacy whilst being a part of, and now President of, the organisation Students for Global Health. When Imperial Business School publicised this opportunity to represent Imperial at



At the Lectern // Fatima Ali

the summit, I knew it would be an enriching experience culturally, socially, academically and personally.

The summit made clear to me that the greatest challenges we face, in our increasingly complex and uncertain world, all stem from the unabated aspiration for peace. Issues that challenge peace should be a concern for all – particularly in our globalised

world of unprecedented communication, interconnectedness and migration. The threats to peace also come from the inequality, disenfranchisement and marginalisation suffered by vulnerable groups, as well as the rejection and ignorance of other cultures, together with their traditions and beliefs.

It is imperative to understand that although peace is the absence of

for the world.

Positive peace takes longer to achieve as it recognises the time needed for further analysis of ingrained structural and cultural matters. Cultural understanding emerges as a vital factor in achieving lasting positive peace, and hence is a vital foundation for achieving equitable progress and social cohesion in regards

“Special thanks to Imperial College Business School for providing me with this opportunity”

to refugees and migrants. During the summit, Kya Kim, the director of the Peace Mask Project, spoke about the successes possible in achieving

peace through art, cross-cultural dialogue, workshops and exhibitions to create a shared vision for peace. Expressing oneself through art and creation has proven to be an essential tool in conflict reconciliation, as art is rooted in culture and encourages the deepest level of human experience.

Not only is art and cultural awareness understood as a restorative means for healing the scars of war but can be beneficial for any marginalised communities or individuals wanting to reconnect with their identities. The success of Peace Masks, and cultural groups alike, is a beautiful reminder that the fate of humanity depends on fostering appreciation for diversity and paving the way for meaningful mutual prosperity.

Ultimately, we all should endeavour to acquire true knowledge for our overall betterment and for universal welfare, with a particular focus on issues that threaten peace in today’s global community.



Believing in students as agents of change // Fatima Ali



Beautiful Bangkok // Fatima Ali

SCIENCE

science.felix@imperial.ac.uk

Getting under the skin: a new hope for cancer treatment

SCIENCE

Maya Kaushik
Science Writer

Cutaneous T-cell lymphoma (CTCL) is a rare cancer of the skin, which occurs when T cells, a type of white blood cell in the lymphatic system, grow out of control within the skin.

This is often initially mistaken for other skin conditions like psoriasis, dermatitis or eczema, as it presents as red, scaly patches, or itchy plaques on the skin.

Advanced stages of the disease involve the lymph nodes and internal organs. Whilst treatable, CTCL is generally incurable, and current systemic therapies (drugs which spread throughout the body)

rarely provide reliable responses in patients.

Some CTCL tumour cells express a cell

“ADCs are intended to selectively target tumour cells and spare healthy cells”

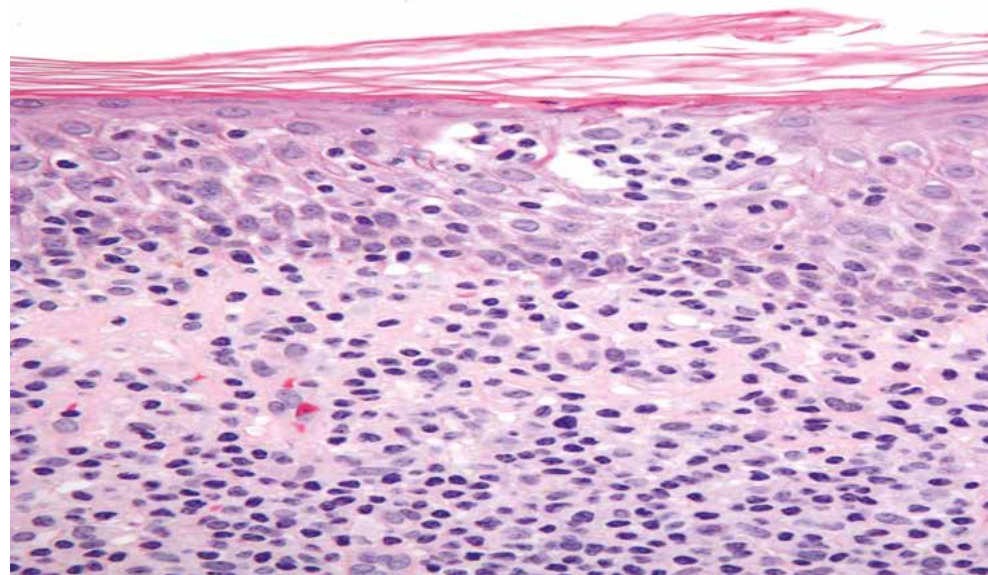
membrane protein called CD30, a tumour marker that can be expressed in this disease as well as in other lymphomas, such as Hodgkin lymphoma and anaplastic large cell lymphoma.

A new drug has recently emerged in the cancer therapy market, known as an antibody-drug conjugate (ADC). Unlike

traditional chemotherapy drugs, ADCs are intended to selectively target tumour cells and spare healthy cells by targeting markers expressed on tumour cells, such as CD30.

“ADCs offer significant hope for patients affected by CTCL”

ADCs generally comprise of an antibody designed to target the specific tumour marker, which is attached via a soluble peptide linker to a cytotoxic drug. Only when the drug reaches the cell expressing the marker



Cutaneous T-cell lymphoma under very high magnitude // Wikimedia

in question will the drug be released, killing the tumour cell.

In 2017 a clinical trial looking at an ADC that targeted CD30-positive cells in CTCL showed exciting results.

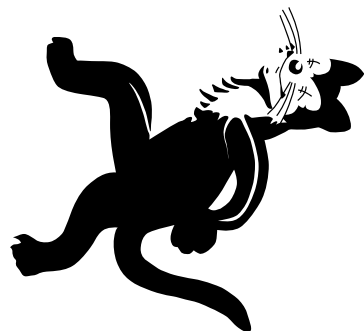
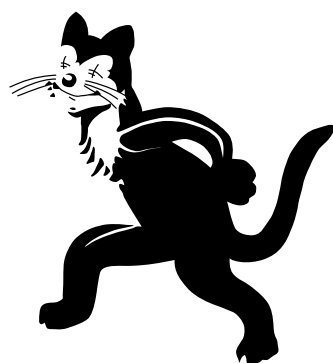
The main endpoint of the trial, which assessed

patients with a reduction in tumour size over a period of four months, showed that this drug was four and a half times better at doing so than the standard choice of drug by physicians.

This drug was approved for use in the EU one year

ago, and offers significant hope for patients affected by this disease, which causes significant disfigurement and adversely affects the quality of life of its patients.

Want to be on the *Felix* team this year?



***Felix* is recruiting new section editors and copy editors for this year!**

If you've enjoyed reading the paper, and want to help create it each week, apply to join the team! All training is provided, as well as weekly cake, so come and join us!

If you're interested, please email felix@ic.ac.uk

A power shift?

The digital transformation in the oil industry

TECH

Sharada Joshi

Energy Journal

Once upon a time, around 30 years ago, the oil industry was at the forefront of technological innovation, pushing boundaries with creations borne out of necessity, such as digital well logs, electrical submersible pumps and 3D seismic imaging tools, which use sound waves to create a 3D image of geological formations. In years following, the focus shifted. As oil prices skyrocketed in 2011, the aim became maximizing production and, in relative terms, technology took a backseat. However, with oil prices currently at \$72/barrel, the narrative has shifted again. The players in this tumultuous market have started looking to new technologies, driven by the need to become more efficient in order to remain profitable. But as companies embark on this digital transformation, a natural question emerges: How will this affect the people working there? Is power being transferred from the people to the latest technology?

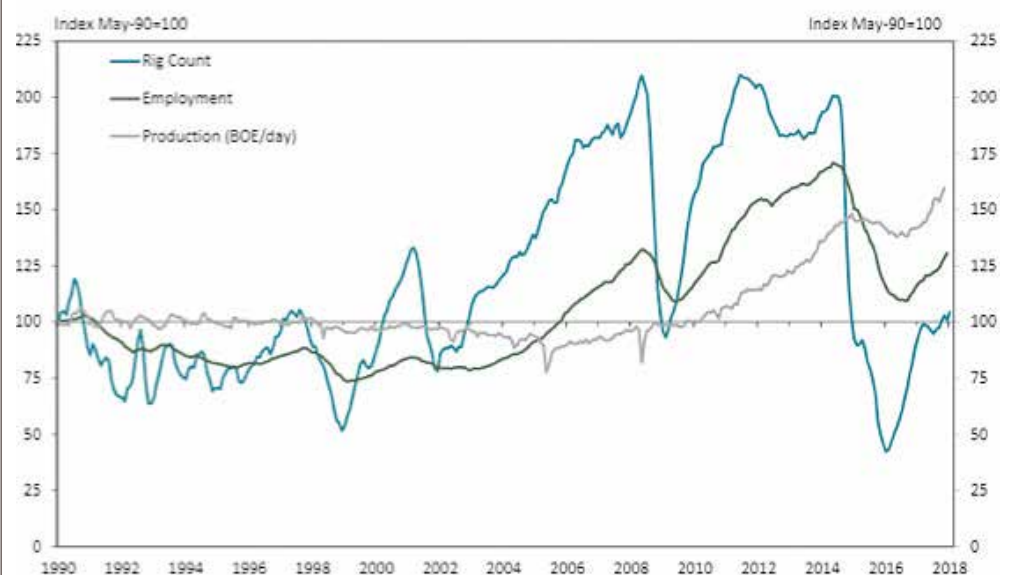
An example of the industry's latest endeavour to embrace technology is BP's partnership with Beyond Limits, an American artificial intelligence company based in Los Angeles. The aim is to utilise cognitive artificial intelligence (AI), a system that uses models to simulate human reasoning when faced with complex problems by 'learning' how geologists

and petroleum engineers think; it then mimics their approach when faced with challenges. The benefits are huge – AI can catalogue unused ideas from discussions between engineers, it can bring up relevant suggestions when a problem needs to be solved quickly and, because it has been trained by experts (who will at some point retire), it can digitally store their knowledge and expertise for the benefit of future generations. Does this mean that fewer engineers will be needed in the upstream sector in the future? According to the Journal of Petroleum Technology, "many analysts do not see the mass replacement of human engineering talent on the immediate horizon." This perhaps implies that although the transfer of power from people to technology is not happening right now, it will inevitably become the reality of the future. The graph shows that, post-oil price collapse, the number of oil rigs has increased substantially again, a trend not entirely echoed by industry employment figures. Meanwhile, the production figures show a near-steady increase. Thus, a conclusion that one can perhaps draw from this is that digital transformation has already had some impact in terms of productivity and efficiency on the oil industry; clearly, higher production levels are being achieved by a smaller workforce. However, the CEO of Beyond Limits puts forward a different perspective: "We are creating a collaboration between man and machine", he says, "to amplify human talent". Perhaps one could

then view this shift not as power to the people, but as the sharing of power between people and technology.

"Is power being transferred from the people to the latest technology?"

Anadarko is another company undergoing a technological transformation; it now employs almost 20 data scientists in its Advanced Analytics and Emerging Technologies group. Other members include geoscience and engineering experts. The advantage of such a collaboration is immediately obvious – it increases knowledge across all disciplines and promotes creativity. The team aims to test new concepts and accelerate technological development to enhance "competitive advantage in the exploration and production space". An example of such a project is the integrated production surveillance and optimisation platform, IPSO. IPSO, which breaks down and filters data like pressure and temperature changes in wells into digestible and easy-to-monitor bits, was an unprecedented success when it was deployed for use in the Gulf of Mexico; it was fully operational 97% of the time in the first 6 months. To continue such breakthroughs, more data scientists are



The trend in industry employment and rig count in the USA // *KansasCityFed*

needed, yet the Journal of Petroleum Technology comments that "the upstream industry has openly acknowledged in recent years that it is not the most attractive sector for data scientists". Thus, it seems that emerging technologies can play a role in encouraging such recruitment and multi-disciplinary teamwork, a sure sign that power still remains with the people.

"Where this power shift leads the oil industry, only time will tell"

Another major driving force for these investments in technology is safety. An article in Chemical Report reads: "Artificial intelligence can eliminate the health and safety concerns by helping the operators to control critical tasks through automated systems without the need for human presence". Obviously, getting people off

platforms has many more benefits than just eliminating health and safety concerns; labour costs are drastically reduced and other costs such as helicopter use are eliminated. To reduce these 'inefficiencies', technologies such as the Iron Roughneck have been rolled out. This connects drill pipe segments, a dangerous and repetitive task previously done by hand. Drones can collect data in five days; it takes rope-access technicians about eight weeks to undertake the same amount of work. So, what happens to the workers when these powers are transferred from people to automation? It's estimated that automated drilling rigs could reduce the workforce on a rig by up to 40% in the future. However Chris Robart, Ambyint's president of US Operations takes a different view: "We are freeing up individuals to go do other things, like think about new technology, troubleshoot failed equipment, deal with workovers, or new well designs." Clearly, these new tasks require a com-

pletely different skillset to the labour-intensive jobs that AI and automation are replacing.

From Iron roughnecks to drones to the applications of AI, the oil industry has certainly embraced this era of technology, focusing on increasing efficiency and improving safety. This additional power to technology though, comes with additional costs to the people of the workforce. For the foreseeable future at least, oil rigs will not all become fully automated. But we are witnessing the birth of shared power, as machines become increasingly better at tasks humans were employed to do. Where this power shift leads the oil industry, only time will tell.

Taken from the 5th Edition of the Energy Journal: Power to the People. The Energy Journal is a biannual publication about current affairs in the energy industry, written by Imperial College, LSE and UCL. Want to read more? Go to: energyjournalonline.wordpress.com

MUSIC

music.felix@imperial.ac.uk

Andy's Top Ten Most Anticipated Albums of 2019

Editor-in-Chief, **Andy Djaba**, continues his assault on the Music section

MUSIC

Andy Djaba
Editor-in-Chief

Ordinarily I would kick off the year writing about my top ten most anticipated hip-hop albums. However, as I've mentioned before, I was left quite overwhelmed by hip-hop in 2019 and I'm struggling to come up with ten hip-hop albums I'm really looking forward to this year. As a result, I'm expanding my list to include artists from some other genres I listen to (namely, R&B, soul and artists from out the U.K.).

10.
Chance The Rapper



Chance the Rapper // Flickr

2018 came and went without Chance dropping a project. Instead, he dropped off a series of mediocre singles, all in the same happy-go-lucky, positive, gospel-influenced style that we've heard before (and are getting slightly bored of now). To be fair to the man, he's been busy proposing to his long-term girlfriend and doing endless social activism for the people in his city of Chicago. But enough is enough; time to get back in the studio! He must think he can live off *Coloring Book* and his '3' hats forever. 2016 was a long time ago now and Chance is no longer hip-hop's golden child. It's time for Chance to

deliver with a follow-up project and prove he has the potential to challenge for the hip-hop throne.

9.
Rihanna



Rihanna // Flickr

Bad gal riri is on this list because I'm tired of seeing Fenty Beauty this and Fenty x Savage that, whilst hearing no new music. Her last musical offering came in 2016 with her album, *Anti*. There have since been rumours that she's been hard at work preparing a 'reggae' album, which I would be very interested to hear and represents a return to her Bajan roots. However, I'm not actually hopeful of us receiving any new music this year if I'm perfectly honest. With Fenty Beauty, Rihanna has secured the bag. I don't see her distracting herself from the make-up millions to indulge us with another album any time soon.

8.
Daniel Caesar

Ever since hearing his unique blend of sultry R&B and neo-soul on his breakout debut album, *Freudian*, in 2017, I've been a massive Daniel Caesar fan. He was rel-

atively quiet in 2018 but still managed to drop one of my favourite tracks of the year with his T-Pain assisted single, 'Who Hurt You?'. He has since found himself a sweet one and cut the dreads. Everyone knows what that means. We're going to receive the R&B we deserve in 2019.



Daniel Caesar // Flickr

7.
Isaiah Rashad



Isaiah Rashad // Flickr

My TDE bias may be showing here again but it's time that we got the follow-up to Isaiah Rashad's stellar 2016 project, *The Sun's Tirade*. Following TDE's dominance in 2017 with Kendrick Lamar's *DAMN.* and SZA's *CTRL* albums, I fully expected TDE's bench to perform in 2018. Although we received albums from label mates Jay Rock, SiR and (new signee) Reason, the rest of the bench has simply been lazy. Kendrick and SZA will not carry the label forever; it's time to get in the studio!

6.
ScHoolboy Q



ScHoolboy Q // Flickr

ScHoolboy Q is another lazy member of the TDE bench. ScHoolboy drops amazing, cohesive gangster rap albums and 2016's Grammy-nominated *Blank Face LP* was no different. After promising an album every other year and, following rumours that his follow-up album was actually ready back in 2017, I was surprised to not hear from Q last year. The death of his close friend Mac Miller may have had something to do with the delay in dropping the album and it would be interesting and almost cathartic to hear from Q about how he is dealing with the grief of losing his friend. They say the best music comes from a place of pain so we could be in for a touching and special album from Groovy Q.

5.
Bryson Tiller



Bryson Tiller // Flickr

I recently saw a meme that read, "Bryson Tiller

really dropped 'Don't' and dipped". With his 2016 sophomore album, *True to Self*, flopping badly and the ensuing sophomore slump, the casual fan can be forgiven for thinking Bryson has disappeared since his stellar 2015 project, *Trapsoul*. Bryson seems to be in a better place now and, with his new girlfriend in tow to inspire some beautiful R&B, 2019 could prove to be his comeback year.

4.
EARTHGANG



EARTHGANG // Wikimedia

The eccentric Atlanta rap duo and Dreamville signees were on my "Ones to Watch" list for 2018. They delivered with a series of impressive EPs and their impending album promises to be an exciting listen. Their outlandish style has drawn Outkast comparisons and they could cement a position as the biggest rap group to come out of Atlanta since the Migos.

3.
Stormzy



Stormzy // Flickr

Stormzy has been pretty quiet since 2017's *Gang Signs and Prayer*, making moves outside of music, such as launching a book deal and Adidas clothing

line, and collaborating with Cambridge University. As arguably the biggest grime artist in the UK, the pressure is on for him to perform with a stellar follow-up album. I'm interested to see if he continues down the positive, gospel-influenced style or returns to his gritty, grimy, 'Wickedskengman' roots with this project.

2.
Samm Henshaw



The Sound Experiment // Wikimedia

You may remember when I reviewed Samm Henshaw's Scala concert at the end of October, I hinted that he could be the future of UK soul music. Well 2019 is the year he will drop an album that supports my bold claims. You heard it here first.

1.
Dave



Dave // Redbull.com

Ever since I heard Dave and AJ Tracey's 2016 collab track 'Thiago Silva', I've been a fan and followed both artists. While AJ has flooded the market with singles and EPs, Dave has taken a more measured approach. Dave is the best rapper in the U.K. right now. Just listen to his verses on Giggs' 'Peligro' and Headie One's '18HUNNA' if you don't believe me. All we need is an album to prove it.

MUSIC

music.felix@imperial.ac.uk

Homegrown Imperial band heads to New Cross for single release party

Candy's Room take to the stage at the Amersham Arms tonight to debut new single 'Hither Green'.

MUSIC

Felix Music

Music Editors

Inspired by acts such as Alabama Shakes and fuzz-fuelled bands of the 90s such as Dinosaur Jr and My Bloody Valentine, Candy's Room merge together strong rhythmic grooves with psychedelic textures to create a new style of pop music.

Musicians Nathaniel and Miles (Chemical Engineering, 2nd year) have been performing and writing music since their Year Eight days, playing in a trio of Velvet Underground fanatics. Following years of dedication to the craft of songwriting and musicianship, their sound has evolved into their own self-described genre of 'Dream Soul' – a fusion between classic soul and dream pop.

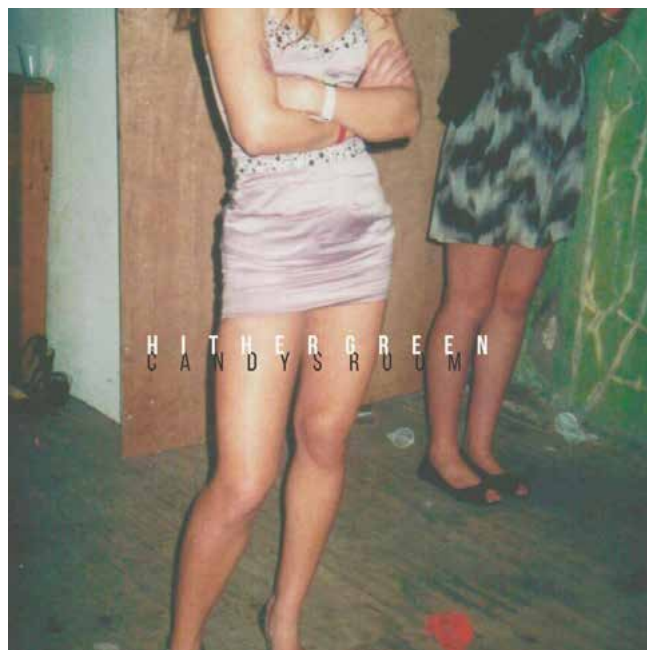
Now initiators of the five-piece band Candy's Room, they are prepared to take 2019 by storm. The rest of the Candy's Room technicolour dream team are Dom (Physics, 2nd year) providing lead guitar, Will (Physics, 2nd year) delivering sonorous saxophone melodies, and Finn on drums.

Their new single, 'Hither Green' focuses on concepts of vulnerability, freedom, and fidelity. It is a celebration of the area in which their journey as musicians began, as well as a look into the lives of two residents of the area. Written and recorded last year, the band teamed up with Kiwi producer Jake Stokes to turn their ambition of creating a song with old-school Motown-style string and brass arrangements into a reality. It was recorded at Crown Lane Studios in Morden and Map Studio Cafe in Camden, with some of the recording happening in our very own studios at Imperial.

We at *Felix* were treated to an exclusive preview of



A true "technicolour dream team" // Candy's Room



'Hither Green' single cover art // Candy's Room

the track. It boasts lush instrumentation, with crisp, staccato guitars dancing over undulating basslines and delicate synths to create a timeless, instantly catchy feel. Switching from serene to sprightly in an instant, powerful vocals cement the single as a melodic anthem for the coming summer.

They have high hopes

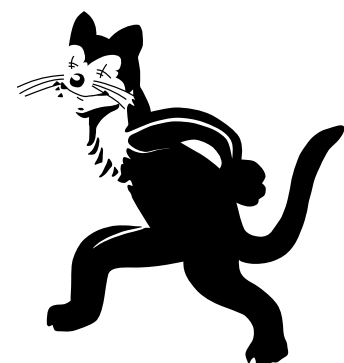
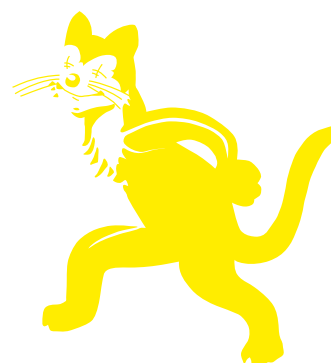
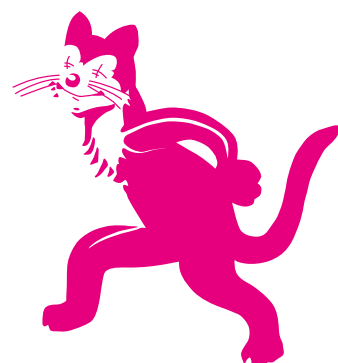
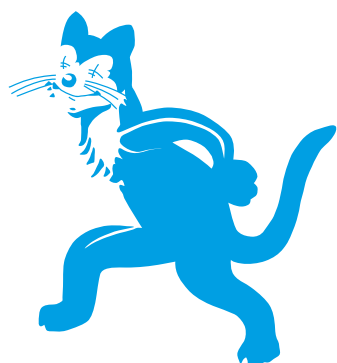
for 2019, with plans to release one single a month for their growing fanbase. They plan to branch out to other areas of the UK to perform and hope to get some festival gigs booked for the summer as well.

To celebrate the release of their new single, they are holding a special gig tonight at the legendary Amersham Arms in New

Cross. Supporting them are the upcoming artists Uncle Monty, The Offdays and The Misconduct Committee.

The show begins at 7:45pm with Candy's Room headlining at 10pm. Tickets can be found on Eventbrite for £5 in advance or can be bought on the door for £6.

Felix is recruiting!



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BOOKS

books.felix@imperial.ac.uk

Of Missed Opportunities and Vanity: Books from the Balkans

Books writer, Pavan Inguva, explores two books that shed light on the Balkans

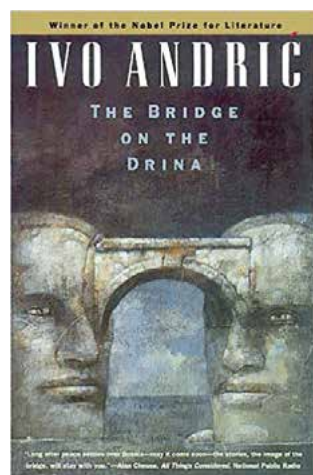
BOOKS

Pavan Inguva
Books Writer

Normally, I would start off by sharing how I serendipitously came across a beautiful bookstore or an author, or book, related to the country I am travelling to. This isn't one of those occasions. The two books I write about here came to me in a far more dubious manner. The first book was stuck in my Amazon shopping cart for months. I cannot for the life of me figure out what course of events led to its inclusion in my cart and eventual purchase. The second book came to me as I was looking for a quote by a Croatian author to use as a caption for one of the pictures I took whilst in Croatia (for the gram). Regardless of the less than ideal circumstances in which I came to know of these authors and books, they are remarkably profound reads, shedding light on the Balkans, a region with tremendously complex history and geopolitics.

“These authors and books... are remarkably profound reads, shedding light on the Balkans”

The Bridge on the Drina by Ivo Andric



Andric, born in Bosnia, received the Nobel prize for literature in 1961 and this is his best-known work. The focal point of the book is the titular bridge spanning the river Drina in Visegrad, Bosnia. Andric chronicles the life and times of the people of the town as it occurs around this bridge over several hundred years from before the bridge was built in 1577 up to the start of World War 1 in 1914. Due to its remarkable construction, the Mehmed Pasa bridge serves as an excellent symbol for permanence and is an UNESCO world heritage site today. Andric skillfully portrays the human experience by introducing and developing multiple characters during each time-period, providing continuity where appropriate. The ensemble of diverse characters outlines both the commonalities of experiences we share, and also the variety of responses we may have to changing times as a function of

different ethno-religious, socio-economic and personal factors. We often think of places like Sarajevo or Istanbul as being the central points where the winds of change blow the hardest during the periods of the Ottoman and Austro-Hungarian empires. This is certainly true from a macroscopic, historical point of view, but Andric takes a completely different approach, focusing on how a smaller township and its racially and religiously diverse people adapt and interact with the changing times. I found this approach incredibly humanising and historically informative, which arguably is one of the primary appeals of historical fiction.

The one thing I regret from this read was that I did not take the time to visit said bridge whilst in Bosnia. As I was standing in the location where Archduke Franz Ferdinand was shot in Sarajevo, I was in awe of the fact that I was standing in the same location where one of the 20th century's most

defining moments took place. I would imagine that after having read Andric's work, having felt the richness of human experiences and history on the bridge, the feeling of awe when I visit will be similar.

The Banquet in Blitva by Miroslav Krleza



“In a drop of wine, the universe sparkles.” An excellent quote from Miroslav Krleza that makes an excellent Instagram caption. At

this point, I felt bad that I was willing to use one of his quotes without having read his work. So to alleviate my guilt from literary vanity, I ordered a copy on amazon. Krleza is hands down one of the edgiest authors I've ever read. This guy is more than willing to call a spade a spade in the crudest manner good literature permits. The state of flux and political climate of central Europe in the 20th century has unfortunately given many a talented author keen insight into power and human nature and Krleza's work serves as an excellent example of this. Whilst this series is a trilogy, only the first two books are available in English as a set.

The book is set in the fictional Balkan state of Blitva pre-WW2 with an arguably stereotypical troubled founding story following the fall of the Austro-Hungarian empire. The book focuses on Colonel Kristian Baruntanski, the dictator who spearheaded Blitva's push for independence, and Dr

Niels Nielson, an intellectual and Baruntanski's childhood friend calling for his death as a traitor to Blitva. Dr Nielson published an open letter calling for the Colonel's head. This sparks an escalating conflict between the two, culminating in a cliffhanger ending in the second book with Nielson fleeing to neighboring Blatvia. This conflict served as a thinly veiled satire on how nationalism has panned out in the region, both ideologically and practically. Several ancillary characters such as Major Georgis, Baruntanski's hitman, were also well developed, helping to characterise the inherent contradictions in human nature and the divergent interest various stakeholders may have in relation to political structures and action. Overall, Krleza has put together a complex and edgy read. Power through and you are rewarded with a remarkable insight into variety of topics.



Nobel Prize for Literature winner, Ivo Andric, in front of the bridge on the Drina // Serbia.com

ARTS

arts.felix@imperial.ac.uk

True West: Engaging, absurd

ARTS



Where? Vaudeville Theatre
When? Now - 23rd Feb
How Much? From £15

Marena Gray
 Arts Editor

The West End debut of the 1980 play is the first major revival of Sam Shepherd's work since his death last year. The two main leads provide a meaty role for any actor, with talents such as John Malkovich and Gary Sinise, Philip Seymour Hoffman and John C Reilly, and Mark Rylance alternating the roles with Michael Rudko, each trying their hand to play the hardly fraternal, warring brothers. With *Game of Thrones* star Kit Harington and actor-musician Johnny Flynn portraying Austin and Lee respectively, we see the portrait of two brothers, which could be said to be more of a bifurcation of the playwright himself, and their own warped versions of the fading

American dream.

Harington plays against type as Austin, an Ivy-League educated screenwriter, who is housesitting for his mother in her Southern Californian home. The arrival of Lee, played with menacing prowess by Flynn, after five years of absence and three months in the Mojave desert, disrupts the neurotic Lee and old arguments resume.

The first act belongs to Flynn, whose looming height, harsh drawl and deliberate movements bring an ominous air to the estranged Lee. His casual monologue on how most murders occur within the family reveals a feral underbelly, where his time spent in the desert has changed him for the worst. Lee then steals the limelight from Austin and plays to producer Saul's gullibility, with a "true Western story".

"outrageous moments"

In an identity swap, not unlike a new suit which fits surprisingly well, the second act sees Lee try his hand as screenwriting, whilst Austin takes up the

mantle of the petty thief. This act belongs to Harington, with an outrageous number of toasters lining the stage in his attempt to prove his skill, resulting in a petering tower of toast and a furious Lee. Harington's comedic timing was a delightful surprise, with his degeneration

"Harington's comedic timing was a delightful surprise"

demonstrated through the tell-tale curls coming loose and his crisply ironed t-shirts and shorts taking on a more worn and distressed look.

The set, wonky and unusual in its perspective by Jon Bauser, is at the mercy of the actors, with furniture and people alike thrown about with an increasingly destructive nature. The arrival of the Mother at the point where Austin attempts to strangle Lee with a whipcord adds the element of the absurd. With an accent significantly weaker than Harington or Flynn, Madeline Potter talks down to the boys as if they were still unruly children, rather than men on the verge of insanity.

From my understanding of the playwright, his plays do not always make sense, focusing on mood and emotion, rather than structured storytelling. The play itself feels like a collection of offbeat scenes, harshly cut with drumming rhythms that shock you out of the story. However, there are some outrageous moments between the two leads which engage you to the bitter end.

The Tragedy of King Richard the Second

A brief, professional performance that plays it safe.

ARTS



Where? Almeida Theatre
When? Now - 2nd Feb
How Much? From £10

Calvin Nesbitt
 Arts Writer

There has not been a more appropriate time to perform *The Tragedy of King Richard the Second*. When else in modern British political history have questions of leadership, the right to rule and the role of governance been drawn more into question than now?

When the excellent Simon Russell Beale, transfigured into Richard in the tight atmosphere of the Almeida, pronounces those famed syllables "Not all the water in the rough rude sea Can wash the balm off from an anointed king", how can one not think of the tunnel-visioned Brexiteers and their refusal to contemplate a people's vote? How can one not think of the arrogant incompetence of the Tory party at this time of national turmoil (after all what is 'the natural party of government' other than a reformulation of the divine right of kings)? Yet, what we are presented under the direction of Joe Hill-Gibbins is a defensive formation that does not give itself the room to explore such themes. Think Shakespeare in the form of a polite appearance at a Christmas party: we go briefly, act charmingly, and leave as soon as is socially acceptable.

Hill-Gibbins' production is to modern



Apt timing for this Shakespearian classic // Almeida

Shakespeare performance what minimal is to techno, stripped back. The washed, concrete stage and strip lighting is only a smoke machine away from being a tucked away room at Berlin's Tresor night club. It is a small eight person ensemble that don the stage for the brief 140 minute straight through run time.

"Think Shakespeare in the form of a polite appearance at a Christmas party"

Dancing around, they briefly visit each of the play's characters before the stopwatch begins to beep. This brevity means it is only really Bolingbroke and Richard who are explored in depth. That being said, Martins Imhangbe as Aumerle and Robin Weaver as Northumberland must also be applauded.

The advantage to this

simplicity is that each word and tone of voice is given the complete stage: when the spotlight is on Beale as Richard, it is really on Beale as Richard. This leads to certain devastating moments where the words of the Bard ring true and have you aching to ask that they pause, rewind and repeat the line over and over. Beyond the line delivery, even the minimal stage props make their impact, watching Beale drowned and humiliated in earth and water under a neon gaze is hard to top in terms of dramatic experience.

Of course, the counter to the above is that the room feels very empty when the space for exploration is not taken up. The case in point being Leo Bill as Bolingbroke who sometimes feels as far away as his fictional counterpart in exile. And it is here that one leaves the theatre wishing more had been said on the themes that are begging to be spoken about. Without this, the cast are given a heavy burden which, admittedly, they do make an impressive attempt of bearing.



Well done Jon Snow, well done // Marc Brenner

ARTS

arts.felix@imperial.ac.uk

Caroline or Change Review

Change is in the air: Vibrant musical captures the spirit of 1960s America

ARTS



Where? The Playhouse Theatre
When? Until 6th Apr
How Much? £5 for 16-25s

Vaishnavi

Gnananathan

Arts Editor

Caroline Thibodeaux is only 39, but her life is already reduced to the basement of the Gellman household in which she is a maid, where the washing machine, dryer and old radio are her only companions. Well, apart from eight-year-old Noah Gellman that is. Noah idolises Caroline, taking every opportunity to spend

time with her, even when she treats him with cool indifference or chastises him for leaving his pocket money in his dirty laundry. When Noah's stepmother Rose insists Caroline start keeping any change she finds, to teach Noah a lesson about money, it brings into sharp focus Caroline's situation and highlights her moral dilemma: forced to start considering keeping a child's lost pocket money to help make ends meet for herself and her four children.

Playwright Tony Kushner is best known for his widely acclaimed *Angels in America*, notable for its highly intimate personal stories set against the backdrop of world changing events. *Caroline or Change* also carries this particular Kushner trademark: its

"this is one of the definite 'must see' shows of this winter"

1963 and John F Kennedy has just been assassinated, the American Civil Rights movement is growing: it's clearly a period of great change for America as a whole. And so it is for Caroline: she's come to this point, 39 and with life looking bleak, when change is in order. The combination of small intimate individual stories and world changing political events just draws each into sharper focus, Caroline's personal dilemmas reflect the

frustration and thirst for change of a nation, whilst the sweeping changes across the country are juxtaposed with how slow progress can be for people on the ground like Caroline, whilst keeping up the hope that change is very much in the air.

Jeanine Tesori's music is the perfect partner to Kushner's words, transforming what might seem like bleak subject matter into something fun and heart-warming. It pairs particularly well with one of the most original and fun aspects of the show: the personification of choice inanimate objects, such as the washing machine and dryer that are Caroline's constant companions as in the basement. Fly Davis's fantastic costumes help bring them to life, especially the 60s- inspired



Star Sharon D Clarke shines // Helen Maybank

washing machine (Mesha Bryon) in her extravagant costume of plastic bubbles.

Sharon D Clarke, our titular Caroline, is undoubtedly the star of the show. Her commanding stage presence makes it difficult to look away. And indeed its difficult to want to; she's amazing as Caroline, effortlessly capturing her despair, but also her quiet dignity. This isn't to say that the rest of the cast are weak. Quite the opposite: there isn't

a single weak link in this production, with the entire ensemble cast delivering excellent performances.

So many things come together to make *Caroline or Change* the visual treat that it is. A fantastic musical brought to life by a near perfect production, this is one of the definite 'must see' shows of this winter.

Swan Lake – A Lively Traditional Performance

A wonderful start to the new year with this traditional Swan Lake by the English National Ballet.

ARTS



Where? London Coliseum
When? 3rd – 13th Jan
How Much? Limited tickets

Rebekah Byford

Arts Writer

Swan Lake is perhaps the most renowned classical ballet repertoire still routinely performed. Recent productions such as Matthew Bourne's reimagined all male production or even the twisted representation on screen in *Black Swan* have only increased its popularity.

The English National Ballet have kept tradition and modern ballet alive

with Derek Deane's production of *Swan Lake*. Originally performed in-the-round at the Royal Albert Hall in 1997 and then restaged for conventional theatres, it has proven a hit for the ENB over the years.

This ninth production is performed in the glorious London Coliseum. English ballet, whilst perhaps not quite as ultra-refined as its Russian counterpart, when done well is a wonderful spectacle. This performance had it all; lavish costume, impressive scenery, strong performances from the corps de ballet and barely a wobble onstage.

It was refreshing to see traditional ballet done well, with a few twists here and there. In this production, Tchaikovsky's

wonderfully written score was beautifully conducted by Gavin Sutherland.

"Tchaikovsky's wonderfully written score was beautifully conducted by Gavin Sutherland"

During the prologue, showing Rothbart first transforming Odette into a swan. A lovely piece of stage magic was used during the "transformation", with the change to swan, Odette was instantaneously revealed from behind Rothbart's cape.

A standout of the night was "The dance of the little swans" (cygnets); the well-loved and incredibly difficult pas-de-quatre. The four ballerinas were completely in sync for the whole section; a rarity, with fantastic technique which gained large well-deserved applause.

Overall the company performed well; the swans section in Act II always a delight with a good corps de ballet. A standout performer of the ensemble was Precious Adams, not forgetting Daniel McCormick's impressive leaps and Julia Conway's impressive pointe work of the pas de trois in Act I.

Both the character parts, Queen (Jane Hayworth) and tutor (Michael Coleman), were well played. Providing

laughter and storytelling. Rothbart (James Streeter), the villain of the piece, is always a difficult role and in this production the characterisation improved through the ballet.

Isaac Hernández reprised his role as Prince Siegfried, before as a guest artist, now a company member of the ENB. Whilst appearing a little off balance at the start of the ballet and lacking in characterisation, he really came into his own during the later acts, especially with an impressive solo performance in Act III, with wonderful flying grand jetés and beautiful pirouettes.

Odette and Odile are traditionally played by the same dancer. Jurgita Dronina portrayed a vulnerable Odette, whilst

mastering the flirtatious nature of Odile. The change in character was noticeable as soon as she stepped on stage in Act III, she seems to convey both characters through her upper body gestures and face with ease. Her technique is delightful, mastering the somewhat incredible 32 fouettés in Odile's solo of Act III.

The chemistry and partner work between Hernández and Dronina, whilst lacking in places at the start, grew throughout, successfully conveying the tragic ending of *Swan Lake*.

Whilst not quite a Moscow performance, certainly a fantastic English ballet. Overall, a delightful performance.

ARTS

arts.felix@imperial.ac.uk

Matthew Bourne's Swan Lake retains its wild heart

ARTS



Where? Sadlers Wells
When? 4th Dec– 27th Jan
How Much? From £12

Indira Malik
Arts Editor

From the superstars of the Bolshoi to Billy Elliot raising money for a bus ticket to London, the history of the male ballet dancer is a checkered one – as filled with triumph and acclaim as derision and neglect. Few modern stagings have carved their place in the history of the male ballet star, or indeed into the form itself as Matthew Bourne's Swan Lake. A punk rock reimagining, at the time of its first performance it took the Tchaikovsky

scored classic and tried to blow it up from the inside, feathered tutus and all. Bourne recounts that during its first run little girls left the performances in tears, sobbing that their parents had bought tickets to the wrong Swan Lake. Perhaps only a stranger to the worlds of buns and pointe shoes, as Bourne was at the time, would've dared such a thing.

Watching this revival I was struck by how profound a transformation Bourne's staging is from the original. This is no gimmicky gender-swap, but a shift in tone, message, and story. I was struck too at how similar it seemed to Ballet Black's Midsummer's Night Dream that was performed at The Barbican some months ago, evidence that Bourne has had an influence in modern ballet that has

stood the test of time. In Bourne's Swan Lake we follow a pampered but affection-deprived Prince as he seems to find love, is betrayed, then finds passion and freedom in the unlikely of places. Will Bozier is tremendous as the Swan; bare chested, forehead marked with war paint, he dances with muscularity and avian grace. If the traditional tutu-performances of Swan Lake depict the swans with the ethereal beauty of Edwardian paintings, Bourne's swans bare their dinosaur hearts. Sometimes ungainly, sometimes ferocious, always otherworldly they disrupt the proper-ness of the palace scenes with wildness. Bourne's staging has always been hailed as "the gay Swan Lake", certainly the pas-de-deux between the Prince



Maybe swans do fly afterall//Tristram Kenton

(Dominic North) and the Swan King are passionate and tender, but it is also an ode to the chaos of nature, a rejection of rigid rules and carefully observed manners. Peppered with pantomime-esque humour, the staging sings

with irreverent energy, in particular, Carrie Willis as the Girlfriend is scene-stealingly good.

If casting the Swan Queen and her cast of swans as male dancers was a challenge in the 90s then maintaining that

sense of revolution and drama, nearly twenty years later as the now classic returns to Sadler's Wells is no less of a feat. With humour, great verve, and a fantastic corps of dancers, Swan Lake delivers.

The Curious Incident: A Triumphant Return to London

ARTS



Where? The Piccadilly Theatre
When? Until 27th April
How Much? From £18 students

Vaishnavi Gnananathan
Arts Editor

Adapted from Mark Haddon's book of the same name, this *The Curious Incident of the Dog in the Night-time* tells the story of Christopher Boone, a 15-year-old who is exceptionally gifted at maths yet struggles with social interactions and many every day tasks. Christopher finds his neighbour's dog, Wellington, murdered in her garden and decides to begin an investigation

into who could be the culprit, recording all of his interactions in a book. A simplistic description of the plot does little to capture the magic that is this production. Yes, this is a story about Christopher, but through his interactions with those he encounters it becomes so much more, an exploration of humanity itself.

Playwright Simon Stephens does a phenomenal job of translating the play to the stage. He remains faithful to the much loved book, yet manages to tailor it to everything that makes theatre so enjoyable. To say that the set and staging are amazing would be a criminal understatement. The ingenious multimedia set transports you into Christopher's world, giving you an insight into how he sees things, with Christopher's diagrams

springing to life on the walls. One of the things most striking about the book is Christopher's sensory overload by the sights and sounds of busy London. Haddon's words really created a sense of palpable distress that I was certain could not be replicated. Yet this fantastic production proved me wrong. The abstract use of sound, light and stage combine to transport you straight into Christopher's mind. Director Marianne Elliott does a great job of bringing together all these different elements to create a truly immersive experience.

This production has been through many cast changes since its debut at The National Theatre and it's a worry to any fan of the original if the new casts are able to replicate the initial magic. There's no question here that they

do: Joshua Jenkins is fantastic as Christopher, never failing to capture his vulnerability and confusion. Stuart Laing and Emma Beattie are brilliant as Christopher's parents Ed and Judy, each of them is vulnerable in their own way, burdened by circumstances. Laing in particular really captures

the essence of Ed; its impossible not to feel a rush of sympathy for him in the moments where he breaks down in front of Christopher. Rounding out the main cast is Julie Hale, playing Christopher's support worker at school, Siobhan.

Words cannot describe how brilliant this perfor-

mance is and honestly, any fan of theatre should treat themselves to it. As the cast took their bows, I don't think I could see a single person seated, we were all up and giving this play the standing ovation it clearly deserved.



It's raining rats and dogs//Brinkhoff Mogenburg

ARTS

arts.felix@imperial.ac.uk

Flamboyant family fun with Aladdin the Panto

ARTS



Where? Hackney Empire
When? Ran till 6th Jan
How Much? From £10

Simran Kukran
Arts Writer

This production of Aladdin was a 20th year celebration of pantomime at the Hackney Empire. Panto tends to deviate from set plot lines, but this performance uses Aladdin as a vague guideline rather than a script. There are several layers of narration, starting with an impressive 10ft trapped puppet Goddess Gaia taking over the stage. The rest of the show is just as

flamboyantly ridiculous. Even the location and characters were given an East London twist, set in the far off land of Ha-kaney a town that has just exited the Eastern Union. Aladdin is determined to win the heart of princess Jasmine, who he is not legally allowed to set eyes on. Once they fall in love and decide to marry, he is given the challenge of building a palace in one day to prove his worth to the dictatorial Empress. This is much to the distress of his brother Dishi, forever in the shadow of Aladdin going through the motions of supporting him through his wacky adventures. To greet him, we shout "What a fittie!". There are also plenty of

opportunities to boo and shout "he's behind you!". Abanazar is a villain so treacherous he also carries the title Jacob Peas Bogg. In pursuit of the lamp, he must find someone pure of heart to retrieve it, so he poses as Aladdin's uncle to convince him to recover it. The high-jinks and dance numbers that ensue are wonderfully outrageous with catchy songs. Rather than the genie, it is Aladdin's mother, widower Madam Twankey, played by Clive Rowe (Duke from Tracy Beaker!) who is the real star of the show. She runs a laundrette in between her outrageous dance routines. This is a show catering to all the family, where



Hijinks and happily ever afters // Hackney Empire

everyone watching is encouraged to participate. There is a sign-language dance routine led by a panda for toddlers to potter along to, and some less wholesome one-lin-

ers to keep the parents cackling. Somehow every character finds their way to a happy ending. The goddess and genie is freed, Aladdin and Jasmine live happily ever after, the

empress elopes with her guard Dumpling. Even Abanazar finds love and renounces his evil past for a future with Madam Twankey. Bizarre, but wonderful.

Pinter Six: Money can't buy you love

The empty lives of the ultra-privileged

ARTS



Where? Sadlers Wells
When? 19th – 20th Oct
How Much? From £15

Claire Chan
Arts Editor

Now past the halfway mark, Jamie Lloyd's season of Pinter plays continues to astonish with each new installment. What's impressive is the curation – the plays are grouped by subject matter, rather than chronology, showcasing the themes that Pinter revisited multiple times throughout his career as a playwright. Pinter Six is all about sharp satire of the upper class: unhappiness, coarse vulgarity and downright cruelty lying behind a outwardly civilised façade.

Party Time is set at an opulent dinner party, given for the rich by the rich. The guests swan about in smug self-supe-

riority, uttering vacuous phrases of small talk. A civil war seems to be going on outside, but the only hint of unease comes when Dusty (Eleanor Matura) interrupts to ask her husband Terry (John Simm) what has happened to her brother Jimmy. The atmosphere in the party changes; Terry tells at her to shut up or she'll be 'spanked'; the host of the party, Gavin (Phil Davis), makes a disapproving remark about 'uncontrollable wives'. A set of giant doors at the back of the stage glow at intervals, as the riot outside continually threatens to break in and disrupt the insulated life of the dinner party. The finale, where Jimmy (Abraham Popoola) bursts through the doors dripping with blood, is a bit too heavy-handed for my liking, though it does get the point across. 'The dark is in my mouth and I suck it... it's the only thing I have.' Outside the cushy world of the party, a

hopeless blackness looms for the rest of society. It's hard to pick a standout from the cast, who are all excellent. I particularly enjoyed Simm's ability to deliver spine-chilling menace in a deceptively pleasant voice. Casting Matura, who is half-Japanese, and Popoola, who is of Nigerian descent, as the only two who seem out of place in the cushy world of Party Time also lends – intentionally or otherwise – racial undertones to this staging.

The cast of nine remains the same for Celebration, this time a more intimate look at the emptiness of relationships. Like Party Time, its cheery title belies the bleak tone of the play. Two brothers, married to two sisters, are at 'the most expensive restaurant in town', ostensibly to celebrate the wedding anniversary of one of the couples, Lambert (Ron Cook) and Prue (Celia Imrie). It soon becomes clear

that true affection is not to be found in any of the relationships on display. Husbands and wives undermine each other with snide remarks throughout dinner, with vulgarity and warped familial ties being the theme of the day. 'All mothers want their sons to be fucked by themselves,' Prue insists, while reminiscing about how her mother used to beat her father till there was blood on the sheets. Suki (Katherine Kingsley) and her husband Russell (Simm) are no better; Russell confesses to an affair with a secretary, only for Suki to regain the upper hand with her tales of when she was a 'plump young secretary' with her share of filing-cabinet liaisons. In the middle of these unhappy conversations, the restaurant waiter (Popoola) makes frequent 'interjections' about his grandfather, longing for a past of culture and tradition which is long gone. Soutra Gilmour's set

and costume design are commendable for how both plays manage to disgust us equally in their overt, though very different, displays of opulence. Sleek black glamour for Party Time with its constant sense of threat, ritzy glitter for the (relatively) light-hearted Celebration.

I previously reviewed Pinter Four, a stunning collection of short sketches in which Pinter explored the unreliability of memory – as escapism, as bond. Here, too, recollection is subjective for Lambert and Suki. Their past relationship is such a precious memory to Lambert – "I fell in love once... and [she] loved me back" – that he uncharacteristically foots the bill for everyone, Suki and Russell included. Suki, on the other hand, believes he never loved anything more than her body. For all the casual cruelty in Celebration, it's this repudiation of the one shred

of genuine emotion in the play that hits the hardest. Celebration ends with the spotlight on the waiter, who is about to make 'one last interjection' – but what is it? Will it be a solution to the toxicity of these relationships, a way to reclaim genuine warmth? We will never know.

Despite being written 9 years apart, the two plays echo each other remarkably. Once again, Jamie Lloyd shows us how Pinter is still relevant today – more relevant than ever in today's political climate, in fact, with its ever-growing divide between the haves and have-nots. The false veneer masking a far bleaker reality in these two plays also resonates with the false perfection of our online lives and social media, despite the loneliness and nihilism that seem to dog our generation. A thought-provoking pairing not to be missed.

14

ARTS

arts.felix@imperial.ac.uk

Politically charged art or abandoned bath house?

Spend an afternoon literally diving into the gentrification of East London.

ARTS



Where? The Whitechapel Gallery
When? Till 13th Jan
How Much? £12.95; £9.50 students

Amanda Hertzberg
Arts Writer

East London sits close to my heart, so when I heard Whitechapel Gallery had an exhibition related to gentrification and capitalism, I grabbed my Felix pen and notebook and ventured out of our comfortable West London.

The two artists in question; Michael Elmgreen and Ingar Dragset, from Denmark and Norway respectively, have been working together for over 20 years now. The duo doesn't confine themselves to one or even a couple of mediums: their installations come as full experiences. As I walk through the doors at the gallery I enter into a room with a large swimming pool in the middle. I could be in an abandoned Hungarian

bath, but I'm in an art gallery. The setting is the Whitechapel Pool, a public swimming pool for the local community, supposedly at its peak during the 70s. The pool and the whole story are of course just fictional products painting a vibrant story for the exhibition. It's not just the pool in the room though; a fallen large sculpture, a metallic car seat and a big rock weighing down a trampoline are a few other things scattered around the room. Everything is run-down and abandoned. There is sand and dust on the bottom of the pool. It's a story of gentrification that Elmgreen and Dragset have painted up here. It is a story of taking something away from the community and giving it to capitalism. This used to be a communal pool bustling with life, but now it is going to be made into a luxurious spa for members only.

The pool is not the only installation in the exhibition. On my way up the stairs I come to face an ATM machine on the wall. On the floor beneath lays a baby in a bassinets. I freeze up for a second

and look around, wondering who could have left their baby here. I see the gallery guards smirking over at my reaction. The baby is a wax doll, a very believable one. Elmgreen & Dragset: 1, Amanda: 0. The installation raises questions; what could the guardian of this child possibly have seen on the screen / have been doing at the ATM before deciding to leave their baby behind?

Even this is not all there is, there is a room full of more shocking sculptures, and another room titled 'Self-portraits'. I'll let you find out what's in there on your own though. The work of Elmgreen and Dragset is truly performed in such a thoughtful and successful way. Living in the reality of 2018, with capitalism, gentrification, populism and a push for equality, I think art needs to address these topics, and discovering new ways to execute this since the graffiti of the 80s is even better. I would even highly suggest checking out the artists and their previous installations online. Definitely not your average exhibition at the National Gallery.



A dive into harsh reality // Whitechapel Gallery

15



Cézanne's *The Card Players* // Courtauld Gallery

Courtauld Impressionists: From Manet to Cézanne

A true celebration of art, with over forty veritable masterpieces showcasing the cream of Impressionism. But is it value for money?

ARTS



Where? National Gallery
When? Till 20th Jan
How Much? £7.50

Shivani Gangadia
Arts Writer

Born and brought up in London, repeatedly visiting this gallery with my father since before I could even walk, it's safe to say I'm a hardcore National Gallery devotee. Unfortunately, this is precisely the same reason this exhibition left me feeling a sense of unfamiliar disappointment as I left the building, for the first time in my life.

Don't get me wrong – the exhibition itself includes a mesmerising set of paintings, the unification of Samuel Courtauld's historically split up collection (between the National Gallery and the Courtauld Gallery); it would be absurd of anyone to deny the mastery of Seurat's 'Bathers at Asnières', or Manet's 'A Bar at the Folies-Bergère'.

Perhaps I just had overly high expectations, or I hypoed the exhibition up too much in my own head – a glorious, ground-breaking union of

all the greatest Impressionist and Post-Impressionist pieces London, or indeed the UK, had to offer. Or perhaps I was hoping for something a little bit different, or some sort of examination of the pieces in a new or different way – I'm not really sure. Instead what we get is the Courtauld collection coupled with select pieces from the National Gallery, and an admission charge stuck on it. Many of the painting descriptions for National Gallery pieces were essentially the same as they usually are in the free collection, so I felt a bit robbed. Equally, I imagine those on holiday who came to visit the regular free National Gallery Impressionism collection, only to find half of the pieces taken away and put in a paid exhibition, must also be feeling robbed.

Whilst I liked the way it was split up by artist, with each section titled using emboldened prints of their signature, it meant that it was difficult to cross-examine themes and techniques between artists. Further, with only a few paintings by each artist, there also weren't enough paintings to see development in their own styles. However, there was sufficient relevant and interesting informa-

tion about every artist and each painting, making it ideal for those who haven't experienced much Impressionism, or really love it and haven't yet seen London's collection before, with the decent price tag of £7.50 in such a case.

The way you'll feel about this exhibition really just depends on who you are and your circumstances. If you've been to the National Gallery countless times, and have either been to the Courtauld before or have time to spare until it reopens in 2 years, I'm not sure if this exhibition is worth it. Considering the £8 admission for the Courtauld, with access to 3 times as much art as this exhibition (including 2 other art periods along with this Impressionism collection), and the fact that the Courtauld itself is only a 10 minute walk away on the other end of Strand, it would be easily doable in one day when the collections are both back in their respective normal locations.

But if you have limited time in London and can't afford to wait 2 years, or are simply eager to feast your eyes on this astounding collection, then £7.50 is still a pretty good deal.

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Michael Moore doing Michael Moore //IMDb

Fahrenheit 11/9 Review

Film Writer Rowan Dixon gives us his thoughts on the latest Michael Moore film about Donald Trump, the state of North American politics and Gwen Stefani.

FILM

FAHRENHEIT 11/9



Dir: Michael Moore. **Script:** Michael Moore. **Starring:** Michael Moore, Donald Trump, Hillary Clinton. *128 minutes*

Rowan Dixon
Film Writer

As with all Michael Moore's films *Fahrenheit 11/9* (not *9/11*, that's his other one) is one of the most eye-opening films of the year, and one I think more of us should see. The film opens with celebrities and news hosts from the run-up to the 2016 election joking about how Trump would never be president, but we have time's greatest gift on our side, hindsight, and I slide

down in my seat, knowing the true outcome and how wrong all these smiling and joking 'experts' were.

If you haven't seen any of his films, Michael Moore does a wonderful job of telling a side of the story from a perspective you rarely see, and in this case, there are too many stories to count. This film, like all of his others, starts with an outcome we all know; like the financial crisis of 2008 in *Capitalism: A Love Story*, and in this film the shock victory of Donald J Trump beating Hillary Clinton to the White House. At this point I was comfortably lying on my sofa as I knew what had happened (we all do), but then Michael Moore reaches a hand out of the TV to check that you're still awake and watching by dropping a bomb shell on you. In this instance he doesn't blame Russia or a rigged voting system, which is what we would all be expecting

"... get some popcorn and watch *Fahrenheit 11/9*, or *Fahrenheit 9/11* for that matter, but that one is all about blowing people up, oil and good old fashioned greed."

for the result of 11/9. No, he blames Gwen Stefani (yeah, that woman off *The Voice*) for the election of the 45th president. This is explained in a slightly twisted but humorous way

by Moore as he speaks over B roll footage from Trump announcing his campaign and actors cheering Trump on. These unexpected reveals keep hitting home hard throughout the film give a different perspective on the political environment in the US to what you are used to.

Throughout the film Moore keeps you on the edge of your seat by revealing information to you, that in hindsight, we should all know about by now. Maybe I'm naive, and maybe you're more up to date with North American politics than me, but I don't think the general public know a lot about how manipulative the democrats were in the runup to the 2016 election. The twisted nature of the political landscape, on both the left and the right is revealed, but not just in the past decade, going back to the 1990's and how politicians use their

power for 'the good of the people' to keep their party in power. This is an underlying theme of the film.

"...Michael Moore does a wonderful job of telling a side of the story from a perspective you rarely see, and in this case, there are too many stories to count."

Moore picks out instances from recent history where the elected officials (even the highly regarded ones)

who are meant to protect and help the citizens, screw them over instead and do what's best for them and their friends and allies.

Fear not, however, as Moore makes you laugh throughout, be it at our own stupidity, or by him trying to arrest numerous members of the government for poisoning over 10,000 children (yeah, that happened, I had no idea, did you?). There are so many topics talked about in this film that it would take me days to present it all, which makes the film all the more impressive, as he fits it all into 120 minutes. If you want an eye widening experience of a part of the USA's political landscape over the past 20-30 years, I urge you to get some popcorn and watch *Fahrenheit 11/9*, or *Fahrenheit 9/11* for that matter, but that one is all about blowing people up, oil and good old fashioned greed.

FOOD

food.felix@imperial.ac.uk



Imperial students queue up for food stalls as part of Charity Week // Shivan Parmar

Imperial College Food Festival: Reviewed

What better way to combine two amazing things - food & charity - in one event? Food writer Shivan recaps the recent Imperial College Food Festival

FOOD

Shrivani Parmar

Arts Editor

On 24th October, the Imperial College Food Festival took place on Queen's Lawn, featuring a diverse range of food stalls including London Smokehouse, Nick and Greek, Wafflestick and Coconut Tree. The fundraiser was part of the international Charity Week campaign held on campus, and raised a whopping sum of over £1,000 for sustainably developing resources for children in need. It was also nominated as one of the best events in London – score!

With the sun rising and the sky a brilliant blue, food vendors from across London set up on Queen's Lawn on the morning of

the 24th. Coordinated by Azmat Habibullah, Anisah Hakim and their team of volunteers from Islamic Society, they were soon ready and waiting for the first hungry students to emerge from their lectures. Despite a slow start (let's be real, the 9ams probably didn't have great attendance rates), the stream of customers spiked after midday and did not stop. London Smokehouse sold out almost two hours early, and had to turn away further customers, commenting "This is better than a standard day's trading at our King's Cross market, and we'd love to come every month!". Alongside the steak, Thai and Greek food, Imperial's very own Bruneian Society ran a stall, giving people a taste of ethnic delicacies. You could also receive a semi-permanent tattoo from a local henna artist.

"London Smokehouse sold out almost two hours early"

Charity Week is a worldwide fundraising campaign, coordinated by Islamic Relief, in which over 70 universities participate. The goal is to help not just individuals, but communities, by sustainably developing infrastructure which will have a ripple effect in benefitting a society for generations. By focusing on improving key infrastructure around impoverished areas of the globe, it takes a holistic approach to improving wellbeing. For instance, whilst many charities focus on buying new equipment for hospitals, such as monitors

and ECG machines, the Charity Week campaign additionally spends the money on training staff to use the machines and to fix the equipment when needed. The aim is not merely to help children in need, but to lift them out of poverty for good. This year, over £1.3 million was raised during Charity Week around the world. Recent projects include providing psychological support for children in the Central African Republic affected by conflict, and rebuilding seven schools in war-torn Gaza.

The food festival was but one aspect of a wider Imperial Islamic Society campaign for Charity Week. The society raised £39,000 in total, through a wide range of events including the esteemed Annual Charity Dinner, held at a London hotel, a sponsored climb of Mount Snowdonia by over 40 students, and

a football tournament. More informally, several students volunteered to sell Krispy Kreme doughnuts and chicken wings around campus to raise more money towards the Charity Week cause.

"You could also receive a semi-permanent tattoo from a local henna artist"

This was the first time that the Food Festival had successfully run, following three years of attempts resulting in disappointment. However, this year, after mounds of paperwork, the College approved the event in time – resulting in the first time the college has allowed

a society to host a large event on Queen's Lawn. If you are interested in running a similar event in the future, we highly encourage you to contact Azmat for details on how to go about it! Furthermore, anyone interested in taking part in next year's Charity Week campaign should message the Imperial College Charity Week page on Facebook, and the committee will be in touch with further details. Use some of your spare October time before the deadlines rush in food a good cause!

Overall, the Food Festival was a resounding success as part of a much broader Charity Week, and hopefully the first of many future charity food festivals held at Imperial. Because food + money for a good cause = what more could you want?

SUSTAINABILITY

artur.donaldson15@imperial.ac.uk

The meat of the problem

Veganuary cuts to the heart of the one of the biggest challenges facing the planet.

SUSTAINABILITY

Han Cai

Sustainability Writer

It's January 2019. Following another festive holiday, many people may be seeking new year's resolutions to adhere to, ideally in support of good causes. Going vegan or "zero waste" might be an option worth considering when it comes to environmental sustainability. But will cutting down meat consumption really help with global waste management?

FAO (Food and Agriculture Organization) has predicted that the global meat consumption will double by 2050, as an inevitable result of population growth and increasing demand in developing countries. However, there is also data suggesting the potentially jeopardizing effect of this trend on meat production requirements.

It shouldn't come as a surprise that to produce meat, the animals need to be fed first. This translates into much higher demand for both land and water usage. Raising livestock for food production uses 83% of the world's

farmland and accounts for 56-58% of agricultural pollutant emissions, but provides only 37% of our protein and 18% of caloric intake, according to an Oxford University study. The study also stated that even the lowest impact meat and dairy products still pose more environmental threat than the least sustainable vegetables and cereals (so, keep dipping your pita in hummus). The land is mostly used for production of animal feed and grazing, which can be detrimental to wildlife through deforestation and alterations to their habitats. Furthermore, ruminant farming is still infamous for its greenhouse gas (GHG) emission; in particular, the potent GHG methane. The arable land also needs to be irrigated for crop production, meaning that animal products require far more water than crops alone, because of the colossal amount of feed that go into their production. The livestock sector is now considered to be the number one water polluter, due to the waste associated with livestock farming. In addition to manure and slurry, veterinary medicines such as antibiotics can enter downstream ecosystems

and water sources, endangering the livelihood of aquatic species. Although the severity of different farming practices varies across the world, the transition to a diet that excludes animal products can still be hugely beneficial, resulting in a 76% reduction in land usage and 49% drop in GHG emissions, whilst substantially mitigating water contamination.

There is an interactive BBC website worth looking at that provides

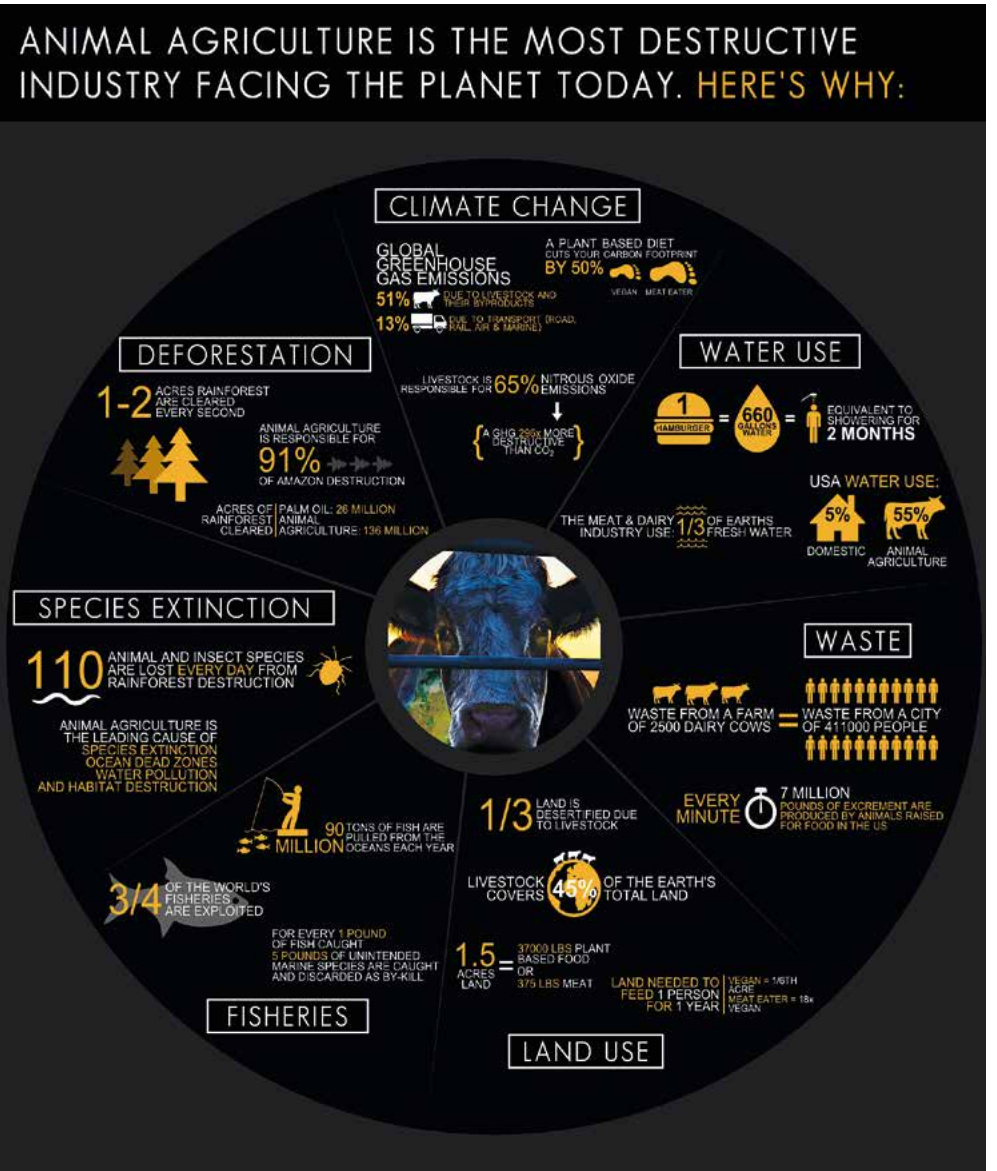
"Raising livestock for food production uses 83% of the world's farmland"

a simple overview on how dietary choices compare to each other: <https://www.bbc.co.uk/news/science-environment-46459714>.

Research on EU consumer behavior has also emphasized the

"The livestock sector is now considered to be the number one water pollutor"

relative contributions of different food groups to overall waste production and resource depletion. An average EU consumer



Meat business infographic // Cowspiracy

wastes around 123kg of food per year, 80% of which is avoidable. This is equivalent to wasting an apple a day at minimum, or a loaf of bread a day at maximum. Despite the fact that meat waste is not the main culprit when it comes to overall waste quantity, it is responsible for most of the wasted water and nitrogen resources because of its resource-intensive nature. Lowering consumer meat intake will therefore still greatly support the initiative to reduce waste footprints.

The figures are indeed quite staggering, and replacing meat with plant-

"An average EU consumer wastes around 123 kg of food per year"

based protein sources can drastically reduce the unnecessary usage of water and land during production.

Veganuary continues to rise for good reason. Making such a commitment does indeed help the planet in the long run!

Sustainability is looking for writers. Email artur.donaldson15@imperial.ac.uk if you are interested



Making meat is a messy business // Wikimedia

POSTGRADUATE

gsu.president@imperial.ac.uk

Why “Supervision Stories”?

POSTGRADUATE

Ute Thiermann

Graduate Students' Union
President

On 7th December 2018, we published our first supervision story (together with the first ever postgraduate focused content in *Felix!*). The reaction from students and staff at the College was polarised, spanning from enthusiastic support to harsh criticism. While one brave ex-Imperial student took the courage to speak up first, we are still looking forward to reading the other 3480 supervision stories describing the life of our PG

Research students!

Critical voices refer to the national Postgraduate Research Experience Survey (PRES) where Imperial College students showed a satisfaction rate of 83% with their current supervision. The participation rate was quite high, at 59%. For many people, this number, which is slightly below national average, seems to be satisfactory enough to lean back in their chairs and defend that Imperial does a good job in managing their supervision performance.

But wait a minute. As one of the few social scientists around College, I have concerns with the nature of questions and the conclusions we draw from the PRES. While the

survey evaluates general satisfaction, the skills and knowledge of the supervisor and training needs, the PRES does not address any questions related to well-being and mental health.

“The reaction from students and staff at the College was polarised”

I want to express my recognition of the Imperial staff working hard to improve student well-being and who are rolling up their sleeves to tackle the PG related

mental health crisis. Together with a group of nine other universities, in 2018, Imperial College participated in the Vitae-led research project “Exploring Well-being and Mental Health and Associated Support Services for PG Researchers”. The report was very clear in stating that “the quality of the student-supervisor relationship is central to the student experience and hence, often central to their well-being.”

The report further states:

“There was consensus across staff interviews and student focus groups that difficulty in the supervisory relationship was one of the most common reasons for well-being issues, often exacerbated

by imposter syndrome [a psychological pattern in which an individual doubts their accomplishments and has a persistent internalized fear of being exposed as a ‘fraud’]. Professional support services staff particularly commented that it was one of the most difficult circumstances to deal with, not least as PGRs were usually reluctant to give them permission to approach the supervisor. Academic and support staff felt that there was general reluctance within universities to tackle difficult supervisory issues”. The report mentions that students experience fear of complaining, perceiving themselves as being in a powerless position. Only 42% of students agreed

that they would feel comfortable in talking to their supervisor about mental health issues, while 45% disagreed; women being even less likely to talk to their tutors than men.

With “supervision stories” we are creating a channel for us and the College to hear what is going on inside of labs and offices, without fear, without filter. It is also a way to inspire students with problems to reach out for help through the constantly improving Imperial College welfare system and, eventually, resolve their problems and receive the PhD experience they deserve. So, dear students, please share your stories!

A new PhD community? Yes, please.

POSTGRADUATE

Emma Couves

FoNS Academic and Welfare
Officer

Despite having been at Imperial for three years, adjusting to PhD life brought its own new challenges, both academic and in terms of maintaining work-life balance, managing my motivation and mental health and finding time to devote to exercise. At the start, when I knew literally no one, I wished I had a way of finding support and friends in the wider PhD community. I wanted to meet people who have been at this point before and have had to adjust their approach to become effective in their research. Unfortunately, the lack of

community spirit not just in the PhD circle but at Imperial as a whole means that its research students, who are responsible for a significant portion of the academic output of the college, are suffering in silence. Struggling with motivation, mental health and resilience are no new problems to PhD students; a ‘part of the job’ some might argue. But your Graduate Students’ Union (GSU) is here to support you to have the most enjoyable and effective time at Imperial. We want to build a community of PhD students which is collaborative and supportive in all aspects of PhD life. I was keen to get involved and help build this community but, at the moment, it’s a bit of an uphill battle.

Before the Christmas break, about five of your elected PhD representatives. a sadly low

number (although we did get extra pizza, mince pies and mulled wine), met to discuss some of the big problems facing PhD students. Apart from spending almost 20 minutes complaining about how we are all slowly freezing to ice cubes in our labs and offices – which the GSU president has agreed to raise further – overwhelmingly it was agreed that building a college community where PhD students between faculties can meet, interact, make friends or even more (speed dating was even suggested) would make for a more positive atmosphere! The GSU are working hard to promote cross-faculty interaction, so watch out for information about ‘GSU Connect’ and ‘GSU Black Tie Event’ all to come in the new year. For

those of you in the Faculty of Natural Sciences and looking for a New Year’s resolution which will improve your mental and physical health, consider joining me and the faculty running club: we meet outside SAF at 5:30pm every Tuesday (and ultimately end up in H-Bar). Your GSU is here for you so, if there are any suggestions you have, talk to your PhD representative or Academic and Welfare

“Your GSU is here to support you to have the most enjoyable and effective time at Imperial”

Officers for your faculties.

Multiple faculties are struggling with open discussions about both positive and poor supervision of PhD students. The GSU is looking to hear from its students so we can share good supervision practice with the Graduate School and College. One problem we discussed was the feeling in multiple departments that PhD students are underprepared for supervision of undergraduate or Masters project students; we suggested that college should make it mandatory for supervisors to inform PhD students well in advance when they have to supervise a project student. Also, we figured that it would be good to have access to additional training for PhD students by the Graduate School who have to supervise.

As we look into the new

year it is also a good time to remind all members of our community about the mental health support on offer; Imperial College Counselling Service, Union Advice Centre and Imperial College Health Centre are all offering services open to all students. Every department has qualified Mental Health First Aiders which can be identified by their green lanyards. The Chaplaincy also offers courses in mindfulness and tea, cake and chat, exclusively for PhD students, happening once a month from 12.30-14.00 (the next one is 24th January).

We hope to see you at some of our events this term and encourage everyone to get involved in the Imperial Community!

POSTGRADUATE

gsu.president@imperial.ac.uk

Meet your GSU Committee!

POSTGRADUATE

Graduate Students' Union Committee

The Graduate Students' Union (GSU) is the representative body within the Imperial College Union for the postgraduate community across all Imperial campuses. The GSU works

alongside the Imperial College Union President to ensure that the requirements of postgraduate students are catered for. The GSU also ensures that postgraduates' social and recreational needs are met and holds a number of events during the year – do look out for these! Postgraduate students at Imperial are at the forefront of the research done and the experience they have as a student should be the best. Therefore, at

the GSU we ensure that this happens (and you'd be pleasantly surprised how much goes on behind the scenes to do this!). The work we do focuses on the academic, welfare and social needs of postgraduates. Below you can see who makes up the current GSU committee with a brief outline of some of the things they get up to. However, the roles are very flexible and officers help out where there is a particular area

of interest...or crisis! Remember, you don't have to be an official committee member to help out either if there's something you'd like to organise or change on more of a short-term basis.

Whether you are a Master, MRes or Doctoral Research student, you are automatically a member of the GSU. If you have any questions or would like to find out more please do not hesitate in getting in touch by emailing: gsu.president@imperial.ac.uk



In this vein, we take this opportunity to thank you for voting for us and look forward to serving you and ensuring your postgraduate experience is a well-rounded and happy one! Look out for

the elections in March if you would like to get involved and join our team to create some rewarding long-term impact for the PG community.



Ute Thiermann - GSU President

I thrive to ensure PG issues are taken more seriously in both the College and the Union. Ultimately, I want to increase the general wellbeing of all PGs by improving supervision culture, college infrastructure, mental health services and socialising opportunities. My PhD looks into how mindfulness can make people change their behaviours and become more sustainable. I am also finalising a two-year yoga teacher program at Triyoga.

Lingru Zheng - Deputy President (Operations)

In my past year as a committee member of the GSU and student trustee at IC Union, I have witnessed the growth of the GSU to better meet its members' needs. My previous role included initiating the IC Data challenge by partnering with 7 companies, ICDSS and Imperial Enterprise lab. We envisage an even bigger event this year!

As DP, I endeavour to improve the employability of all postgraduates by equipping you with in-depth connections in the industry and helping you turn your lab/simulation outcomes into commercial projects/products by working with corporate sponsors and Imperial Enterprise lab.



Ashley Brooks - Deputy President (Academic & Welfare Representation)

Hi, I'm Ashley, a third year PhD student in the Centre for Transport Studies (Civil Engineering). When not pursuing studies, I can be seen playing the guitar from time to time!

I'm responsible for working closely with the Academic & Welfare Officers and leading the postgraduate Academic Representation Network in conjunction with the President. In addition, I would like to celebrate the international diversity of the PG community and believe that it is a vital part of Imperial College's campus and life – indeed, it can set the tone for intellectual curiosity and pursuit throughout the College.

Carina Zhao - Social Media Officer

Hi! My name is Carina Zhao and I'm from China. I'm studying the MRes Drug Discovery and Development in the Department of Chemistry. As the new Social Media Officer of GSU this year, I'm more than excited to apply my communication skills in raising awareness of the Union and to make contributions to Imperial Master's and PhD student welfare and opportunities. I enjoy being supportive to my GSU colleagues and I really look forward to nailing this year's challenges with my team!



Clare Chan - Events Coordinator

Hi everyone, I'm Clare and I'm studying Investment & Wealth Management at the Business School. I am the Events Coordinator of the GSU. I am responsible for organising various events for all graduate students, working closely with the Union Events Team in order to make sure all events run smoothly and provide the best experience for all participants.

POSTGRADUATE

gsu.president@imperial.ac.uk

Sam Yu - Academic & Welfare Officer (Business Officer)



I'm Sam and I study Investment & Wealth Management at the Business School. As an Academic & Welfare Officer of the Business School, I am mainly responsible for retrieving feedback from students and increasing the amount of academic resources to all available students. I am also responsible for connecting PhD/Master's students from different disciplines, thus expanding the social networking aspect for every student.



Jenny (Yeon Hee) Kim - Academic & Welfare Officer (Faculty of Medicine)

I'm Jenny and I'm studying public health. I am the Graduate Students' Union (GSU) Academic & Welfare Officer for the Faculty of Medicine this year. I work closely with the course and department representatives to receive the student feedback that can be discussed with faculty and college level staff, GSU committee, and the constituents to resolve any issues faced by the students.

Hence, my role is to represent the students to ensure their voices are heard and the essential changes are made, in order to create a supportive environment for all students in the faculty.

Sandunika Hirimuthugoda - Marketing & Publicity Officer



Hi everyone! My name is Sandunika, I'm a postgraduate student studying Cardiology and Respiratory Healthcare. I'm the new GSU Marketing & Publicity Officer. I endeavour to engage a wider interest group and work closely with the Union Communications team to ensure our events are well-attended and our issues heard.

In that vein, I'm honoured to represent you this academic year and to make a positive impact on your Imperial College experience.



Lorenzo Palmieri - Sponsorship Officer

I am Lorenzo and I am a 3rd year PhD student in Mathematics. I'm the new Sponsorship Officer at the GSU. My goal is to engage private companies and external partners to support new events/projects taking place at Imperial in order to make our university's environment even more stimulating and exciting!

Hannah Jones - Events Officer



I'm Hannah and I'm doing a PhD in Neurobiology. I'm the GSU Events Officer, so I work closely with the Events Coordinator to plan and organise specific postgraduate events across each Imperial College's campus. We have lots of things we are planning to run this year, including networking events, socials, industry sponsored events and a fancy black-tie dinner!



Joseph Tam - Treasurer

I'm Joseph and I'm a Clinical Research Fellow in Urology and Prostate Cancer. As Treasurer of the GSU, my job is to budget the GSU events and activities. I will try to be as transparent as possible to be accountable to the student population.

Raya El Laham - Academic & Welfare Officer (Faculty of Engineering)



I'm Raya and I'm doing a PhD in Material Research. I'm the Academic & Welfare Officer for the Faculty of Engineering. My goal is to have more PGs reach out to the GSU and be more comfortable expressing their concerns and worries with regards to their wellbeing, as well as their education.

INVESTMENT

icu.investmentsociety@imperial.ac.uk



Bond Curve Yield Inversion

INVESTMENT

Alexander Koh

Head of Education ICIS
Investment Writer

Yield curve inversions have traditionally been a foretelling sign of impending recessions. To explain the idea of a yield curve, one needs to understand what exactly a yield is. A yield to maturity, or simply bond yield has multiple interpretation, the simplest being – it is the return an investor realises on a bond. For instance, a yield of 4.5% on a bond implies that an investor would get a return equivalent to a 4.5% annual interest rate in a bank account. Bond yields are inversely related to bond prices, when bond prices are low, the yields are high, vice versa.

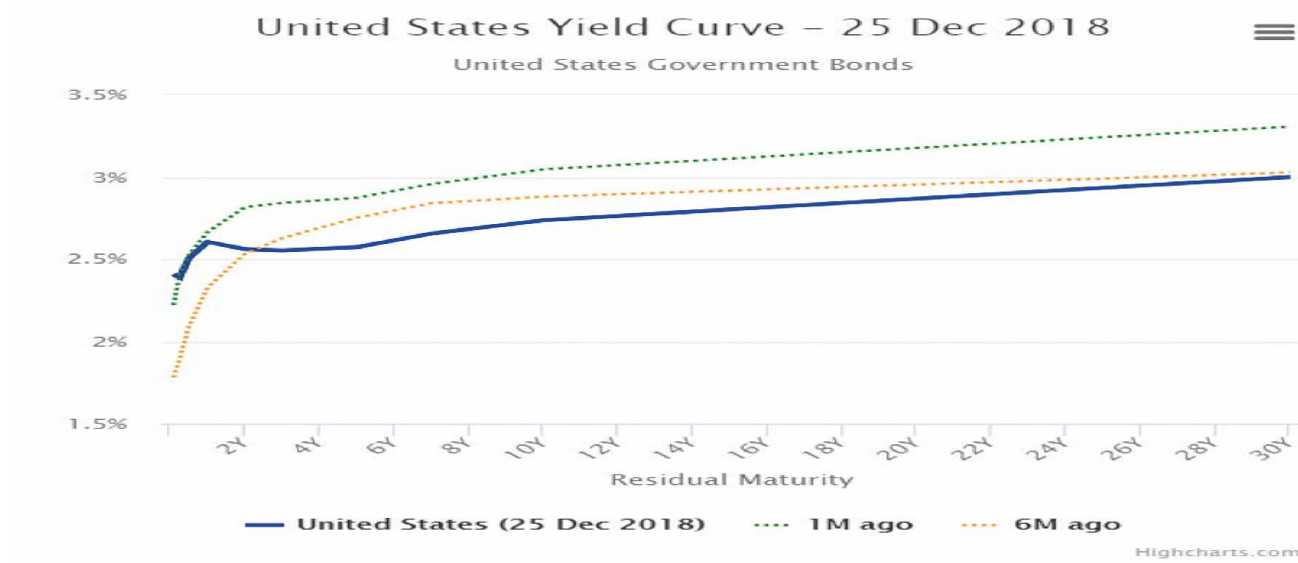
However, high yields are not always ideal. During the Greek debt crisis and Greek bond default, Greek government bond yields (10Y) reached yield as high as 48.60 before the Greek government defaulted. Bond yields, while giving a yardstick for retail investors to compare the returns on their investment between different bonds, does not account for the risk of default – hence astronomically high yields implies that investors are valuing the bonds very low prices to account for the likelihood of default.

Moving on, a yield curve simply illustrates the yields of a type of bond against the maturity of the same bond (e.g. yield of 10Y U.S. bond against the maturity of 10 Years). A standard yield curve is shown below. There are 3 crucial things to understand about the yield curve:

1. Short-term government bonds (<2 Years) typically has a lower yield relative to long-maturity government bonds because long-maturity bonds tend to have a higher default risk (hence the prices of 10 year maturity bonds tend to be lower and their yields tend to be higher). i.e. the Yield curve is upward sloping in a normal scenario.

2. Short-term government bond yields are controlled by the central bank via monetary policy. In the U.S. context, this is done by adjusting the Federal Funds Rate or by carrying out Open Market Operations (Sale or purchase of government bonds). When the U.S. Central Bank (the FED) raises the Fed funds rate, this increases the cost of borrowing for overnight loans by commercial bank and commercial banks would raise their interest rates conversely. In times of inflations (high economic growth/Overheating), the FED would raise interest rates to relieve the inflationary pressure while during times of deflations (recessions), the FED would lower interest rates.

3. The long-term government bond yields are controlled by bond traders and reflects the sentiments of bond traders. For instance, when the market is performing well, bond traders would expect that the FED would raise interest rates, and conversely, this would lower the price of bonds and increases yields. Bond traders in turn, would start selling the long-term bonds in anticipation of this rate hike (and decrease in bond prices), leading to high yields for the long-term government bonds. In this sense, an upward sloping yield curve reflects a healthy economy.



Fortelling Turbulent Times Ahead? // Highcharts.com

However, when bond traders suspect that the FED would lower interest rates in light of an impending recession, bond traders would begin buying long-term government bonds as the price of long-term government bonds would rise when the FED lower interest rates. Hence bond traders would begin buying long-term government bonds and this would lower the yield of long-term government bonds. This reflects a pessimistic investor sentiment towards the market, and it is a strong warning sign of an impending recession.

Overall, it can be observed that a yield curve inversion – when the yields of long-term government bonds

becomes lower than the yields of short-term government bond, it is a strong warning sign of an impending recession. Historically, the bond curve has inverted 7 times since the 1980s, out of which, 6 times the bond curve inversion has predicted and preceded recession. The 6 times were: the two 1970s oil crisis, the 1980s recession, the 1990s recession, the early 2000s dotcom burst, and the 2008 Global Financial Crisis. Each time, the bond curve inversion happened less than 2 years prior to each recession.

In recent times, the spread between the 3-year and 5-year U.S. government bond has turned negative (i.e. one segment of the yield curve

has inverted). Moreover, the spread between the 2-year and 10-year U.S. government bond lies at 17.6bp (or 0.176% point spread). While the current yield curve has yet to be fully inverted, it can be seen that the yield curve is flattening. Given the hawkish stance the FED has been assuming (hawkish refers to the FED closely watching inflation and would likely raise rates), the flattening of the yield curve implies that bond traders suspect that the FED would assume a dovish position in the near future. Ironically, the Fed still chose to raise interest rates in Dec 2018 despite the foretelling signs of yield curve inversion – a harbinger of recession.

Nevertheless, it is imperative to keep in mind that the timeline between yield curve inversion and economic recessions are not instantaneous. The yield between the three to five year maturity bonds dipped below zero during August 2005, two years prior to the start of the Global Financial Crisis.

“Pessimistic investor sentiment ... strong warning sign of an impending recession”

Treasury Yields

NAME	COUPON	PRICE	YIELD	1 MONTH	1 YEAR	TIME (EST)
GB3-GOV 3 Month	0.00	2.35	2.40%	+0	-106	4:29 AM
GB6-GOV 6 Month	0.00	2.45	2.52%	+0	-100	4:29 AM
GB12-GOV 12 Month	0.00	2.50	2.58%	-7	-86	4:29 AM
GT2-GOV 2 Year	2.50	99.90	2.55%	-26	-66	4:29 AM
GT5-GOV 5 Year	2.88	101.36	2.58%	-29	-33	4:29 AM
GT10-GOV 10 Year	3.13	103.33	2.74%	-30	-26	4:29 AM
GT30-GOV 30 Year	3.38	107.50	2.99%	-31	+16	4:29 AM

Will the Fed continue down its hawkish path? // Bloomberg

INVESTMENT

icu.investmentsociety@imperial.ac.uk



Valuation of Medical Technology Start-Ups

INVESTMENT

Dike Dijemeni & Esuabom Dijemeni

Investment Writers

In the past, industry specific start-up “rules of thumb” may have been sufficient to serve as reasonable basis for any valuation concern. Combined with the unique market dynamics and regulatory environment associated with the medical technology industry, start-ups in this field present a unique set of valuation considerations. In recent years, valuation issues have become increasingly important for start-up companies due to changing international reporting standards and financial reporting rules. These issues along with increasing regulatory and shareholder scrutiny together compound potential troubles for start-up companies. Because both the subject enterprise and valuation purpose are misfits within the context of typical valuation work, valuation practices are generally not applicable for start-up companies. In reality, the appropriate definition of value varies depending on the circumstances surrounding each valuation engagement. This article discusses common circumstances that give rise to the need for a valuation, basic valuation concepts, and specific valuation considerations relevant to medical technology start-up companies.

Firstly, what are the most common standards of value for start-up companies? There are broadly two standards of value for start-ups: fair market value and investment value. Fair market value is the most common standard of value used in business appraisals

and is the standard used for compliance related to equity compensation. On the other hand, investment value is the value to a specific investor based on their particular investment requirements and opportunities.

Secondly, what are the general approaches to determining business value? There are three general approaches to determining business value – asset, income, and market. Ultimately, the conclusion of value will reflect consideration of one or more of these approaches (and perhaps various underlying methods) as being most indicative of value for the subject ownership interest. The asset approach can provide meaningful valuation benchmarks for start-ups that have recently completed fund-raising rounds. For start-up companies, the asset approach is generally inappropriate to apply unless the start-up is in a very early stage of operational development such that there has been no intellectual property or other intangible value developed internally.

Accordingly, single-period capitalization of income methods and conventional applications of discounted future benefits methods are rarely appropriate to use. The mechanics of an income method require an estimate of future cash flows and an appropriate discount rate with which to determine the present value of future cash flows. The income approach is based on the idea that the value for a given enterprise is created by the expectation of future cash flows and thus focuses on the capacity of a start-up company to generate future economic benefits.

The market approach is the preferred approach when appropriate data



is available in sufficient quantity and quality. The market approach compares the subject to similar businesses, business ownership interests, or other assets that have been recently transacted. However, such per share pricing information from capital rounds provides helpful valuation anchors in the form of upper or lower boundaries for enterprise value, and can credibly substantiate the reasonableness of valuation conclusions. Consideration of prior completed financing rounds or other transactions in interests of a start-up is also a method under the market approach.

Market methods include comparison of the subject interest with valuation metrics implied by investments in publicly traded companies and those implied by transactions involving controlling interests in similar companies. Most start-ups are not near IPO or acquisition, so there is generally not sufficient information to implement the market approach to determine the enterprise value for start-up enterprises with the exception of the occasional very late stage start-up.

Thirdly, what valuation considerations should be accounted for in medical technology start-ups? Valuation of medical technology start-ups take into account anticipated future capital needs, the probability of successful exit, time to successful exit, and the potential exit value. For medical technology companies, exit events are usually via acquisition or IPOs. Furthermore, exit events and values are influenced by four factors which are market characteristics, market impact, stage of development, and key success indicators.

All companies operate within a given market and this context is perhaps the most significant factor in the exit valuation of a medical technology start-up. The most significant market factor to consider for a medical technology start-up is the absolute size and growth prospects for the pertinent market. Even if a start-up has everything else in place, 100% market share of nothing is still nothing.

Other than the disruptive potential of the new technology itself, strategic acquirers in the medical technology space commonly consider a variety of factors in evaluating the potential market. These factors

include impact of a new technology, strength of intellectual property, stability of design, technical performance data, support from human clinical studies, completion of regulatory approvals, and reputation of “early-adopter” using technology, reliability of supply chain and distribution partners, and availability of technical expertise.

Most medical technology start-ups tend to follow similar patterns in operational development regardless of industry segment. The value of a given start-up is largely related to its level of operational development. Generally, meeting later-stage milestones generates greater increases in value than that of earlier-stage milestones.

Due to this relative lack of information, qualitative factors such as the quality of the management team, clinical advisory team, and venture capital investor group become an important consideration, especially in the valuation of early-stage start-ups.

In conclusion, given the incremental valuation complexities particular to medical technology start-up enterprises, it is important to remember that industry knowledge

and valuation knowledge are not synonymous—and both are important. Firstly, the definition of value by an investor or investing group determines how value is attributed to a medical technology start-up: a start-up can have multiple values attributed based on value definition. Secondly, the value of a medical start-up depends on the unique investing approach of an investor / investing group: a start-up can have multiple values based on investing approach. Thirdly, the value of a medical technology start-up significantly depends on its market characteristics, market impact, product development stage, and key success indications. Finally, we encourage readers to extend business dialogue to include valuation and specific valuation considerations relevant to medical technology start-up companies.

“Value is largely related to its level of operational development”



Welcome back to the Union!

Happy New Year and welcome back to another busy term. We hope you're all feeling refreshed and ready for all we have organised here at the Union. With exams in full swing, we understand that the next few weeks might be a little stressful, but we have a lot on offer to make it all go a little smoother.

Don't forget that the Advice Centre is available to all students and can support you through the exam season, along with providing advice on mitigating circumstances and any other issues. To find more information, visit imperialcollegeunion.org/advice.

Begin your 2019 health goals with Meat Free Monday this January.

Throughout the month, all venues are offering a range of vegetarian options. Have a read of the infographic below for details on why you might want to consider going meat-free at least one day a week. For more information on the initiative, visit imperialcollegeunion.org/mfm.

Enjoy our many deals across our campus outlets this month. Visit any one of our bars for discount prices on food and drink during the January Sale. Pop by the Union Shop for up to 50% off select items too. Grab your breakfast at FiveSixEight at the new breakfast time of 9:30-11:30, as well as a hot drink at Shop Extra's new coffee station. Last term's new addition to the shop offers a coffee and tea station with both dairy and non-dairy milk options.

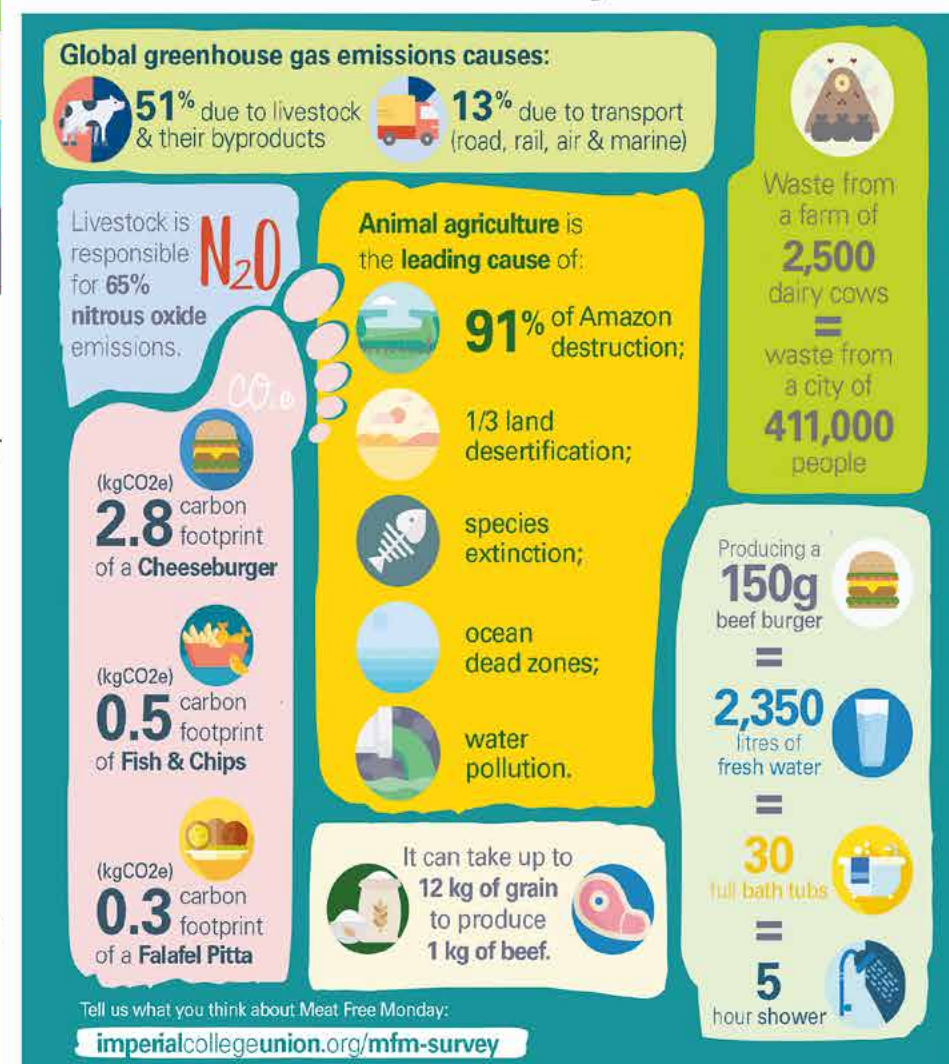


How do you experience Imperial?

Have you completed the Student Experience Survey yet? Don't lose another minute - access it here: imperial.ac.uk/student-experience-survey and tell us what's your experience of Imperial. We know student life is complicated and we want to hear more about how we can enrich and improve it.

We've been working with College along the years, using the data collected from the Student Experience Survey and making real change around the campuses. You said Central Library had a lack of air conditioning, study spaces and power sockets so we made sure the Library received funding to improve ventilation and aid cooling during the hot months of summer, while adding extra study spaces and power sockets on levels 4 and 5. You also said Ethos gym lacks quality equipment and needs to be expanded and in response to that we refurbished Ethos and replaced all gym equipment. Complete the survey now and enter a prize draw to win one of the 20 vouchers up for grabs.

Go Meat Free on Mondays!



Make great memories



11 January, Friday

PGI Friday
h-bar | 19:00 - 23:00

Replay Friday
Reynolds | 19:00 - 23:00

BPM
Beit Bars | 20:00 - 02:00

17 January, Thursday

Pub Quiz
h-bar | 19:30 - 21:30

15 January, Tuesday

Super Quiz
FiveSixEight | 19:30

Jazz & Cocktails
Metric | 19:00 - 23:00

The Quiz
Reynolds | 18:00 - 20:00

16 January, Wednesday

CSP Wednesday
Beit Bars | 19:00 - 01:00

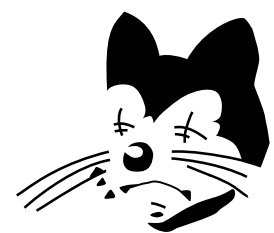
18 January, Friday

PGI Friday: Back 2 School
h-bar | 16:00 - 23:00

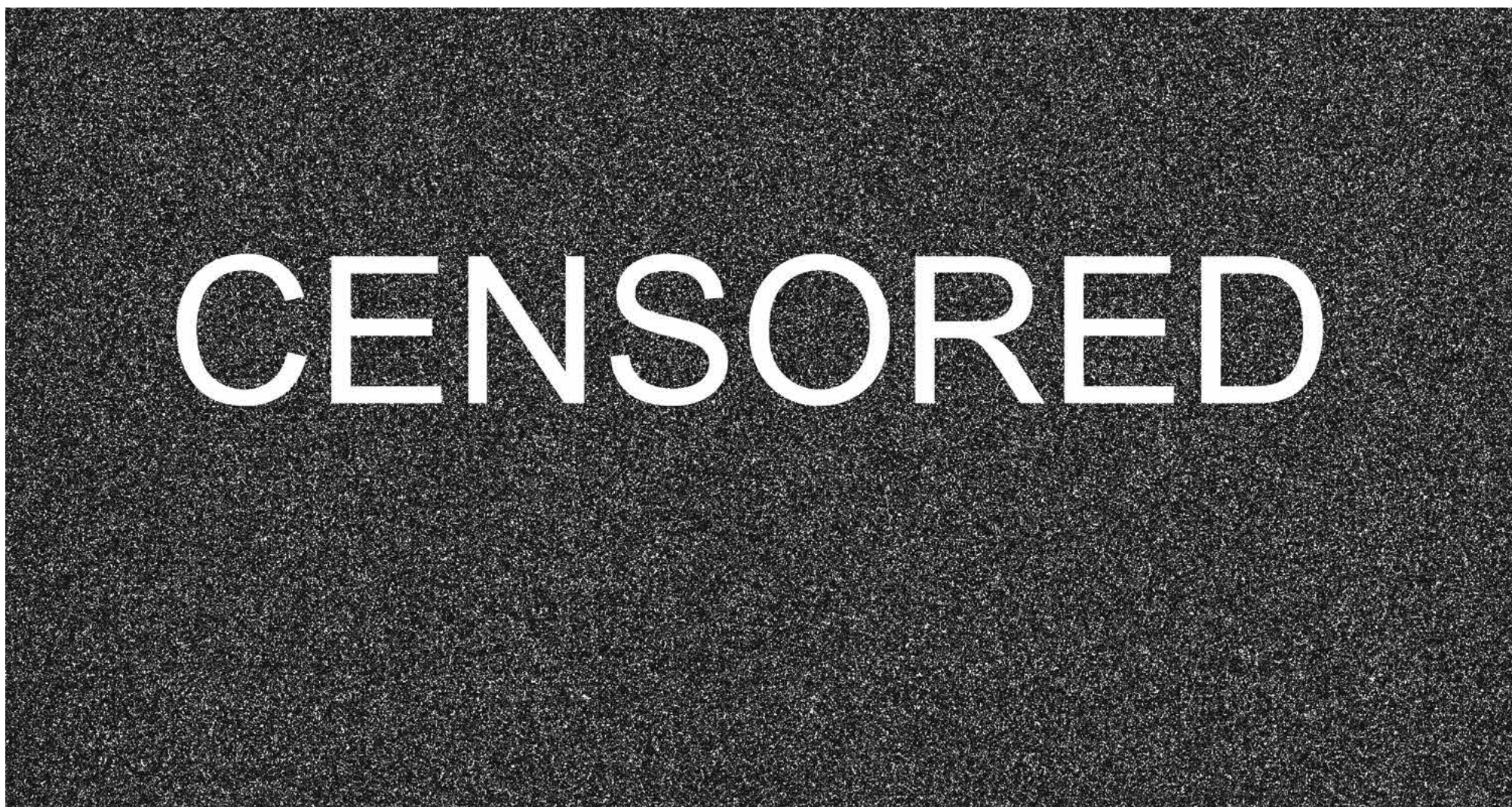
1st Bop of the Year
Reynolds | 19:00 - 23:00

Beit Me I'm Famous
Beit Bars | 20:00 - 02:00

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Hangman



Controversial Centrefold censorship // Flickr

Hot flash - Centrefold to be stripped down

HANGMAN

Negafelix
Editor-in-Chief

Negafelix kicks off 2019 with an exposé: Felix centrefold to contain full frontal nudity!

Negafelix can confirm that the centrefold will henceforth contain fully nude photographs, following an onslaught of irate e-mails from blue-balled students.

“The announcement comes as Imperial comes third from bottom in the list of ‘most sexually satisfied students’”

The uproar came following the publication of Kinky Klub in the Christmas edition of

the newspaper (*Felix Navidad*, 2018), in which suggestive simulation of various kinks by participants were semi-censored, simultaneously evoking and choking repressed yearnings in many amongst the student body. “Listen here you fat pricks,” an e-mail from one Bamish Heck, 3rd and a ½ year physics student, reads, “I’ve gone through shit this break. I’ve eaten my five-a-day, spent time with family, laid off drugs, and even gone to bed at ten o’clock every day for three weeks. I don’t even scream ‘yeet’ when orgasming anymore. I can’t live this wholesome life no more - I demand

full frontal nudity! Stop covering the goods!” This was followed by several fairly explicit sexual threats (many of which several members of the NegaFelix team are not opposed to engaging). Members of the Kinky Klub were understandably in shock on hearing of the requests. “Wait, are you for real?,” exclaimed Xanax Taken, Chair and founding member of the society, “I was honestly just messing about when I suggested we start this up – didn’t realise so many people were eager to bust a nut...wait no never mind I did. Looks like my milkshake does bring all the boys to the

yard, huh?” The announcement comes as Imperial comes third from the bottom in the list of “most sexually satisfied students”, according to National Student Sex Survey (NSSS) polling, narrowly beating out Cambridge and the London School of Tropical Medicine. “This is an absolute disgrace,” exclaimed Nikki Feel, Deputy President (Gelled Hair). “If all it takes for this sorry lot to stop moping around the library café looking like a hoard of zombies are some tits and balls, then it’s about damn time!” It was expected that this would be met with

considerable opposition from the Communications team within the College, however NegaFelix has received nothing but overwhelming support from the College. An informant within the Fortress of Solitude, also colloquially known as the Faculty Building, noted that Alice Gast rubbed her hands with glee and the news, saying, “this is the perfect distraction for those horny bastards! Quickly Lucinda, prep the private jet – I have an oilfield to get to!”

HANGMAN

negafelix@imperial.ac.uk

7 ways Imperial will stay firmly in the green in 2019

HANGMAN

Janice Fast
College Overlord

College Overlord Janice Fast puts in her two cents (oops, no that's too much money) on how Imperial plans to turn the Blue Cube green in 2019

WELCOME BACK, my loyal subjects, to another year in your personal hell, and my private heaven. I know many of you are currently taking January exams;

I hear your cries from my penthouse office in the Faculty Building. Cheer up; it could be worse (don't tempt me though)!

As many of you already know, a core part of our mission as an administration is improving (my) life on campus. We've recently paid for an independent consultant to consider areas of change to make the College green this year. † The consultant recommended some great areas for change, which I propose to you here:

1) We're reconsidering an overhaul of the personal tutorial system. Why waste tutors so? Academics are a finite resource; think of the children! That cannot possibly be good for the

environment. How about 30 people per tutor group? Savings! (for the planet)

2) The new air-conditioning in the library seems to be doing you all a lot of good. In the interests of global warming (and to save on heating) we're leaving it on 24/7 this year.

3) Oil spills are such a waste of money. They're also not that great for the environment. Both of these go against our core values – so why waste perfectly good oil when we could just recycle it for use in Fusion? Crude oil is full of naturally occurring hydrocarbons, you know – it's practically vegan!

4) Speaking of oil, our good friends over

at Shell have pledged to donate a sizeable amount of funds towards the administration to 'help improve services'. Everything we do is for you!

5) It's nice we're signing up for the Race Equality Charter, but it's pretty costly. For the environment, that is – all that paperwork cannot possibly be good for those indigenous people in Patagonia. Surely it would make more sense just to scrap the whole thing? (We do take racism seriously though; we have black professors)

6) We've decided there are too many of you home undergrads paying these cheap fees. Hence we've decided to cull

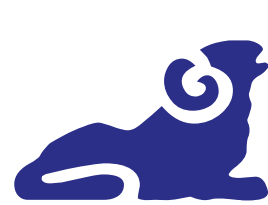


The Hangmans practically write themselves // Memeperial

the entire Earth Science department. We all have to sacrifice for the greater good.

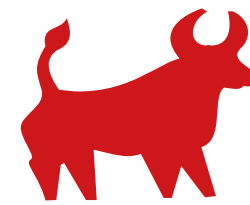
7) Oh, we're raising your fees again. Green Imperial!

Always eager to hear your thoughts about this (though we will be putting these through); my office is on the top floor (a.k.a not-on-your level) of the Faculty Building.



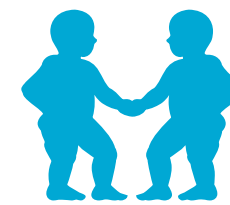
ARIES

You've already given up on your New Year's resolutions. If only you could lose weight as easily as you lost hope.



TAURUS

You're Deputy President (Finance & Services). How can you save money? Sell leftover Farmer's market vegetables and market them as premium vegan? Score!



GEMINI

You can finally breathe easy as student finance delivers you from the pit that is overdraft. Not for long though; rent is due.



CANCER

You're Alice Gast. Listen, 2019 is your year to secure the bag. Finesse them oil companies, sis.



LEO

You're stunting with your new AirPods, eating sushi and shit. Don't try and act like you don't shop at Lidl like the rest of us.



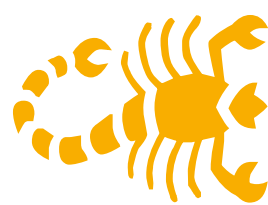
VIRGO

Your boyfriend gives you a late Christmas present: chlamydia.



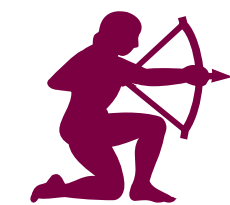
LIBRA

You attend an ethics event organised by Shell. You never realised just how fun conning fishermen out of their futures could be.



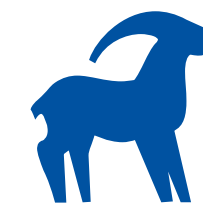
SCORPIO

You go to the beauty parlor. You feel out of place. Turns out you're no longer used to being around so many other women. Is this how incels feel?



SAGITTARIUS

You decide to go on a quick weekend trip to Vienna. Unfortunately DroneSoc decide to have a little social outing in the countryside.



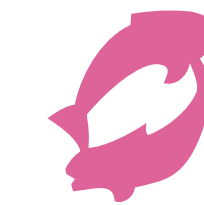
CAPRICORN

You're President of VegSoc. Meat Free Mondays are a fantastic idea - shame the food's shite.



AQUARIUS

You have a moment of clarity in the middle of your exam. Fuck, you've forgotten to take the bins out.

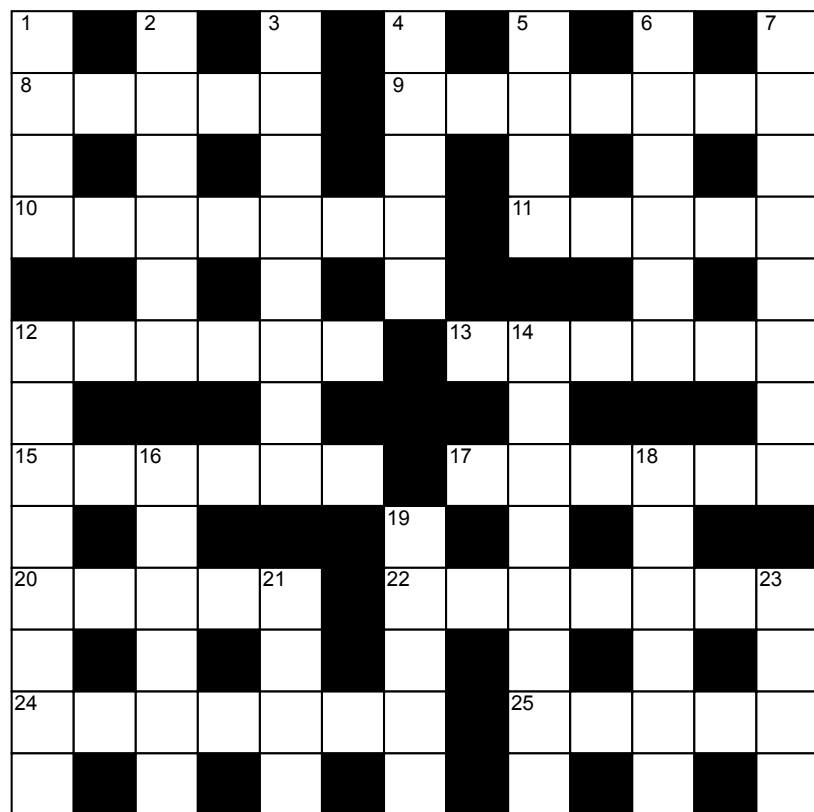


PISCES

You decide to support Theresa May's Brexit deal. In the renegotiations, the only thing all parties agree on is your deportation.

PUZZLES

fsudoku@imperial.ac.uk



CROSSWORD

Across

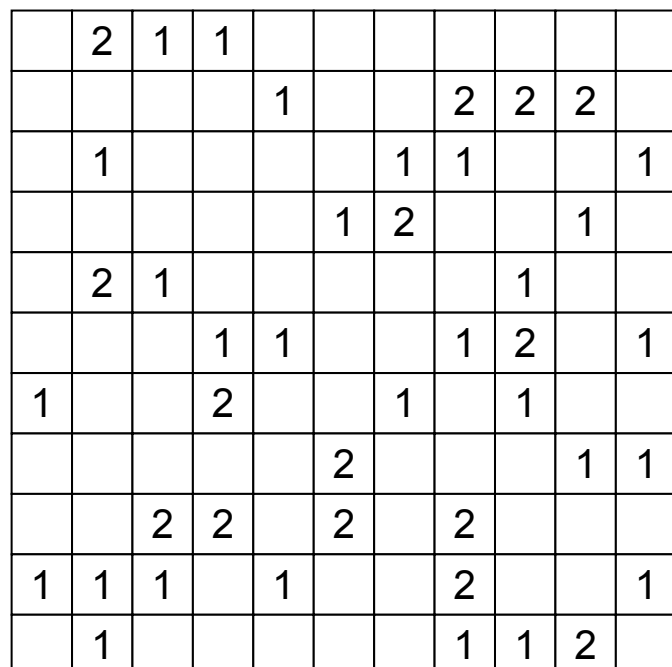
- 8. Short Japanese poem (5)
- 9. High flat region (7)
- 10. Pink ones are especially good detectives (7)
- 11. Some enjoy watching it dry (5)
- 12. TV news host (6)
- 13. Room for working (6)
- 15. Sacred objects (6)
- 17. Listening to his music makes you smarter (6)
- 20. Field's best friend (5)
- 22. Glazed wall holes (7)
- 24. By-products of a wandering mind (7)
- 25. Late (5)

Down

- 1. Parliamentary position (4)
- 2. Piece of cake! (6)
- 3. Chestnut, Button, or Portobello (8)
- 4. Precursor to musicals (5)
- 5. Horrible stingy insect (4)
- 6. Brotherly constellation (6)
- 7. Fraction (8)
- 12. Makes mountaineers sick (8)
- 14. ^[1] (8)
- 16. Makes a cuppa (6)
- 18. On a ship (6)
- 19. Satisfying basketball sound (5)
- 21. 1000 units (4)
- 23. Simon does it a lot for fun (4)

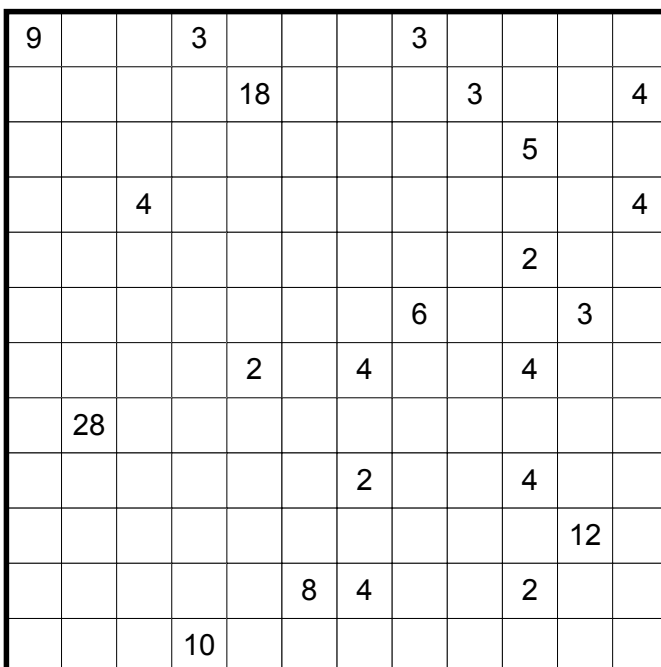
MINESWEEPER

The number in a cell represents the number of mines adjacent to that square (up/down, left/right, diagonal). Find and mark all of the mines to clear the board.



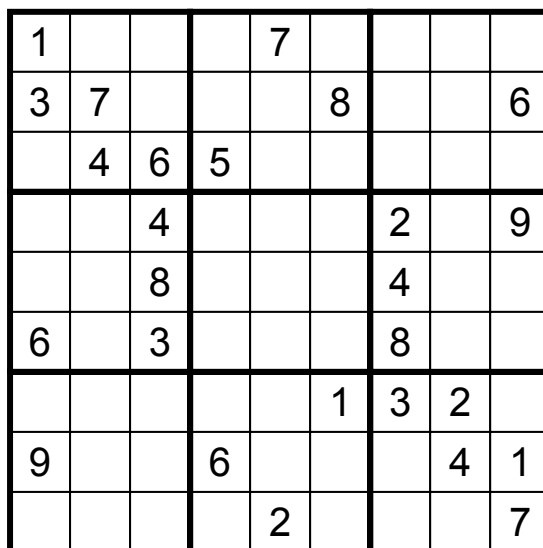
SHIKAKU

Divide the square into rectangles, such that each rectangle contains exactly one number. The numbers given represent the area of the containing rectangle.



SUDOKU

Fill all the boxes with a number between 1 and 9. A number can only appear once in a row/column, and only once in each sub-box.



FUCWIT

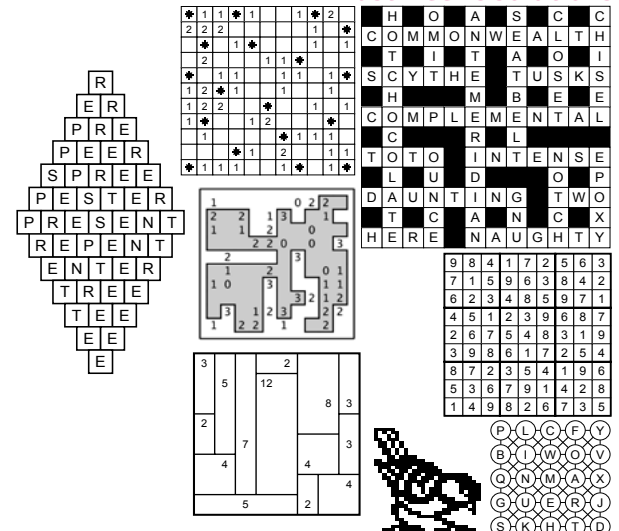
1	Maxiane 🐻	191
2	HoneybunnySnugglepuff	169
3	Yeet Infection	165
4	CHZYN0.1InMy<3	149
5	Luncheon Pals	138
5	KBLB	138
7	DQ	134
8	Lunar Lunacy	125
9	Budget-Greg & 13Whales	123
10	S. B. S.	120
11	Computer Magic	102
12	Fleesh and the tooters	95
13	Lilmonix3	88
14	Castiel	87
15	The Indoor Sundial	75
16	Sudok-urself	68
17	Cat Ladies	65
18	Those Left Behind	64
19	IC Sci-Fi & Fantasy	50
20	XxDxX	49
21	Quizlamic extremists	48
22	M	43
23	Trollheim	42
24	Crosswordsolver.org	34
24	Quizzy McQuizface	34
26	Dancing Queens	33
27	Freakamathics	30
28	satu lipa	28
29	Snails	24
30	the dope popes	18
30	The 188's	18
32	Antionuus	17
33	Flo	15
33	Los Pollos Hermanos	15
35	OSUcks	14
36	Ed, Edd & Eddie	13
37	Saskatchewan	11
37	M.C. Potato	11
39	Sleepy Honey Badger	9

Spring term leaderboard starts this week. Send your solutions to fsudoku@imperial.ac.uk before Wednesday midday to take part in the leaderboard!

Points available

Crossword	6
Minesweeper	4
Sudoku	3
Shikaku	4
Total	17

Last week's solutions



SPORTS

sport.felix@imperial.ac.uk

Immortals Stumble at Home against Kent Falcons

SPORTS

Daniel Grumberg

*Imperial Immortals
Publicity Officer*

With a lot of new recruits and some veterans returning for a final season, the team looked entirely different for our rematch against the Falcons.

“This time around we weren’t suffering from missing minibuses or anything”

We were hoping for a much more contested game this time around at our home grounds.

This time around we weren’t suffering from missing minibuses or anything like that and arrived in Harlington with plenty of time for changing, ironing out last-minute game plan adjustments and warming up.

After the usual roster checks and coin-toss formalities we took the field hot during an evenly contested first half.

Unfortunately, a couple of defensive lapses and a failure to score in the red-zone twice, once at the one-yard line, the other with a fumble on a break-out pass, put us behind early at the half.

We got back into the game quickly, thanks in particular to Sebastiano “Super-Glue” Zane who received a 60-yard TD

pass in his first ever game.

We then proceeded to pound the two-point conversion in with our favourite play, the Red Raider!

“The Falcons cranked up the tempo of their offence leaving our two-way players gasping for air”

Unfortunately we struggled to keep the momentum up, as the Falcons cranked up the tempo of their offence leaving our two-way players (almost all our squad) gasping for air

without the ability to get a second of rest between plays.

Nevertheless, congratulations to our MVPs.

The first Sebastiano was already mentioned previously. Tom “Hello Cheer” Smith displayed his usual passion and love for hard tackles, Killian “Spacehead” Gmyrek in his much-anticipated return at receiver, and Francisco “Sick Pump” Costa for not getting injured so far.

With the second half of the season approaching quickly, we are looking at improving even further and changing the look of the division by re-establishing ourselves as one of the top Britball teams.

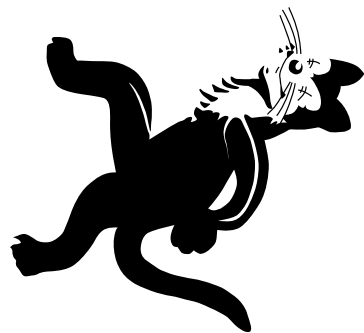
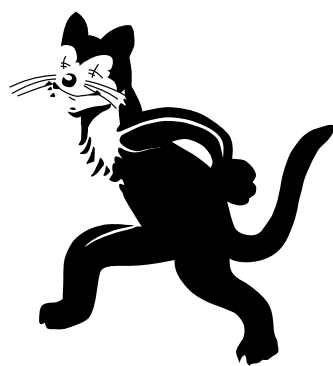
If you want to join a young energetic American Football team get in touch on Facebook.

#BecomeImmortal



The Immortals’ game face appears to be a mixture of surprise and fear // *Immortals*

Want to be on the *Felix* team this year?



***Felix* is recruiting new section editors and copy editors for this year!**

If you’ve enjoyed reading the paper, and want to help create it each week, apply to join the team! All training is provided, as well as weekly cake, so come and join us!

If you’re interested, please email felix@ic.ac.uk

SPORTS

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Couch-to-5k: From Couch Potatoes to Runner Beans

SPORTS

**Karyshma Gill,
Noemie David-
Rogeat & Charlotte
Barratt**

ICXCAC Members

Graduates of ICXCAC's Couch-to-5k programme detail their journey from fitness zeros to running heroes in just 9 weeks

You know how some people start the academic year determined to do their best?

We, the couch potatoes, decided to trade Netflix for ICXCAC and running shoes.

We know what you're thinking: why would perfectly sane people give up the TV for running? At first, that was us as well.

Who in their right mind likes running except for runners?

Personally, running was something I only consid-

"The ICXCAC Sunday breakfast is one of Imperial's best-kept secrets."

ered starting after hitting the snooze button one too many times for a lecture that wasn't recorded.



Nobody told the Couch-to-5kers that their prize medals were not in fact large chocolate coins // ICXCAC

Yet we all signed up and so the training began.

We were gradually introduced to the runner's world by the wonderful ICXCAC women's captain, Charlotte Barratt.

The programme followed the NHS 'Couch-to-5K programme', a training programme designed to allow couch potatoes to eventually run a 5 kilometre race in a measly 9 weeks.

The first session was supposed to be relatively easy; we only ran in 1 minute intervals.

As easy as that sounds, by the end of it I was almost ready to quit and as training practices became more intense I began considering this option more and more.

Although I hate to admit it, the only thing that kept me going was food.

In my opinion, the ICXCAC Sunday breakfast is one of Imperial's best-kept secrets.

As a broke student who has an addiction to brunch, these runs were the perfect bait.

Run and you'll get a full English.

Once we realised that ICXCAC members had the metabolism and passion to be serious foodies, we couch potatoes started showing up for more events.

Some of these events were events we genuinely never imagined doing such as 7am core sessions (yeah, they're those people), LUCA Cross Country races (4-6km races on muddy trails up and down steep hills in some of London's parks) to even trying out athletics' track and field.

The best thing about these events was the love and support shown by the other members, because even though we weren't competitive athletes we were never made to feel like we didn't belong.

In each session

we started with drills to perfect our technique and afterwards learnt how to stretch our different muscle groups.

After 5 weeks we were already running 20 minutes non-stop around Hyde Park in the dark wearing fluorescent gear, keeping a good pace, and managing not to look like our arms and legs were spaghetti floating around our body.

After a long term of constantly pushing our limits, the Richmond Park Christmas 5k (AKA our big debut as runners) eventually arrived.

In typical British spirit, that morning it decided to rain cats and dogs.

That didn't deter us though.

Armed with face paint and our very first race number we ambushed the starting line, ready to make our mark.

The prospect of eating baked goods after the race was definitely a

motivating factor (shout-out to Charlotte and her chocolate balls).

What a successful race it was!

All 9 of us not only managed to complete the race in 35 minutes and earn ourselves the biggest medal ever (with a Christmas pudding on), but the incredible Michael Fu, Fintan O'Connor

"Shout-out to Charlotte and her chocolate balls"

and Claire Zhang even placed in the top 3 in their respective categories

"They all absolutely smashed it", said Couch-to-5k Captain Charlotte.

"I can't believe how far they came in just one term. It's a massive personal achievement.

"Watching them cross the finish line on race day like real athletes in their ICXCAC vests made me incredibly proud, a bit like a mother bird watching her chicks fly off from the nest for the first time. Except running.

"Michael, Fintan, Claire, Karyshma, Noemie, Rachel, Nathalie, Lisa, Gabby and Maria - you're all superstars".

Our journey doesn't end there though.

Some of us (Noemie, we're looking at you) didn't manage to make it to the race, so, we're hoping to run a 5k together again in spring... just because we can.

Now that we speak the runner lingo, we all also want to try to get a new PB (personal best) and a SB (season's best) and maybe even a 10k under our belts while we're at it.

Turns out, running is addictive and now we're one of "those guys".