



**UK POLITICAL
LEANING SURVEY -
ANONYMOUS - ON
THE BACK PAGE**

FRIDAY 15TH OCTOBER 2021

Banner photo Credit: Envato Elements

Was YOUR data leaked? “Enormous” personal data breach result of Imperial College blunder

Credit: Imperial College London



Imperial College Faculty Building - Ground zero for the breach

Sam Lovatt Editor-in-Chief

Felix has discovered that Imperial College London accidentally released the personal data of thousands of students, including at least their full names, UCAS numbers, dates of birth, home addresses, ethnicity, telephone numbers and the room number they stayed in when in halls.



**THIS WOULD
HAVE BEEN THE
DATA FOR EVERY
STUDENT WHO
STAYED IN HALLS
OF RESIDENCE
AT IMPERIAL
COLLEGE IN THE
LAST 5 YEARS**

Continued on page 4

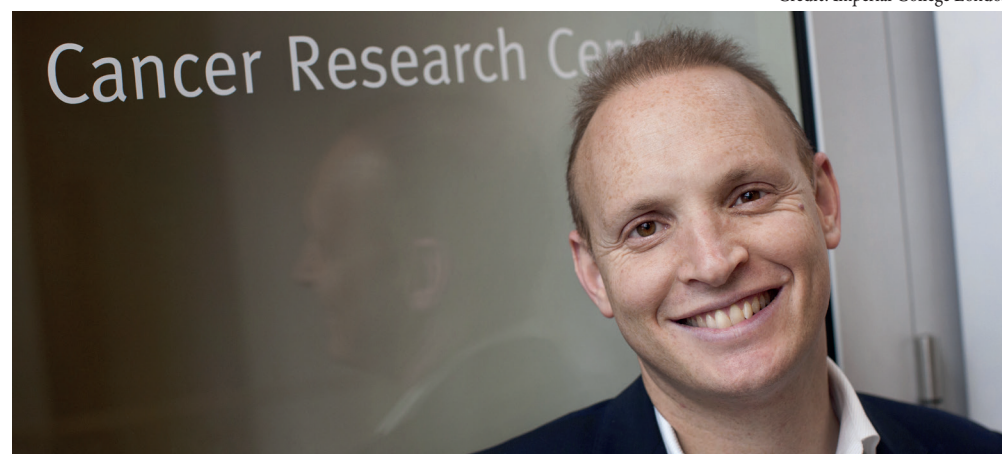
Imperial College oncologist found guilty of providing inappropriate treatment

Credit: Imperial College London

Calum Drysdale News writer

Imperial professor of Cancer Medicine and Oncology, Justin Stebbing, who was nicknamed “God” by some of his patients for his pioneering work has been found guilty of failure to provide appropriate care by the Medical Practitioners Tribunal Service (MPTS).

Continued on page 5



View the FOI request here

EDITORIAL

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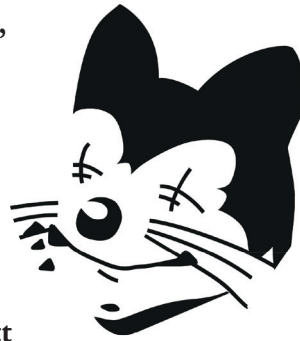
The Felix Editor on

Pandemic Profit Windfall

In my placement year I worked for Reckitt, a FTSE top 20 company which owns many brands, including the likes of Durex, Strepsils, Gaviscon and, notably, Dettol. Just before the pandemic, on 7th March 2020, Reckitt hit a trough stock value of 5374. By 11th July 2020, Reckitt stock price had peaked at 7754, or a 44% increase in just 4 months. Reckitt also reported £1.696 billion in operating profit for just the first half of 2020, up £221 million from the same period the previous year. It's no secret that a global boom in disinfectant products was mostly responsible for this rise.

More recently, HSBC has set aside £650 million for bonuses for its bankers this year, following a quintupling of profits in the first half of 2021, when compared with the same period last year. These profits have occurred due to a number of irregular economic circumstances leading to a booming economic recovery and high rates of mortgage lending. One large factor in this recovery, as recently acknowledged by HSBC's CEO, is the world leading, yet eye-wateringly expensive, vaccination programme.

Having shelled out for one of the most socialist economic responses to the pandemic world-wide in the form of the furlough scheme, it is clear that the UK government sees the pandemic



as a burden that should largely not have to be shouldered by the individual. Why then are these sectors that have drawn in record profits, almost entirely by fluke that their commodities are desired in a locked-down world, able to reap the rewards scott-free and incur no extra taxation? Do we really think that key management changes within Dettol have led to astronomical profits that break all records, or could it be that every public surface and exposed digit has been sanitised to within an inch of its life?

As we can see from the recent National Insurance hike, running an economy that shelters so many people at no extra cost is not sustainable. But part of the cost has been passed to the tax payer, partially in an effort to tackle the NHS backlog which, of course, was caused by locking down. Meanwhile the £221 million extra profit taken by Reckitt has been stashed away, and HSBC shareholders have received an average of just under £1 million each over the last year in profit shares. I am personally very far from a socialist, however I can see no justification for not introducing a windfall tax on companies unduly profiting from the pandemic, instead of removing the universal credit uplift and hiking National Insurance. This operating procedure can only lead to the rich getting richer and the poor getting poorer.

Statement of Intent

At Felix we believe that it is always in the interest of the students to know. Transparency in the workings of the College and the work of your student representatives is key. Therefore I, the Felix Editor, on behalf of the team promise that:

We will, to the best of our ability, tell you the whole truth and nothing but the truth.

We will keep your confidence and will only publish something you say to us if you have explicitly said that we can.

We will work to expose unfairness and discrimination in all forms that it takes at the College .

We will treat fairly any article sent to us, regardless of point of view, and do our best to work with you to prepare it for publication.

Signed by Sam Lovatt
Editor-in-Chief

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Write for Felix!

Felix is a longstanding institution which has produced some of the finest student journalism in the country, won awards and broken stories that end up in national news.

Felix provides an outlet for all students and staff to review, read about and report on whatever they want. Anything you feel passionate about can be transcribed, honed to perfection with the help of our Section Editors and published both in print and on the website

Writing on what you're passionate about is the best way to deepen your interest and expand your horizons (also, if we're honest about incentives, a lot of the sections get you free tickets and it looks good on the CV)

If you're interested in writing for us, get in touch with any of the section editors at their submissions inbox (e.g: if you want to write for Arts, email arts.felix@imperial.ac.uk), or the Editor in Chief at felix@imperial.ac.uk

We need writers, editors, copy-editors, illustrators, photographers and more!

Keep The Cat Free

Since 1974, "Keep the cat free" has been Felix's motto and a central tenet of its operation. The phrase applies in three aspects: editorial independence, free to read and free to write.

Editorial independence does not mean unfettered free speech. Just because we can say something doesn't mean we should. Felix will always be an inclusive environment for as many people as possible. This being said, Felix does not conflate offence with harm, and any content that is not illegal or deeply immoral can be published at the Editor's discretion, with the following statements in mind.

The paper will never hold a formal political agenda, nor will it be reliant on advertising for funding, despite the occasional inclusion of ads.

These ads will never dictate what is run in the paper.

Felix retains the right to criticise anyone and is accountable to the law in terms of defamation. As part of the Union, Felix is part of a charity that exists to represent and support students. The paper will always seek to strike a balance between public interest and student welfare.

Since 1971 the paper has been free to pick up and read and will remain this way indefinitely.

The paper will always be a place that students, staff and alumni can write freely. This statement applies exclusively to the aforementioned groups, and guest posts, paid or otherwise, are never accepted. In the same spirit, Felix will never financially reward any contributions from the above groups.

NEWS

Continued from page 1

Data breach

The data was made accessible by the College's Freedom of Information (FOI) team in the form of an Excel spreadsheet, where it appears rows containing sensitive data were hidden but not deleted.

The data was made available on the website WhatDoTheyKnow.com (WDTK), where it was publicly available for anyone to download for nine days, before being flagged by the person who made the request and subsequently removed from the site. The data was available from the 14th to the 23rd of June 2021.

The requester was approached for comment.

WhatDoTheyKnow.com is a website designed to make responses to Freedom of Information requests public. Any member of the public could have downloaded and saved this data during this timeframe.

The original request, titled 'Data by college halls' asked:

"For all undergraduate halls, for the last 5 years, could you please provide for each individual hall:

- Number of students by each subject (eg: 100 computing, 25 physics)
- Number of students by fee status (Home/EU/international)"

A further request for the percentage of students by age and gender was made later the same day.

The person who made the original request described the mistakenly uploaded data as containing "thousands of rows of student records - including full names, UCAS numbers, DOBs, room numbers, home addresses, ethnicity, and telephone numbers".

When asked for comment, Imperial College declined to specify exactly what data was included in the breach, or how many students' details were included. If the data leaked was comprehensive for all students included in the original request, this would have been the data for every student who stayed in halls of residence at Imperial College in the last 5 years.

Once the requester of the FOI had

Dear Imperial College London,

For all undergraduate halls, for the last 5 years, could you please provide for each individual hall:

- * Number of students by each subject (eg: 100 computing, 25 physics)
- * Number of students by fee status (Home/EU/international)

Yours faithfully,

Dear IMPFOI,

Thanks. Could I add two more queries to this request (again, for each hall):

- * Percentage of residents by age
- * Percentage of residents by gender (ie: male/female/other/unknown)

Yours sincerely,

Screenshots of the original Freedom of Information requests

“ ONLY WHEN THE REQUESTER EXPLAINED HOW THEY HAD VIEWED THE PERSONAL DATA DID THE FOI TEAM ACCEPT THAT A BREACH HAD OCCURRED

pointed out that the document sent contained such a considerable amount of personal data, the College's FOI manager, who we have chosen not to name, responded to say they could not see any personal data included in the spreadsheet. Only when the requester explained how they had viewed the personal data did the FOI team accept that a breach had occurred and asked

the user to delete the document from their device.

A WhatDoTheyKnow volunteer described the breach as "significant" and said it involved "enormous amounts of personal data, including highly sensitive personal data".

When asked for comment, an Imperial College spokesperson said "As soon as we were made aware of this breach we immediately self-reported to the ICO who have since confirmed that they are content with Imperial's response and will take no further action". This comes in contrast to the correspondence on WhatDoTheyKnow.com, where it appears that when the original requester highlighted the breach, the College's FOI team responded by saying, incorrectly, that no personal data was included in the document.

When asked whether any attempt had been made to notify the students whose data was included in the breach, a college spokesperson responded by saying that "the data was only

accessed by the requester and College and WDTK staff who were working to resolve the issue", and that "The ICO's regulatory guidance advises against notifying individuals in such circumstances". Confirmation that no one had downloaded the data other than the original requester was gained through collaboration between Imperial College and WDTK.

The spokesperson also added that the College "have implemented a series of additional measures to prevent this happening again", though did not elaborate on what these were.

This statement follows another potential data breach, which for sensitivity reasons cannot be detailed, which occurred after the breach in question.

When informed of the breach, Imperial College Union commented "The Union was concerned to learn of this incident, which could easily have led to the breach of a significant amount of student personal data. We hope the College will seriously

If you open the file using an appropriate client, and then go to the annual "Have arrived" sheets, there are thousands of rows of student records - including full names, UCAS numbers, DOBs, room numbers, home addresses, ethnicity, and telephone numbers. The columns containing personal information are marked in green on my client, indicating that perhaps you meant to delete them before sending the archive.

A description of the data included in the breach, given by the person who requested the data

review its processes for handling student data in light of this and other incidents". When asked whether holding the College simply to the letter of the law in terms of data protection was enough, the Union added "This narrow aversion of disaster shows that adherence to regulatory requirements is clearly not a sufficiently high bar - the College should be far more proactive in protecting students' personal data".

Imperial College declined to comment on whether the personal data of anyone seeking refuge or otherwise protected was included in the breach.

Imperial College declined Felix's request for interview.

Felix columnist Rupert D'Toriano on the breach

An interesting display of indifference from Imperial College on what could have been one of the largest data breaches in higher education history.

Data on students is clearly being fired around the secretariat more frequently than some may assume, and with very little oversight on how it is protected. What sort of data protection team doesn't know the difference between hiding and deleting data in Excel?

Furthermore, when the personal data was originally flagged to the FOI team, they responded by saying that there wasn't actually a breach? At any step along the way the user could simply have not responded to the FOI team and the data would still be up

there today. We can thank our stars that the person who made the request was so diligent and moral, or the data of most of the people reading this could be floating around in cyberspace right now. It is by sheer luck that the data wasn't downloaded during the 9 days it was publicly available, and this should be no defence for the operating procedure.

The College's response says that the ICO's guidance "advises against notifying individuals in such circumstances". As far as I can see this is not true. The ICO states on its website that "If a breach is likely to result in a high risk to the rights and freedoms of individuals, the UK GDPR says you must inform those concerned directly

and without undue delay". Nowhere does it say that an organisation should NOT inform individuals included in such a breach. Is it right that we hold the College to the very minimum of what the law requires in protecting our data?

In spite of all this, the College seems to have responded in a tone suggesting they did everything right. Let's hope that the unspecified changes made to the data management system lead to real change in how similar requests are processed, or maybe next time Lady Luck won't be so kind.

Continued from page 1 Medical malpractice

The MPTS in Manchester has heard over the last 20 months how Stebbing, had made a name for himself by aggressively pursuing all treatment options, even when the benefit of treatment was unclear. However, in a judgement published last Wednesday, the Tribunal found him guilty of 33 out of 36 counts of giving inappropriate treatment to terminally ill cancer patients of which he admitted 30. The Tribunal will now decide whether the result impacts his fitness to practice and whether he should face further sanctions. This may extend to him being struck off the medical register.

Issues first arose surrounding Stebbing, who has a first-class degree in medicine at Oxford University, and who has worked in the United States, the Royal Marsden and Imperial College in 2017 when he was accused of failing to discuss the risks and benefits of treatment with patients and failing to maintain proper records. Soon afterwards, a whistle-blower passed a dossier to General Medical Council and the Care Quality Commission which raised further concerns about Stebbing's behaviour in his private practice. Allegations in the dossier allegedly included claims that the oncologist

proscribed expensive cancer medication beyond the remit of his licence and continuing care even when the benefit of such was unclear. One patient was found to have been placed on a course of immunotherapy while receiving end-of-life palliative care and others died in ICUs days after receiving

chemotherapy.

Of the 12 patients that the GMC lawyers based their case around, all but one had died within a month of receiving treatment from Stebbing.

Stebbing's enthusiasm to

continue treatment extended to over-ruling NHS doctors who had determined that treatment would have little to no benefit. He is currently the subject of a

£50,000 civil case by the daughter of a man, that was placed on chemotherapy, days before he died.

Tribunal chairman, Hassan Khan, wrote in the 236-page report

published on the 7th October, that Stebbing was "blind to the patient safety concerns being raised" in a way that was "fundamentally

inconsistent with the best interests of patients and their safety".

The Tribunal heard in other evidence that Stebbing was often "put on a pedestal" and that many staff felt "intimidated" by him. While working in London, it was claimed that Stebbing, when he heard that his decision to continue a patient's chemotherapy was vetoed said to a nurse "The patient is f***ed anyway so whether we give it or don't he will die."

Stebbing's lawyer, Mary O'Rourke QC argued in mitigation that private care was often where patients willing to accept a "last chance" attempt gravitated and that Stebbing should have the right to use his medical judgement. Stebbing himself also tried to argue that the GMC's position of "If you're in doubt, let the patient die" was itself neglectful while he had prioritised the saving of lives.

An Imperial College spokesperson told media that while Stebbing continued to do a "small amount of clinical work", he was kept under supervision.



Stebbing - "Reckless" and "arrogant"

Credit: Imperial College London

ARTS

‘TIS A CONSUMMATION...

By VAIDHISWARAN RAMESH

HAMLET IS BROUGHT TO THE 21st page 9
CENTURYEdited by:
VAIDHISWARAN RAMESH
ALEX JACKSON

Theatre

Bold and uneasy!

Penetration

★★★★

Where? *The Cockpit*When? *Until 9th October, 2021*How much? *£14*Reviewed by **Vaidhiswaran Ramesh** Arts Editor

What constitutes rape? Do people of all ages and genders understand explicit verbal consent? Are the people around us and the systems set in place to redress victims and prosecute offenders well equipped? And more importantly — what’s the detritus of such an offence on the people around us? These are some of the questions that *Penetration* running at The Cockpit seeks to rake up.

Inspired by seven real life incidents, Lloyd-Davies weaves an intricate story revolving around these themes through the lives of seven characters weaves an intricate story revolving around these themes. The story takes off with Anna McIntyre (played by Georgina Armfield) accusing Sean Jackson (played by Calum Wragg-Smith) of rape; and we follow along as their lives unravel from the consequences of that accusation — watching as they turn to the people around them for support and a voice. The story pulls no punches and lays out, with excruciating detail, the follies of the support systems we turn to — be it our parents or spouses, social media, or a support group.

As for the execution itself, the play is set ‘in the round’ at The Cockpit. The characters weave in and out of the pews and, using four simple chairs and some elementary lighting, they serve us a multitude of

Louise Bangay and Calum Wragg-Smith as Felicity and Sean Jackson in *Penetration*

make-believe settings from police stations to clubs. For the most part however, the play is held together and driven by fast-paced dialogue between just two characters, and the scenes transition in such rapid succession that it feels as though you are watching jump cuts in a David Fincher film.

The cast all offer convincing portraits of their characters but Louise Bangay, playing Sean’s mother, is a standout as a shell-shocked mother who can’t help but ‘seek to understand’.

The play chooses to steer clear of offering any social commentary or explicitly taking sides — though by choosing to engage only within the confines of those real-life incidents it does give a strong voice to characters clearly biased on the issue. Perhaps that’s the intended effect to highlight the injustice of biased cogs in a system? This for one makes the play hard-hitting,

intimate and brutal; but, at key moments, the lack of a unique voice sticks out and the production begins to resemble a collection of regurgitated tabloid stories.

Within these confines, *Penetration* raises some hard-hitting questions — both of our individual actions, and of what we tolerate around us. It was interesting to find during the interval (and more vocally in the Q&A session with the cast later), people of all ages (including octogenarians) talk in hushed tones questioning the simple concept of right and wrong in this circumstance with their better halves. The fact that this play instigates such conversations should be the key yardstick of its success here.

So, go for a complicated, messy, and honest portrayal of rape and consent. Only know — if you walk out of this without feeling uneasy, you probably haven’t been focusing enough.

Theatre

Perfectly executed drama

Snowflakes

★★★★★

Where? *The Old Red Lion Theatre*When? *Until 16th October, 2021*How much? *Student tickets £14*Reviewed by **Alex Jackson** Arts Editor

This play is billed as “The Dumb Waiter meets Black Mirror” and, well... that’s exactly what you get. The stylisation, lighting, sound, tone, and plot are all heavily influenced by Charlie Brooker’s sci-fi television series (check out *Hated in the Nation* from the third series of *Black Mirror* for example). But this isn’t

exactly a bad thing. The lights come up on a semi-naked white dude, Tony (Henry Davis), who has — until now — been sleeping deeply in a bed centre stage. Tony is clearly in a hotel room, with the remnants of a sexual liaison the night before littered around the bed; and, as he wakes up and takes a phone call, we also learn that he is posh, married, and, to use his later words, a bit of a c*nt. Enter Sarah (Niamh Finlay) and Marcus (Robert Boulton) to help remedy that fact with a live trial by social media.

There is something very satisfying about the perfect execution of a simple idea. This play explores justice and revenge through the torture and forced interview-

ing of an alleged sex criminal. Everything in this play seems to be blunt, on-the-nose, and unapologetic. The likes and thumbs-up from the livestream are projected onto an actual black mirror. But, and this is the key point, everything seemed to work as it should. The audience is trapped in the room in the same way Tony is. The door is shut and, as the tag line of the play reads, “the door stays locked until the job is done”. The dialogue between the characters is uncompromising in its depiction of morality and ideology in the post-internet age, and Tony’s monologue about truth rings... true?

If you are familiar with any of the works mentioned above, then you already know how this play is going to

Credits: Photo/David Monteith Hodge

go. The techno-dystopian stylisation works incredibly well in a theatre setting, and the main cast deliver in spades (or shovels). Boulton's performance as Marcus was energetic, scarily believable, and thrilling and harrowing in equal measure — this is perhaps to be expected given that he also wrote the play. That being said, the narrative is well balanced, and Davis and Finlay seem just as present. All three performers find depth and nuance in characters that require a lot of range.

I am undecided on if this play really brings anything new to the discussion on “snowflakes” and cancel culture, but one thing is for sure, I enjoyed the experience a lot. The crispness, clear theme, and undeniably sensational cast won me over. These aspects coalesced into a coherent and sharp production that can only be attributed to the overall direction (Michael Cottrell). This play is the debut production from the Dissident Theatre Company, and I am excited to see what comes next! *Snowflakes* is certainly a play for any sci-fi fan with a dark side and it definitely gets my recommendation.



Niamh Finlay (Sarah) and Henry Davis (Tony) in *Snowflakes*

Credits: Photo/The Dissident Theatre Company

Exhibition

To the Infinity Room and beyond

Credits: Photo/Yayoi Kusama



Infinity Mirrored Room Filled With The Brilliance Of Life!

Yayoi Kusama: Infinity Mirror Rooms

★★★★★

Where? Tate Modern

When? Until 12th June, 2022

How much? £10 (£5 Tate Collective)

Reviewed by **Amanda Hertzberg** Arts Writer

The experience begins when you step on board the lifts on the right hand-side of the Tate Modern ticket office. The doors close behind you and you're inside a Roald Dahl-esque box that could take you anywhere. Out of Willy Wonka's chocolate factory, into space, or maybe into a tropical landscape. But the doors open again and you alight into Yayoi Kusama's landscape of lights and patterns.

Kusama, a now 92 year old Japanese artist, has created art since a young age. Walking through the ever-so-brief but ever-so-enchancing exhibition we come to learn that art is not the only thing that has followed Kusama's steps since a young age. Since a little girl, she has also experienced hallucinations. Realising this, Kusama's art makes more sense. Her art is the physical embodiment of her hallucinations. Being known for her so-called “Infinity rooms”, of which this exhibition has the joy to contain two of, she creates art for more than just one of the senses. She creates an experience. The two rooms in this exhibition have queues forming in front of them. Signs warning the public about what they're about to experience are present, “Beware

of flashing lights”, “If disoriented, look to the ceiling” or “Don't step into the shallow pools of water”. When entering the second room the museum worker is again separately warning everyone about falling into the water. “It happens everyday, even with a warning” she says. At this point we're almost excited about the potential dangers of what we are about to experience. The reality is slightly less intense than all the warnings make it out to be. I wouldn't call it “underwhelming”, just a lot “less” than expected. The rooms are a lot smaller too, in comparison to pictures seen prior, popping up on my instagram feed every now and then. However, looking back at my own pictures afterwards the mirrors and reflective surfaces would have me fooled all over again.

Other than the rooms there are some miscellaneous photos of Yayoi, capturing her whilst simultaneously creating and taking part in her own art. There's nudity, there's paint, there's flashing lights. There's a slight element of insanity in every bit of it. This falls into place when we find out that Kusama admitted herself to a mental hospital in 1977, and has lived there ever since. It is a partial relief to step out of the exhibition into a more sane world, having tasted a little bit of Kusama's insane reality.

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ARTS

Theatre

Cultural identity at play!

Malindadzimu

**Where?** *Hampstead Theatre***When?** *Until 30th October, 2021***How much?** *From £5*Reviewed by **Vaidhiswaran Ramesh** Arts Editor

Identity, in particular cultural identity, is an interesting notion. Shaped by our community and a shared upbringing, it is as much an individual concept as it is societal. We can claim one but are almost always inevitably given another by society (and that usually ends up being the one that sticks!). As much as we may seek to rewrite it, the detritus of our past seeps into us and colours us for all it's worth. This is particularly true for certain communities and nationalities that historically (and even now) face a multitude of barriers to adopting an identity of their own. Neither time nor accent, education nor shared culture is seen capable enough to unshackle this established notion.

Malindadzimu, written by Mufara Makubika and directed by Monique Touko, treads on this delicate subject, and bit more, at Hampstead Theatre! Hope (played with youth by Kudzai Mangombe) grows up in Nottingham, the daughter of a Rhodes scholar from Zimbabwe, Faith (played by Shyko Amos), who has chosen to make England her home and country! That is until a set of wholly unconvincing circumstances changes her mind, and she moves back to a farm in Zimbabwe with her teenage daughter. The play then follows the duo as they choose and struggle to reconnect with their lost heritage and identity, waited on by native house help Gogo (played by the ecstatic Natasha Williams). There are other sub-plot lines involving Cecil Rhodes and his enduring legacy (and mausoleum) in modern Zimbabwe and Lobengula (Sifiso Mazibuko); however, it is a little girl's quest to find and define her identity that sits at the heart of the play.

The play is executed in a small stage bound by pews two or three rows deep on three sides. The set design is somewhat minimalistic, the stage populated for the most part by only a table and a few chairs that are put to fluid use craftily. A translucent screen on the backdrop serves up the Zimbabwean farmland and the countryside aesthetic to moderate success.

Driven by strong performances – none better than Natasha Williams as Gogo – the play feels intimate and resembles a small, very real, and messy family drama unfolding right in front of our eyes. The dialogues are often didactic yet always feel rooted and authentic to the characters. However, the writing feels loose at stages and the plot lines fail to converge at the end to give a convincing closure to the subject matter dealt with.

Perhaps what offers this story a poignancy and in-



Natasha Williams steels the show as Gogo!

timacy is exactly what holds it back as well. The small stage and makeshift set transitions, during which the characters, for an all too brief moment, fumble about as they set up the stage for the next act. In these changes, they render themselves no longer as Faith, Hope or Lobengula—with their perfect African accents and dialects—but as stagehands from London. This break in character and flow for a play executed in such small quarters is maybe to be expected and can almost be forgiven — but the lack of crispness in the script expounds this to such an extent that you are left to wonder where an act ends and where it begins. Is this an interlude or is this part of the play?

Sitting outside the theatre hall reading the synopsis again, I was thrown back to an LBC radio sound bite from summer of 2020 featuring Labour MP David Lammy passionately trying to convince otherwise

a well-spoken, educated, and articulate 'Englishwoman' who was claiming that he was not English but that he could be (he 'was not', but could be) British. Such events—vivid in our memory from that dreadful summer of 2020—underscore the immediacy and the potency of the subject matter being dealt with here. And unfortunately, that is one responsibility this play has certainly neglected by attempting too many plot lines and not fleshing them out enough.

In all earnest, this is 'bold and experimental' small theatre! And thus, along with it are all the tropes that one would expect and come to require of it. Go expecting that and only that and you won't be disappointed. But, on the other hand, if you want a telling exposition of the intricacies of cultural and national identities in the 21st century, it is only all too well to skip Malindadzimu!

Credits: Photo/Robert Day

Theatre

'Tis a Consummation Devoutly to be Wished

Hamlet

Where? *Young Vic*When? *Until 13th November, 2021*How much? *From £10*Reviewed by **Vaidhiswaran Ramesh** Arts Editor

In an ideal world actors would be — well just actors. Shape shifters and illusionists that embody a character, and not entities to be divvied up into any arbitrary category and classified. And plays would be — well just plays. A vehicle to provide for an audience an abundance of drama and/or catharsis. And so, in such an ideal world, no character is out of reach for a versatile actor, and no play too rigid and uninviting to re-interpretation. But, alas, we do not live in such a world, we live in an imperfect world where a female Bond is still a matter of question, and ill-conceived notions of tradition dictate how certain works must be interpreted and treated.

In such a climate, it is highly refreshing to see the Young Vic's Hamlet (directed by Greg Hersov) where each of these pre-conceived notions is not just ignored, but summarily cast aside. With a brilliant gender-blind casting (Cush Jumbo playing Hamlet), a non-elaborate but powerful set design, and through the unashamed incorporation of modern apparatus into the play — Hersov has brought Hamlet into the 21st century, with grace!

Hamlet is Shakespeare's tragic telling of the eponymous Prince of Denmark, a corner stone in playwriting it is a work oft treated with (well-deserved) reverence. As such, the story needs no elaborate retelling here; after all no one watches Hamlet for the suspense.

There are several elements that this production gets right: chief among them is the acting. The star-studded cast deliver a stellar performance, and none shine

Credits: Photo/Helen Murray



To be or not to be... This Hamlet chooses to be



Joseph Marcell (left) and Jonathan Ajayi (right) in Hamlet

brighter than Jumbo as Hamlet and Polonius (played by Joseph Marcel). Marcel is able to induce equal amounts of slyness and comic intervention into his portrayal and remains the life and soul of the first Act. Jumbo, a close contender who really takes over in Act 2, is equally magnificent and presents a uniquely tempered Hamlet. She shows great dexterity rendering the convoluted verbiage of Shakespeare while remaining both accessible and relatable. Norah Lopez Holden (playing Ophelia) enchants in her few scenes with a truly youthful exuberance. Her dreamy dance with Hamlet in Act 1, swaying along to a peppy salsa beat, really sets the stage for the remainder of the play.

Equal credit is to be accorded to the set design and lighting, which is arguably the backbone of the play. Minimalist, sublime and translucent, it offers neither a convoluted royal courtroom setting, nor graveyards punctuated with sombre statuettes (as is commonplace in Hamlet). Instead, we are given three large rectangular pillars — some mirrored and some matte. These pillars revolve around their axis and serve to act as gates and entrances; reflecting the characters and the light in intelligent ways. This comes together phenomenally well in key acts, rendering brilliant lock-cages for the ghostly apparitions and the characters themselves — bringing an additional sense of character to the unfolding drama.

The play is not all smooth sailing though. The performance of the remaining cast does pale in comparison to that of Jumbo and Marcel, and this shows in the scenes where they share a stage. Due to the modern interpretation, it does take a while to get used to watching Shake-

spearean verbiage juxtaposed with modern props. The 'Tis' and 'Thou' hover over the Cockney accent like a thick cloud, and the modern suits, phones, selfies, Kevlar's and guns do appear jarring. But a few uneasy minutes in — these convalesce and what remains is no longer Shakespeare's Hamlet but rather an imperfect yet brilliant Young Vic and Hersov's Hamlet!

Whilst I don't want to dwell too long on the novelty of the elements here—for as much as it's worth appreciating the wind of change they represent—the work is also so highly meritorious that it begs criticism and treatment independent of it. And again, this is not strictly a story of firsts; plays have often been the medium of choice to drive change and, even with this gender fluid portrayal of Hamlet, we have had female actors play the eponymous prince since the 18th century — beginning with Charlotte Charke. Cush Jumbo as Hamlet here, with all the bells and whistles of the 21st century, is just one manifestation upon that enduring legacy — to break moulds and pre-conceptions, and to do it successfully.

Hersov, in the director's production catalogue, muses about wanting to eventually make an eight-hour long version of Hamlet, before going on to underplay the current version as what is physically possible in the "here and now". Step up man! This version is nothing short of a home run! And if it is any barometer of his vision and interpretation, I'd gladly pay to watch the eight-hour version. But, until then — in the here and now — I'd recommend everyone to watch 2021's Hamlet at the Young Vic. 'Tis a consummation devoutly to be wished!

Credits: Photo/Helen Murray

The 2021 Nobel Prizes

Chemistry: Organic catalysts



Photo credits: Wikimedia Commons

Cara Burke Science Editor

German-born Professor Benjamin List of the Max Planck Institute and Scotland-born Professional David MacMillan of Princeton University have been awarded the Nobel Prize in Chemistry for their work on organic catalysts. They independently developed the technique of asymmetric organocatalysis in 2000. Before then, catalysts were thought to only be metals or enzymes.

MacMillan had been working on metal catalysts at the University of California. Metal catalysts are typically expensive, unsustainably acquired, and require an oxygen- and moisture-free environment, which limits industrial applications. List, working at the Scripps Research Institute, had been interested in research from the 1970s

which suggested certain amino acids could be used as catalysts. Both found that small organic compounds can act as very effective catalysts. Being composed of fairly common elements, these catalysts were cheaper, more sustainable, and easier to manufacture.

What made the discoveries particularly revolutionary was the catalysts' ability to produce only one form of molecule out of the two mirror image forms that many molecules can adopt. This had wide-ranging and important implications. Mirror image structures of the same molecule can have very different properties - for example, spearmint and caraway both contain the compound, carvone, but taste different because they contain mirror-image versions of carvone. Compounds used in pharmaceuticals tend to only be effective in one of these mirror-image forms.

This can mean one version is harmless and the other is effective. However, in more severe cases, the undesirable mirror-image can have negative impacts on the body.

This was brought to light in the 1950s, when thalidomide was approved for treating morning sickness. It was found that the mirror-image of the molecule caused severe physical disabilities in the new-born babies. Before asymmetric organocatalysis, there was no efficient way of producing only one mirror-image form of a molecule.

The Nobel Committee said that the technique has "taken molecular construction to an entirely new level." Professor MacMillan upon hearing

the news said he felt "dazed, confused, elated, proud, sentimental, weepy - you name it", and Professor List was on holiday in Amsterdam with his wife, who he claimed frequently liked to joke that Sweden was calling him, when he got the call, and had initially "thought it was a joke". The £870,000 prize will be shared between the two.

Photo credits: Victoria Xu (Imperial, Life Sciences)



Benjamin List (left) and David MacMillan (right)

Physiology or Medicine: Receptors for heat and touch

Isabelle Zhang Science Editor

How are we able to sense where our body parts are without looking at them? How can we sense temperature changes in the world around us? Of the five senses, the molecular detection of vision, olfaction, audio, and taste are well understood. It is relatively less known how our bodies can perceive touch and the stimuli associated with it. For breakthroughs in the molecular sensors that our bodies use to detect heat, pain, and touch, the Nobel Prize in Physiology or Medicine this year was jointly awarded to David Julius and Ardem Patapoutian.

David Julius made his discovery in the 1990s when he found an ion channel that reacts to capsaicin, the chemical responsible for the feeling of heat from chili peppers. His lab had

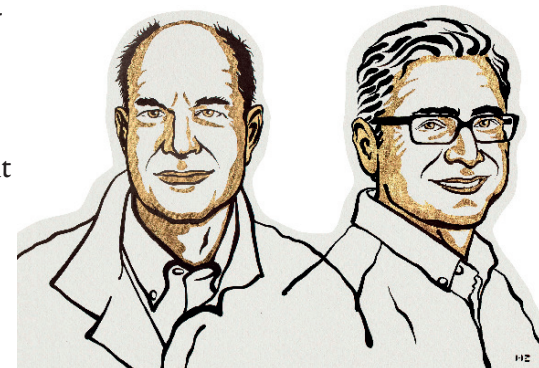
screened through a library of thousands of proteins until finding one that, when expressed in a cell, allowed it to give off electrical signals in response to capsaicin. This ion channel, which they called TRPV1, allows the rapid entry of Ca²⁺ as a response to temperatures above 43°C, acidity, and chemicals similar to capsaicin. Since then, Julius and other researchers have discovered more members in the TRP protein family that are heat-sensitive, including TRPV2 which reacts to temperatures above 52°C, and TRPM8 which is sensitive to temperatures below 20°C. The mechanism behind the heat sensitivity of these proteins are still being understood, with researchers observing that the increase in temperature leads to a change in solubility and charge of the amino acids, thus forcing the ion channel to open or close.

More recently, Ardem Patapoutian discovered a population of cells that could respond electrically when mechanical pressure was applied on them by poking them with a micropipette tip. By inactivating the potential genes responsible in these cells one by one, his lab eventually found cells that no longer responded when poked, thus discovering the mechanosensitive ion channel Piezo1. In its unactivated state, Piezo1 naturally curves the cell membrane around it to form a sphere that projects into the cell. When mechanical pressure is applied that deforms the membrane curvature, it is thought that the "arms" of Piezo1 can act as a lever to transfer the mechanical force from the membrane to the channel to open/close it. A similar ion channel, called Piezo2, was later discovered. This protein allows us

our body to detect the position of its own parts based on mechanical stretch sensed by the membranes of neurons.

Together, this work allows us to understand how our nervous system interprets varying levels of heat/touch and relays the corresponding electrical signal to our brain. These form the basis for how we navigate the world around us and regulate the systems inside us.

Photo credits: Niklas Elmehed © Nobel Prize Outreach



David Julius (left) and Ardem Patapoutian (right)

Nobel Prize in Physics: Modelling complex physical systems

Jamie John Science Editor

This year, the Nobel Prize in Physics is split in two; one half is awarded to Syukuro Manabe and Klaus Hasselmann for “[laying] the foundation of our knowledge of the Earth’s climate and how humanity influences it”, and the other half is awarded to Giorgio Parisi for his “revolutionary contributions to the theory of disordered materials and random processes”.

The recipients of this year’s prize are united by the fact that their work has enabled the modelling of complex systems. Complex systems consist of many smaller parts, which interact with each other in seemingly random ways. They are chaotic, meaning that a small change in initial conditions can have a huge impact on the final state. The climate is just one example of such a system. Climate change has dominated world affairs in the past few years, and the Nobel Committee have clearly recognised that, and affirmed its significance, in their awarding of the Prize.

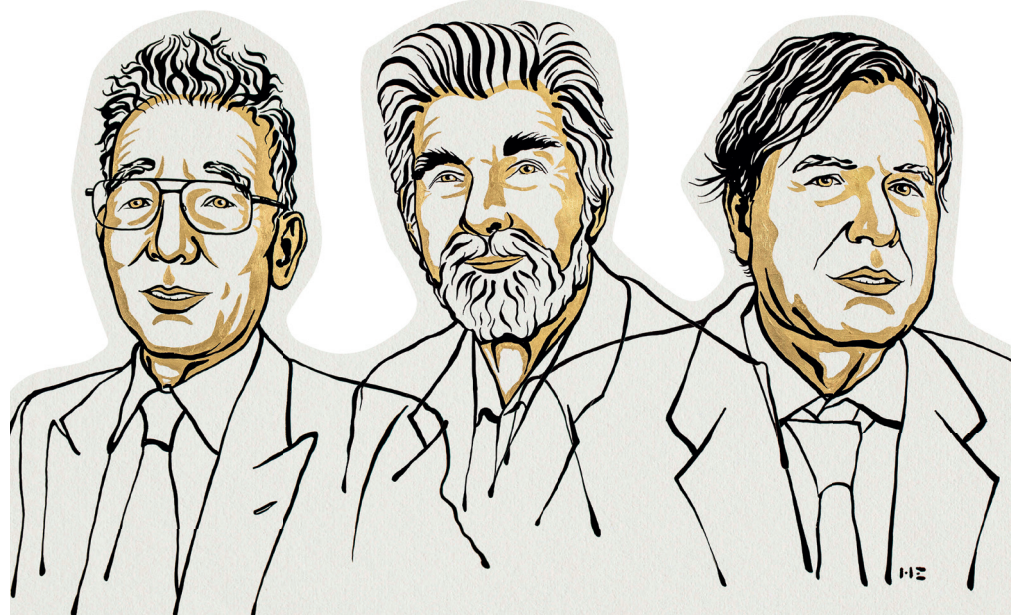
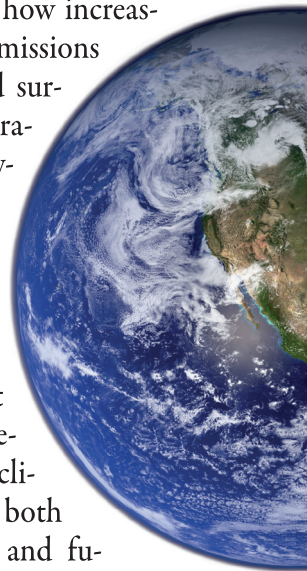
Syukuro Manabe is a meteorologist, who, during the 1960s and 70s, developed three-dimensional computer models of the atmosphere and the ocean, coupling the two together for the first time with his colleagues at the Geophysical Fluid Dynamics Laboratory in the USA. He and the teams he has worked with have used these models to investigate the impact of changing greenhouse gas concentrations on climate. They

demonstrated how increasing CO₂ emissions have increased surface temperatures, quantifying the effects. His work has been hugely important in understanding the effect of human behaviour on climate change, both past, present, and future.

Klaus Hasselmann is an oceanographer who, around ten years after Manabe’s initial work, used computer models to explain why weather can vary so unpredictably, while climate models maintain reliability. Outside of this, his research was used to prove that human-related CO₂ emissions are the primary cause of the increased temperatures observed around the world.

Giorgio Parisi is a theoretical physicist, who was awarded the prize for his work on complex systems and “the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales.” His work has implications for a vast range of fields; neuroscience, biology, machine learning, finance and (perhaps most notably, given the other two Physics Prize recipients) climate modelling all benefit from his research.

Photo credits: Niklas Elmehed © Nobel Prize Outreach



Syukuro Manabe (left), Klaus Hasselmann (centre) and Giorgio Parisi (right)

This week in Science...

FROM IMPERIAL...

Five million children orphaned due to COVID

An international team of collaborators, including researchers from Imperial’s Department of Mathematics and School of Public Health, have found that the number of children orphaned has increased as a result of the COVID-19 pandemic. The latest estimates suggest that at least 5m children have lost one of their parents or grandparents over the course of the pandemic. India is the worst-affected country, with just under 1.9m children estimated to have been orphaned, as of 3rd October 2021. An interactive comparison can be found at the QR code.



Life expectancy declining in many English communities even before COVID-19 pandemic

A new study published in *The Lancet* by researchers from Imperial College London has found that many communities in England experienced a decrease in life expectancy from 2010 to 2019, after the vast majority saw growth from 2002 to 2010. Stark geographical disparities were also identified, with the lowest life expectancies in urban areas in the North of England. Professor Majid Ezzati from the School of Public Health at Imperial College London said, “For such declines to be seen in ‘normal times’ before the pandemic is alarming and signals ongoing policy failures to tackle poverty and provide adequate social support and healthcare.”

FROM AROUND THE WORLD...

First Malaria vaccine approved by the WHO

Last week, the World Health Organisation (WHO) endorsed the RTS,S vaccine against Malaria and recommended its use for children in Sub-Saharan Africa where the disease is most prevalent. Development of the vaccine has been a 30-year effort costing about US\$750 million, with funding mainly from GlaxoSmithKline and the Bill and Melinda Gates Foundation. The vaccine targets the parasite before it enters the bloodstream and has been observed to decrease hospitalisations caused by severe malaria by 30%. Currently no other vaccine against Malaria is as advanced in its development and approval.

DeepMind develops AI capable of accurately predicting rain

In collaboration with the Met Office, researchers from DeepMind published a paper in *Nature* outlining the results of an AI that can accurately predict how likely it is to rain within the next two hours. The AI uses a machine learning method known as generative modelling, based on high-resolution radar data that tracks the moisture level in the air. The tool is observed to be more accurate than existing rain prediction tools and weather forecasts, which perform well for predicting the mid-term future (1-2 weeks) but are not as accurate for predicting the near future.

Physicists measure precisely the lifetime of a free neutron

Scientists led by a group at Indiana University have made the most precise measurement of a free neutron’s lifetime so far, improving on previous measurements by twofold. Neutrons are stable inside nuclei, but outside atomic nuclei, free neutrons will decay into protons and emit electrons and neutrinos in the process. A measurement of this process could provide insight into the formation of light elements during the earliest moments of the Universe’s formation.

Against rationality

► Science writer Leo Zhang explores the 1975 science philosophy book, “Against Method”, by Paul Feyerabend

Leo Zhang Science Writer

In coming to Imperial, the only UK university to focus specifically on science, engineering, medicine and business, our relationship to science is probably quite secure. But throughout our formal education in science, one area which remains curiously under-emphasised is the constraints and validity of scientific knowledge.

Washed up on the shores of received knowledge, the conception of science most of us have loosely can be described as scientific materialism – a position traceable to the philosophers and scientists of the early 20th century Vienna Circle. It takes only statements, verifiable by empirical observation or logical proof, to be capable of containing factual information about our reality – myth, mystery and religion melt into air, under the white heat of the scientific method. The endpoint of which aims to unite the threads of the universe into a grand tapestry of a universal theory of everything, under the auspices of scientifically verifiable fact, as heralded by Hawking and Krauss in all good bookshops.

The sixties ushered in more radical currents of thought into the philosophy of science, catching the contemporary movements of revolution and insurgency in the air, notably Kuhn’s “The Structure of Scientific Revolutions”, which attacked the abstractions of science as a process of continuous evolution towards truth. Paul Feyerabend (1924-1994), a philosopher of science not known for mincing his words, launched his critique in this vein.

Born in Vienna, he had an unconventional path to philosophy- originally studying theatre and stage-management after serving in WW2, switching to physics from history and sociology at university, and finally transferring into philosophy to leave with his doctorate. His subsequent trajectory, after settling down to a career in philosophy, wasn’t any less idiosyncratic. His thought charted a path from the po-faced logical positivists, through Popperian ideals

and into a championing of an “anarchist” theory of science. His most famous work *Against Method* (1975) is a biting expression of this mature radicalism.

In direct repudiation of his earlier work, in it he sought to debase the dogmatic view that the scientific method was the key engine driving scientific progress- calling into question Science’s authority over knowledge (now often taken as a sovereign fact). If scientific knowledge wasn’t legislated for by methodology but instead was a melange of contingent factors, purposeful omissions and rhetoric, what separates Science from dreaded metaphysics?

Through the book, Feyerabend revels in uncovering this whitewashed history. He exacerbates, highlights and brings into unresolvable tension fundamental disparities between theory and historical practice. Our image of scientific activity is fixed along certain methodological lines: viable theories should match empirical evidence and new theories should be consistent with established theory.

Feyerabend raises the simple objection that no theory ever fully corresponds to all the “facts” in its domain. Our point of acceptance creates the entrance of intersubjectivity. Nor are the “facts” ever neutral objects. They are inextricably tangled up in history and as a product of the diverse events and scientists that produced them, they are irreducibly heterogeneous with ancient assumptions embedded alongside orthodox science. It is a mistake to think that they refer to some objective state of affairs.

Thus it is unfair to judge new theories by the status quo. They lack the apparatus of the established. It is only after we build up relevant auxiliary sciences and new idioms do we have grounds for a fair comparison - as Feyerabend put it: “theories become clear and ‘reasonable’ only after incoherent parts have been used for a long time”. It is in this way, he points out, that each theory creates experience anew. To accommodate it we have to irrecoverably alter the sensory

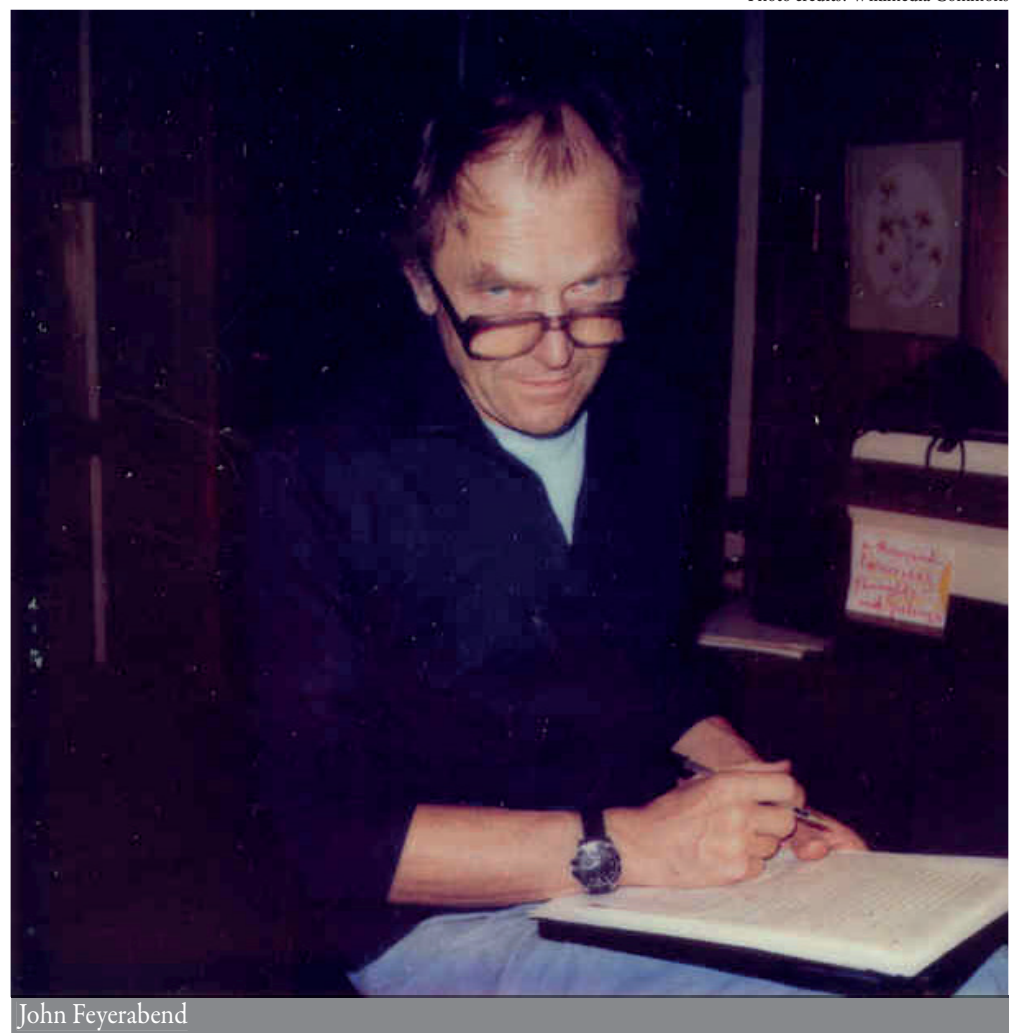
and conceptual core of experience to allow for “new facts” to legitimise our theory (“approximations are made, known affects are omitted, different conceptual lines are drawn”). To form and defend them requires a belief akin to religious faith: Newton himself had to resort to “divine intervention” to account for the Solar System’s stability under his theory of gravitation (and to spread them requires a sort of “propaganda”).

Without this recourse to external, inconsistent measures, theories and ridiculous ideas, we are unable to break away from the presuppositions of established theory latent in all empirical evidence gathered under such institutions. Through historical examples employed throughout, Feyerabend shows us, in applying our standards retroactively, we would deny our sciences of the theories of Galileo, Newton, Bohr etc. Feyerabend’s infamous answer to our initial question is then a blithe: nothing, “anything goes”.

All of this probably rattles against

your own beliefs. It’s hard to recognise what remains, in Feyerabend’s dissection of science, of what drew us to study science in the first place. His proclivity to provoke does nothing to settle our ship either. But from under the fire that Feyerabend lights at our feet, he pushes us towards the limits of what we call “rationality”: a logic which has legislated and justified the worst excesses of Western “civilising” influence. To subject Science to insuperable rules derived by “reason” would be to nullify Science, this is the problem Feyerabend sought to address! He believed the same to be true with economics, culture and all of humanity’s endeavours. Under the growing encroachment of neoliberalism and technologism, inscribing more and more of our horizons and possibilities with their “rationality”, and the spectre of ecological collapse in the closing distance, it remains a pertinent concern for our age.

Photo credits: Wikimedia Commons



John Feyerabend

ENVIRONMENT

Sustainability requires a broader definition of technology

View online here! 

Photo: Annie Spratt on Unsplash

Seb Lawson Environment Writer

Trying to build a more sustainable world can feel daunting and full of loose ends. Perhaps that is the problem: we are fixated on using the term build. When we think of building we think of heavy infrastructure or scaling new technologies from scratch. We do not think of the more subtle solutions of the natural world; a world that does not build but grows and recycles. It adapts.

Carbon capture technologies have been receiving a lot of attention recently. Orca, the carbon removal plant housed in Iceland and conceived by the Swiss, started its operations in early September. Orca inhales CO₂ from the atmosphere, mixes it with water and sends it deep into the earth's surface for it to mineralise.

Annually, the plant will extract roughly 4000 tonnes of CO₂ emission. According to Our World in Data the UK was responsible for close to 370 million tonnes of CO₂ in 2019. As you can see there are some obvious scalability issues here, particularly given the millions of dollars price tag.

Given the urgency of the climate crisis we clearly cannot rely on these technologies alone. We don't even know if there will be any second-order effects involved in the process, which would certainly increase the cost from a non-pecuniary perspective. Sustainability requires working with nature not simply mimicking its processes.

Another well-documented form of carbon capture involves seaweed farms. Not only does seaweed act as a carbon sink but the algae is used in a number of foods, fertilisers and cosmetics. A charity called The Climate Foundation are hoping to incubate a more productive growing environment for seaweed by artificially upwelling the



Indigenous communities can provide valuable nature-based solutions

water using various renewable-energy powered turbines. Whilst this provides a more subtle form of geo-engineering than Orca we again still don't know what the local ecological impacts may be of these turbines.

Provided we expand our definition of technology we have a whole spectrum of carbon capture technologies. The range being how symbiotic they are with the natural world. In essence, are they nature-based solutions or not? Perhaps regenerative agriculture, which involves rebuilding carbon-sequestering topsoil by restoring its degraded biodiversity, is a step closer to the symbiosis. At least for this we have a second-order effect of nutrient-dense food production.

Julia Watson, an architect and expert on nature-based design, spent years travelling around the world to study indigenous technologies. An example being the deep-rooted tree bridges of the Khasi people from Northern India; which tame the effects of the monsoon. These solutions promote adaptation and

symbiosis with the natural world. Or in her words: 'Indigenous technologies advance Darwin's theory from survival of the fittest to survival of the most symbiotic.'

Carbon capture technologies such as Orca are easily marketable pieces of technology. Yet in regenerative agriculture it is not just the process mimicking the natural world, but the whole operational design is built around the natural system. Trying to sell this form of technology is perhaps a little trickier. It is harder to market healthy soil and seaweed than a carbon removal plant in Iceland. There is an asymmetry of publicity that perhaps doesn't reflect the holistic efficacy of nature-based solutions over current geo-engineering projects.

So why does this matter? Well, we need to consider the economic concept of opportunity cost. Building a sustainable future cannot fall exclusively to engineering. Nor do we have the time or resources to do so. We have to way up the opportunity cost of our efforts. The concept stems from our limited resources; time being one of them.

We need to expand our definition of technology when thinking about

solutions as there will not be one panacea to climate change, let alone one silver bullet in tackling the CO₂ problem. Technology is not the monopoly of the laboratory. We have to couple this with nature-based solutions.

Creating a more sustainable world will need to involve technologies from both the tacit knowledge that Karl Polanyi described as well as the more explicit form of knowledge more prevalent in our classrooms. Tacit knowledge is found aplenty in nature-based solutions and is ubiquitous in indigenous technologies. The Orca plant is a manifestation of the more explicit form of knowledge.

So what is the right balance when we are looking at environmental technologies such as carbon capturing? It is not just a question of engineering, but of economics and ecology. Whilst we should be looking to scale and develop technologies such as Orca we need to find the Aristotelian mean between using these engineering feats as well as those technologies that are more symbiotic with the natural world. We need to account for the second-order effects of such projects and consider not just net-zero, but sustainability beyond this.

'Build Back Better' has been caricatured and over-exhausted during the Covid-19 pandemic. No one really knows what this means. However, if the slogan includes trying to build a more sustainable world then we likely need to think about both adaptive and preventative technologies; both nature-based solutions and engineering solutions.

Sustainability cannot be achieved by further distancing ourselves from the natural world but by aligning with it. The almost negligible impact of the Orca project shows that we need nature-based solutions for both short-term adaptation and long-term sustainability.

ENVIRONMENT

Direct air capture - The real solution?

Photo: Martin Grincevski on Unsplash

Marie Mori Environment Writer

Direct Air Capture has been the talk of the town in recent weeks as the world's largest DAC facility, located in Iceland's Hellisheidi, opened for business last month. It may be a solution to our current climate crisis's most pressing concern – reducing the amount of excess carbon dioxide being emitted into the atmosphere.

Named Orca, the newly opened DAC facility was built by Swiss startup Climeworks. The plant cost \$10 - \$15 million (£7.3 - £11 million) to build and took four years to complete. It is a collaborative effort with Icelandic company Carbfix, which has developed the technology for diverting the captured CO₂ back into the ground, where it will take about two years to mineralise and be stored away forever. All of this is powered by the neighbouring Hellisheidi geothermal power plant, the third largest in the world.

Direct Air Capture works by filtering in ambient air using large fans. It is a much more energy-costing process than capturing factory or power plants emissions straight from the source – this is because these emissions are already enriched with CO₂. In contrast, ambient air contains only 0.04% carbon dioxide. The filtered air is treated with a chemical medium that forms a carbon-rich salt, which is subsequently converted into calcium carbonate. This is heated to 100 degrees to produce CO₂ that can be collected, and this is where Carbfix's role of injecting the captured carbon dioxide back into the ground comes in.

To prevent global temperatures from rising above 1.5 degrees in the coming decades and avoid irreversible climate destruction, the IPCC has stated that there must be a "large-scale deployment of carbon dioxide removal measures". Direct Air Capture could allow global emissions to remain at higher levels for a long time into the future, buying us some time to dismantle the fossil fuel industry. Of course, there are other methods of removing CO₂ from the atmosphere – planting trees and growing forest space being the most obvious ones. But these methods are time and space consuming, and in the case of the climate emergency,



Are carbon-capture plants a viable solution?

time is of the essence.

However, Direct Air Capture technology is still in its early days. Despite being the world's largest DAC facility, Orca's CO₂ capturing abilities are limited to 4000 tons a year. This is a minuscule fraction of the CO₂ emitted by fossil fuels and industries today, which was 34 billion tons in 2020. 4000 tons amounts only to the carbon dioxide emissions of 250 American households. This technology is also extremely costly – Climeworks offers individuals and companies the opportunity to purchase carbon offsets at a steep price of \$1,200 (£881) per CO₂ ton.

This may seem like a dishearteningly small outcome for an extortionate cost, but it certainly is a tentative step in the right direction for the future of this type of technology. Climeworks claims that by 2035, the cost could be reduced to as low as \$100 (£73) per ton. So although there is still a long path ahead regarding cost reductions and efficiency improvements, Direct Air Capture offers us a very promising solution to our pressing need for negative emissions technologies.

BOOK RECOMMENDATION

Living the 1.5 degree lifestyle

Monami Miyamoto Environment Editor

To what extent does individual action contribute to mitigating climate change?

Recent years have seen many people becoming more aware of daily choices they can take to reduce their negative impact on the planet - whether it's taking public transport, cutting down on meat consumption or carrying a reusable bag.

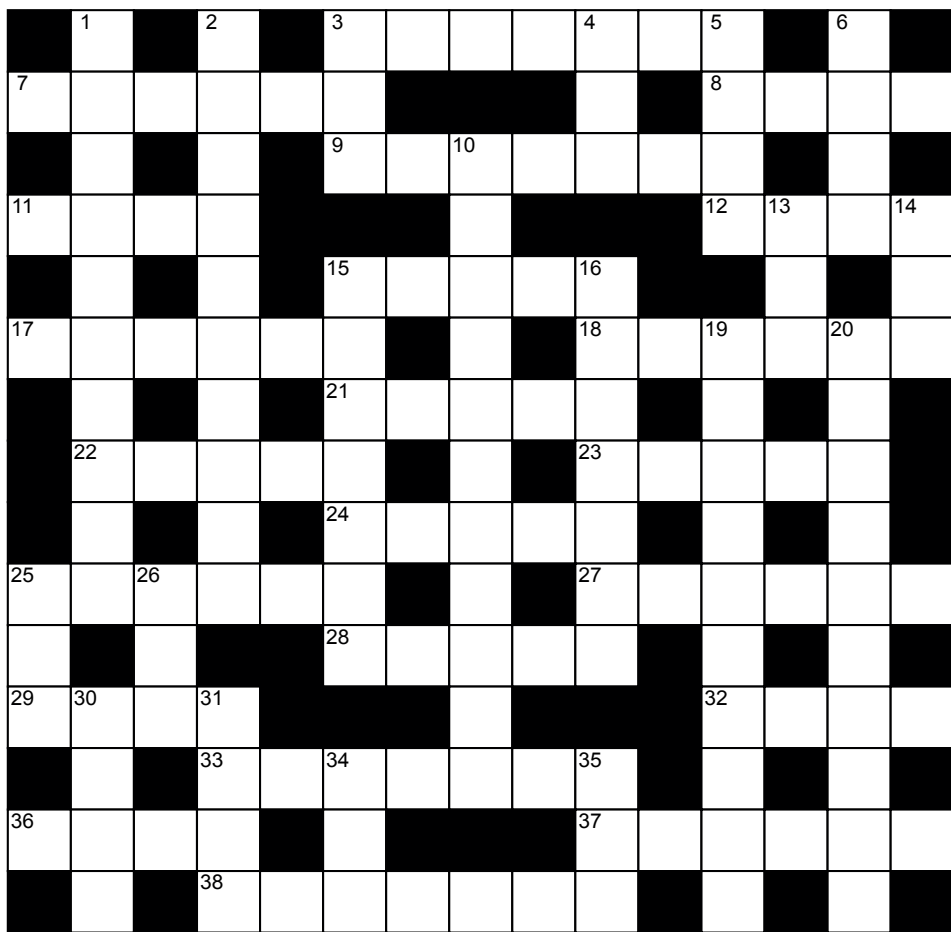
In many ways, the COVID19 pandemic made it easier for people to implement these behaviours; we might've had more time on hand and staying at home automatically reduced transportation fuelled GHG emissions.

But as we transition back

into the pre-pandemic life, which of these pro-environmental actions will stay? And how do we measure their impacts?

'Living the 1.5 Degree Lifestyle' by Lloyd Atler is an attempt to answer these questions. Grounded by scientific research, yet accessible to all, it highlights why some individual actions may be more productive than others, and concludes that whilst on their own, it won't solve the climate crisis, they are a crucial component of the overarching solution; one that must also include rapid, just, and effective policies and education.

CRYPTIC Crossword Grid



CRYPTIC Crossword Clues

Across

- 3. Point or bend around to get it covered. [7]
- 7. Cram right into the undergarment. [6]
- 8. One it placed by the peacekeepers. [4]
- 9. Scowl when you draw a terrible card. [7]
- 11. Lower basin. [4]
- 12. I hear it's a load of ore. [4]
- 15. In short, a rainbow could've easily done this. [5]
- 17. Pass the garment to Casanova. [6]
- 18. Drill in the stilts on the left-hand side. [6]
- 21. The figures of roots? [5]
- 22. For instance, am I returning to drawing? [5]
- 23. Fat-free fish? [5]
- 24. Not a soul will last come midday. [2 3]
- 25. As ripe as a land can be. [6]
- 27. Scan over centre in secret. [6]
- 28. I hear they rented almost nothing out. [5]
- 29. Partially employed stratagems are real assets. [4]
- 32. Close in early on the core section. [4]
- 33. Hang up your uniform once you put the salad in the centrifuge! [7]
- 36. Neat, as a rose. [4]
- 37. It's in the course of this thankless task we get the means to stand on our own two feet. [6]
- 38. Deferring the adoption of the dark side by the honoured force. [7]

Down

- 1. Great amusement gotten when you hit driller, perhaps. [6 4]
- 2. Equipment? Fiddlesticks! [6 4]
- 3. What the beggar might eat when thrown out of the bar. [3]
- 4. In a trice, she felt more herself again! [3]
- 5. You led off the fight. [4]
- 6. How one could describe the acne-ridden clown? [4]
- 10. Fold in firm. [11]
- 13. Released to rise around the submarine. [3]
- 14. Sounds like a more ray-like fish. [3]
- 15. There're excited ears on the network, backing this team. [7]
- 16. Disinfect when heartless son has gone in to slice people up! [7]
- 19. Large rook flying about in the sky composes firebird. [10]
- 20. Centralise construction of combines. [10]
- 25. Some cheap, ugly dog. [3]
- 26. Shot from a pirate? [3]
- 30. He is an easy god. [4]
- 31. Add ring to this form of wrestling. [4]
- 34. I hear dampness is expected. [3]
- 35. Put the gas back, it needs reinflation! [3]

Easy Sudoku

		2		3	8		9	7
	9					5		
					9	6		
6				4		9		
	4						5	
		1		7				3
		5	3					
		7						2
3	1		8	2		4		

Normal Sudoku

		4	1					
1			4				3	
				3	6			4
				6		2	9	7
3								5
9	8	7		5				
8			9	1				
	1				4			2
					7	4		

Difficult Sudoku

6					7		4	9
			1		9	5		
				5		3		
		7				9	1	
			3		2			
	3	5				7		
		4		1				
		9	7		3			
2	7		4					8

Puzzles Notices

Thank you for lobbying your DPFS - we have a leaderboard!

Boy oh boy do we have puzzles for you! 4 whole pages, and that's a treat!

We thank our contributors:
 Lito Chatzidavari for laying out most of this section
 Stanley Scott for the crosswords
 Mihaly Ormay for Nonogram #1
 Ameena Hassan for everything else

P.S: We are still looking for editors and writers!

Points

Cryptic crossword	5 pts
Easy, Normal, Difficult sudoku	2, 3, 4 pts each
Regular crossword	3 pts
Nonogram #1	2 pts
Word pyramid	1pt
Minesweeper	2pts
Gogen	2pts
Nonogram #2	2pts

CRYPTIC Crossword

C	R	S	G	W	M	F	E
A	M	A	T	E	U	R	
S	N	M	I	T	R	L	C
H	A	D	R	I	A	N	
E	O		G	H	E	P	U
W	O	M	A	N	H	O	
	E		O	L	N	T	
M	E	R	G	U	E	Z	
A	E	R	I				
L	A	N	D	O			
A	O	T	W	N		P	E
R	A	V	I	O	L	I	
K	A	X	R	O	A	A	T
E	N	T	W	I	N	E	
Y	E	N	S	E	Y	E	R

REGULAR Crossword

L	G	M	F	W	C	S	C
A	I	R	F	O	I	L	
N	U	L	E	T	A	N	
C	O	M	P	E	T	E	
E	I		C	R	N	B	
S	T	O	C	K	W	E	
R	E	N	E	W	E	R	
I	O	G	I		R		
B	O	S	S	A	C	H	
O	T	R	H	B	S	A	
S	E	R	F	D	O	M	
O	I	E	O	E	E	R	
M	E	L	A	N	I	N	
E	S	S	D	T	T	D	

Sudoku

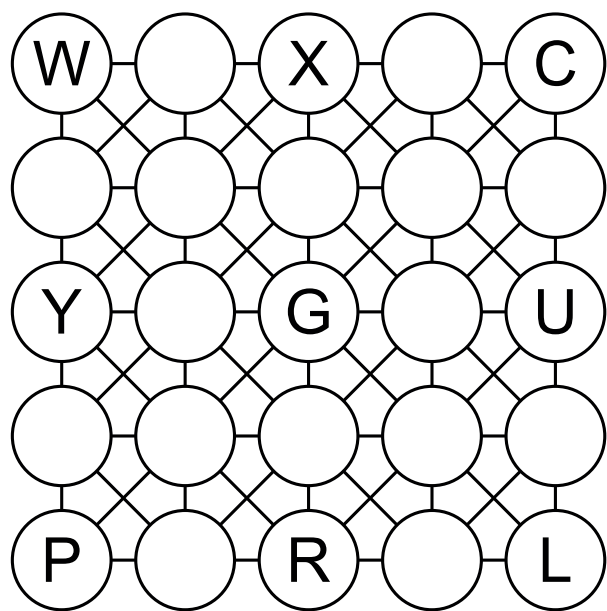
3	4	7	8	9	2	6	5	1
1	9	2	3	5	6	8	4	7
8	5	6	1	7	4	3	9	2
4	8	3	7	1	5	2	6	9
6	1	5	4	2	9	7	3	8
7	2	9	6	8	3	4	1	5
9	6	1	2	3	7	5	8	4
5	7	4	9	6	8	1	2	3
2	3	8	5	4	1	9	7	6

FUCWIT

- 1. Plont Palace 11
- 2. The Flots 3

If you would like to see yourself on this board, it's not too late! Scan or take a picture of your answers, and send it to fsudoku@ic.ac.uk by **Wednesday, 12nn**. Collect points and claim your place in these hallowed notices!

Gogen

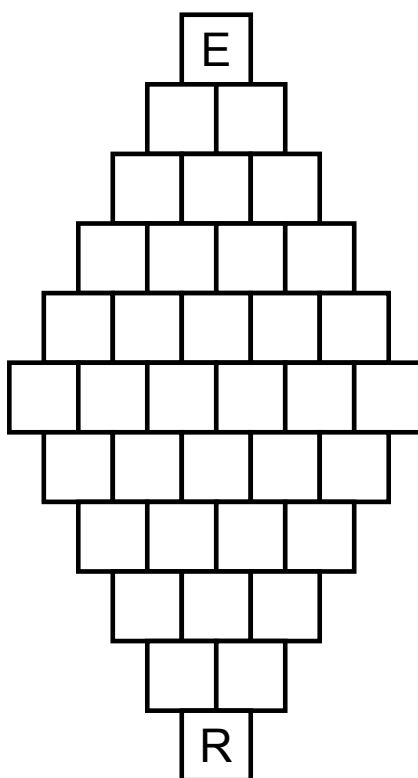


How to solve:
Fill in this 5x5 grid with letters A-Y (Z has been excluded because square numbers are the best.) The letters must be filled in such that all the clues can be made through chaining letters vertically, horizontally, and diagonally.

- CLUES:**
 BLENDS
 CINDER
 FROST
 JAY
 LENGTHWAYS
 MYSTIQUE
 POSTING
 STINK
 TAXI
 VINE

Draw your impression of Felix, our mascot in the space below. We will judge it and your impression could feature in the next issue! (If you haven't guessed already, we are really stretching out the space that Puzzles is using this week!)

Word Pyramid



How to solve:

Use the clues to fill out each row. The next row has either inserted or deleted a letter from the previous row.

- E (1) - Cr, Mn, __, Co, Ni (2) - Same element as before but in *french*
- (3) - Term used for transphobic feminists (4) - Someone's strong suit (5) - Robin Hood, Park Hae-jin, Josef Keller (6) - To keep in reserve (5) - Kate Winslet's name in 1997 (4) - Origins of fish (3) - Logical operator (2) - R (1)

Minesweeper

	1						
1	2	1			1	1	1
1	2				1		1
			1		1	2	
			2				1
1		1			1		
	1						1
1	2	1					1
				1			
1		1					1
				1	1	1	

DISCLAIMER

This section used to be called Hangman, now it's called Catnip, get over it

Gast found trying to gerrymander campus blueprint in order to extend presidency

Anton Briggs NegaFelix gonzo Reporter

Alice Gast was found this Tuesday trying to gerrymander a map of the South Kensington campus in what she described as a “well overdue” attempt at extending her presidency of the College.

Gast, who by the looks of things hadn't slept since at least the previous Saturday, was stumbled upon by a Felix News team investigating the number of students waiting to get into Central Library.

Crouched under the check-out computers on the ground floor, surrounded by a nest of scrunched up A2-sized campus blueprints, the Felix team found Gast adding another line to the spider's web she'd already drawn across the map. A bumper pack of felt tipped pens lay strewn across the floor, and different buildings had been coloured in either red

or blue - apparently Gast sees Huxley as a staunchly Conservative district. The Queen's Tower was inexplicably shaded orange.

As I reached out to ask Alice what had led to this blinding misunderstanding of College appointment procedure, the elevator behind us pinged. The Provost walked out, tut-tutting and shaking his head. As he neared the team I saw he bore a mark of sadness that only a man in grief would truly own.

“It's this sort of behaviour that led to the shorter second term in the first place” he said. “You can't tell from the minutes, but this was pretty much the status quo at College Council meetings”.

“So she's always thought she became President through a first-past-the-post system?” I asked.

“To be honest Anton, that's the tip of the iceberg of misconceptions Alice has about the way the

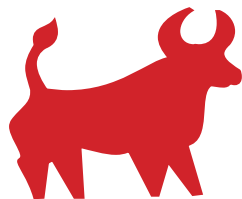
College operates. We've seen her trying to send letters to Imperial College Republic, in the hope that they'll disagree with Imperial College Union. She put forward a £2 billion damage mitigation plan to Council after the Brexit vote, under the impression that the UK would actually physically move away from Europe. I can't count the number of times she's asked me who 'Mr City and Guilds' was and why we named a building after him.”

At that moment, a librarian walked past with a trolley of returned books, rolled Gast on top of them and disappeared behind the IT service desks.



ARIES

This week the condensation on your window will prove to be a valuable stockpile when your flat is cut off from the mains



TAURUS

This week you bring a christingle to a food fight and win hands down



GEMINI

This week your fear of loneliness loses out again to your fear of commitment



CANCER

This week the government issues emergency visas to European astrologers to tackle the horoscope shortage crisis



LEO

This week your girlfriend tells you that it isn't you or her. It is your best friend Gary



VIRGO

This week you pay £115 for the right to run around in a field



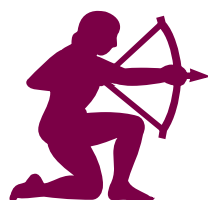
LIBRA

This week a spoken word mix-up causes what you thought was an application to study EEE at Imperial to land you in the Libyan capital



SCORPIO

This week the Felix horoscopes section pulls the ultimate prank and secures a guest lecture from Brian Cox



SAGITTARIUS

This week you're angry at how over-sexualised sex is, it's literally just people reproducing



CAPRICORN

This week the National Cephalopod Review fails to publish your Squid Game fanfiction



AQUARIUS

This week you sue the Pixar lamp for battery



PISCES

This week soaring gas prices make you miss the times you had with your overly-flatulent ex

QUOTE OF THE WEEK

“Think before you speak. Read before you think.” - *Fran Lebowitz*

Dear ICEugenie...

Q MESSY FLATMATES

I've got really messy flatmates and it's driving me insane. The dishes are piled up so high in the sink that you can't even run the tap without water spraying everywhere. I found a rotten piece of meat in the top shelf of the fridge, and its juices have leaked out and contaminated the food on the lower shelves. And to top it all off, I found mouse droppings in the corner of the kitchen! I'm sick of living in this filth, and I don't want to risk actually getting sick. What can I do?

A

That sounds absolutely awful! No one deserves to live in those conditions, and your concerns about health and hygiene are valid. I would recommend having a chat with someone in the Advice Centre about your concerns; you can reach them at advice@imperial.ac.uk. They have helped numerous students with a wide variety of housing complaints, and have truly seen it all; in fact, it happens to be the most common type of concern that students have approached them with over the past three years! They can go over anything from your rights as a tenant to assertive communication techniques that you can use to approach your flatmates about your concerns in a productive way.

Q T-TOTAL?

I'm a fresher and an international student from the United States. I'm feeling a bit out of place at the moment when it comes to finding a group of people to spend time with; I don't

drink alcohol and I don't really like to stay out very late. What is the best way to make friends that would not involve going out or drinking?

A

This is an excellent question! Let me be the first to reassure you that you are not alone; I personally know of three people who are in university and have never had a sip of alcohol in their life! Please don't feel embarrassed or out of place because of this personal choice; it's a really positive thing to be aware of your own boundaries. As for making friends, my suggestion would be to have a look at the 364 clubs and societies that are currently being run by students, for students. A great way to do this would have been to attend the Welcome Fair on October 5th, where you would be able to talk to current members in these societies and sign up to their mailing lists. Keep in mind that you may need to shop around and attend a few meetings with different groups before you find a place that you truly feel like you can fit into; some clubs put more of an emphasis on drinking socials than others. Speaking from experience though, the effort put into this is well worth it; finding that source of peer support can support your mental wellbeing, which could have a positive impact on your studies as well!

Q ANXIETY

My anxiety has gotten a lot worse during the pandemic. I haven't been able to bring it up with my family since they have a lot of very antiquated ideas about mental health, and I

can't expect much support to be found at home. It's getting to the point where I'm struggling academically and I don't think I can manage it on my own anymore. What should I do?

A

Thank you so much for being so open and vulnerable. I know that this isn't easy for you to talk about, especially given the stigma that you have to face from home. I would encourage you to have a look at the counselling service; it is self-referred, and you can reach them at counselling@imperial.ac.uk. The service is completely confidential, and you will not need to disclose your engagement with it to anyone else, at College or at home. They provide up to 6-8 sessions for free, after which you can be referred to the Mental Health Advisory Service for more long-term support. The Disability Advisory Service is also self-referred and can provide support services such as study mentoring and can help you set up special arrangements for your exams. Finally, I would also encourage you to get an appointment with a GP at the Imperial College Health Centre and ask how they could help support your work in counselling. Once a GP has made contact with you, they will be able to support you with writing letters for mitigating circumstances and/or special exam arrangements.

I know that this can be a lot to take in, but the important thing to remember is that you are not alone, and that there are people here at Imperial who can and want to support you. You made it to Imperial because you are bright and talented; your current struggles and obstacles do not make that any less true.

*If you want to ask Eugenie anything, email DPWelfare@imperial.ac.uk
It's totally confidential!*

This Week's Gossip...

We here at Felix CAN'T BELIEVE that the "person with the fun hair" tried to charge RSM £100 for a member throwing up in the toilet of the Union bar - we're excited to see how much the fine for throwing up over the bar staff is

WEAR IT
PINK

BREAST
CANCER
NOW The research
& care charity

WEAR PINK, RAISE MONEY AND HELP
MAKE LIFE-CHANGING BREAST CANCER
RESEARCH AND CARE HAPPEN.

22.10.21

WE'VE NEVER NEEDED YOUR SUPPORT MORE

If there was ever a time to put on that pink top, proudly drape that pink feather boa around your neck or pull up those pink socks, it's now.

Register today to get your fundraising pack at

wearitpink.org/freepack



Information accurate at time of print 21.05.21
Breast Cancer Now is a company limited by
guarantee registered in England (9347608) and a
charity registered in England and Wales (1160558),
Scotland (SC045584) and the Isle of Man (1200).

Your Union



Welcome & Welcome Back!

Are you excited to have your say? We're almost there - voting opens at noon, Monday, 18 October. It's important to vote for someone that shares your values and you know will do a great job fighting for your needs.

Who will be your Academic or Wellbeing Rep? You choose them! You also get to vote for the Representatives to Union Council and the officers of Liberation & Community Network Committees, Constituent Union Committees and CSP Committees.

It might feel a bit overwhelming with so many people to vote for, but this shapes your time at Imperial so take your time and have a look at their manifestos here: imperialcollegeunion.org/manifestos.



You did it! Hats off to you!

Graduating university is a big deal, but graduating from Imperial is absolutely amazing (we might be biased on this one)! So you have to believe us when we say - we're super proud of you all, especially with the pressures of last year.

We're also very happy you get to have an in-person graduation and we're really looking forward to seeing you all over campus in your beautiful gowns. We've invited Chris Stark (from BBC Radio 1) to entertain you on the day in FiveSixEight. We're also showing the live ceremony on our screens in the bar, so your friends and family get to see you graduate.

We hope you go on to do amazing things, but most importantly that you live the lives you dreamt of and you stay true to yourselves. Wherever you go, and whatever you do - know that we are rooting for you!

Don't forget to drop by the Shop to grab some Imperial memorabilia. We know you want that silver tankard!




Celebrating Black History Month

Working with our BME Officer, Rebekah Christie, we've organised a special film screening on Thursday 21 October! This will be happening in the City & Guilds building, room 200, at 18:00.

We'll be showing Mangrove from the Small Axe series. The screening will be free and will offer a great opportunity to come together and discuss Black culture in London, and just enjoy a brilliant piece of cinema. Doors will open at 17:50, so get down there in good time to grab a good seat and pick up some snacks that will be provided!

Last year we put together a few resources for the Black Lives Matter movement. Have a read here: imperialcollegeunion.org/campaigns/black-lives-matter and send us any suggestions you might have to improve this page.



shop

Take your memories with you!

Visit the Shop on the Sherfield Walkway and grab your favourite memorabilia!

Or check out our online Shop! imperialshop.co.uk

Your Union



Historical Pub Crawl

Tuesday 19 OCTOBER 2021 | 17:30 - 23:30

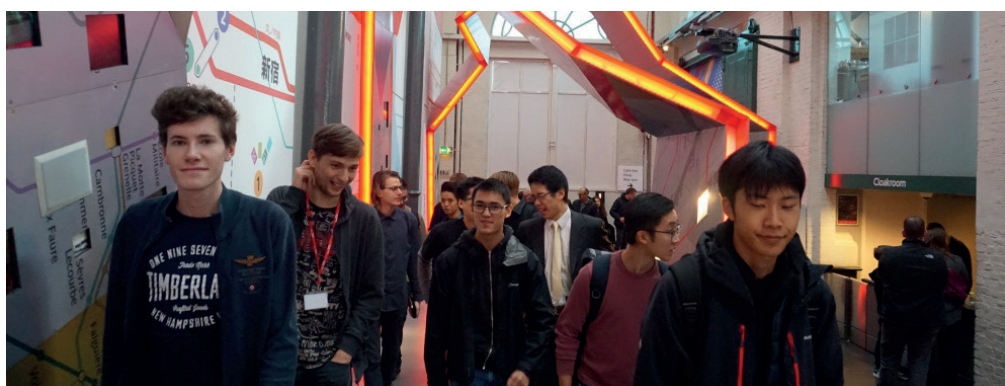
Kick off the year with a staple of the History Society: their historical pub crawl! Join them in visiting a range of fascinating pubs in the heart of London each with their own stories to tell. Meet them at the entrance to the Royal School of Mines on Prince Consort Road at 5:30 PM before heading off to The Blackfriars to arrive after 6 PM. Alternatively you can go directly there to meet them - they should be there until 7 PM. Check out the Facebook event page at [facebook.com/events/923428288265266](https://www.facebook.com/events/923428288265266) for any updates on the day.



Scuba Club Welcome Talk

Tuesday 19 OCTOBER 2021 | 18:30 - 19:30 | City and Guilds Building Lecture Theatre 200

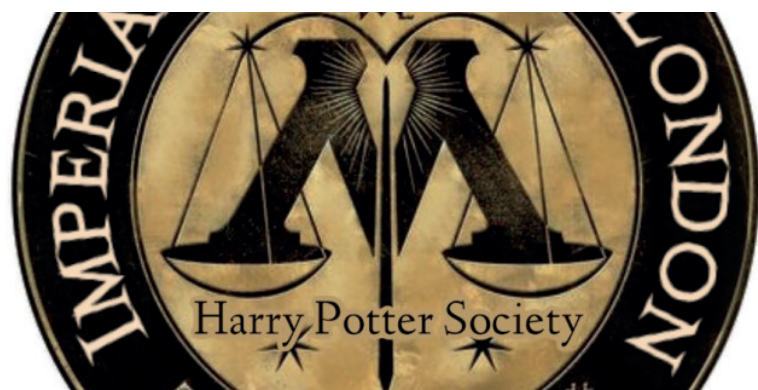
Have you always been fascinated by the sea? Or more important what is below its surface? Are you looking to start a new adventure during your time at university? If so, make SCUBA diving your hobby of choice during your time at Imperial! Their welcome talk will provide all the information needed to get you on your way to earning your diving qualifications! Meet the Scuba Club in the City and Guilds Building, lecture theatre: CAGB200 at 18:30. After the talk, feel free to join them at FiveSixEight for their weekly club pub night!



London Transport Museum Visit - Rail & Transport Soc

Wednesday 20 OCTOBER 2021 | 13:15 - 17:15 | London Transport Museum

Visit the London Transport Museum with IC Rail and Transport (ICRTS), at half price! Discover the history of London's transport at the LTM. Explore the heritage of London and its transport system, and the stories of the people who have travelled and worked in the city over the last 200 years, before taking a peek into how future technologies might impact London as we know it. Sign up for discounted tickets via ICRTS' store! Sign up at: imperialcollegeunion.org/whats-on/event/10345.



Movie Night - Harry Potter Society

Friday 22 OCTOBER 2021 | 20:00 - 22:30 | Imperial College Campus

Join the soft launch of the HPSoc movie marathon! Fun games, BYOP (Bring Your Own Popcorn) and tons of witchery all on campus to start preparing for Halloween!

Location will be determined soon! Sign up here: imperialcollegeunion.org/whats-on/event/10346.

More info & events: imperialcollegeunion.org/whatson

MUSIC

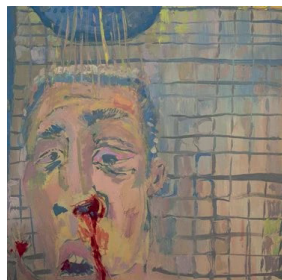
Edited by: ROSIE MILLNS

DON'T MISS THE GIG - PEEPING DREXELS @ WINDMILL, 18TH OCTOBER

SOUTH LONDON'S
PEEPING DREXELS

TAKE TO THE
WINDMILL, BRIXTON,
TO PERFORM THEIR
2021 EP *BAD TIME* IN
FULL FOR THE LAST

TIME. MOVING FROM THEIR GARAGE-
ROCK ROOTS TO HEAVY BUT DANCEABLE
SONGS, THE 5-PIECE ARE A BAND YOU
WANT TO CATCH BEFORE THEY MAKE IT
BIG.

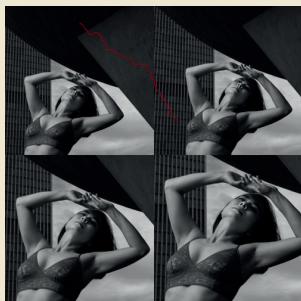


Single of the Week

Working the Knife by Mitski

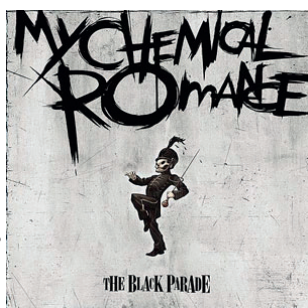
Ending a two year
long hiatus, Mitski
returns with a subtle
but devastating ballad
about the stark reality

of chasing your dreams, alongside a series of tour
dates. If you are lucky enough to find a resale
ticket, catch her at The Roundhouse on 28th
April.



TODAY IN MUSIC HISTORY

IN 2006, MY
CHEMICAL
ROMANCE'S
'WELCOME TO THE
BLACK PARADE'
TOPPED UK CHARTS.



MADONNA WAS
BANNED FROM A US CINEMA CHAIN AFTER
SOMEBODY COMPLAINED ABOUT HER
TEXTING IN CINEMAS.

PAUL AND LINDA MCCARTNEY WERE ON
THE SIMPSONS, LEADING TO LISA SIMPSON
BECOMING VEGETARIAN.

Opinion

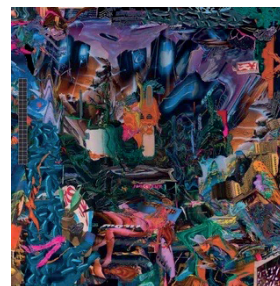
Six 2021 Albums by Artists Coming to London This Year

Written by Giovanni França Music Writer

black midi – *Cavalcade* | Avant-Prog |

Two years after releasing their debut, Black Midi's sophomore effort is an exceptionally eccentric amalgamation of sounds and influences, that somehow does not sacrifice cohesiveness. Even if the songs do not hold an obvious common thread, the sequencing of the album makes it cinematic, notably due to the ominous instrumentals and Geordie Greep's vocal interpretation. His lyricism is also an essential puzzle piece of the artwork, adding a layer of chaos and disorientation. The combination of all these elements creates an ongoing tension throughout the entire tracklist, which is grandiosely released in the closer. It is hard to compare *Cavalcade* to any other band, but this time I will recommend it to listeners of Swans and King Crimson.

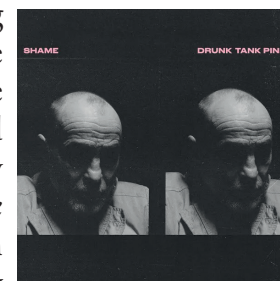
Catch them at Alexandra Palace Theatre on Nov 11th



Shame – *Drunk Tank Pink* | Art Punk |

Shame is a band emerging from the Windmill scene in Brixton, alongside the likes of Black Midi, Squid and Black Country, New Road. *Drunk Tank Pink* is their second full-length effort, released at the very beginning of 2021. The group offers a much more accessible sound than their peers, insisting on strong, repetitive, danceable melodies. However, the album does explore introspective themes, where the vocalist Charlie Steen often paints sceneries with a palpable anxious atmosphere. His energetic delivery is one of the highlights of *Drunk Tank Pink*, giving it a slight theatrical quality. Overall, it is a solid and catchy album that achieves shame's ambitions but leaves some room for improvement. It might appeal to those who are into IDLES or even Gang of Four.

Catch them at Electric Brixton on Nov 12th-13th



Little Simz – *Sometimes I Might Be Introvert* | Hip Hop |

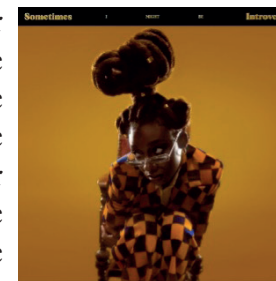
If Simz's last album, *GREY Area*, was her burgeoning, *Sometimes I Might Be Introvert* is her blossoming in the mainstream. The Londoner themes of her fourth album celebrate the black community in the city, fluctuating between the North and the

“south side of that River Thames”. On top of that, the vivid, epic atmosphere of the project develops on Little Simz's continuous push for women empowerment. The rapper also focuses on some very personal struggles, hence the name of the album. She explores themes of introversion, family, and her path as an artist, accompanied by organic, intricate beats. If you are a fan of Noname, or the jazzier side of Kendrick Lamar, *Sometimes I Might Be Introvert* is for you.

Catch her at O2 Academy Brixton on Dec 16th-17th



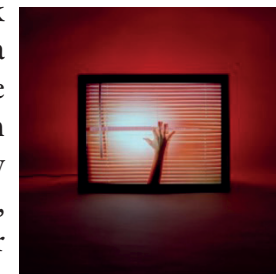
View online here!



CHVRCHES – *Screen Violence* | Synthpop |

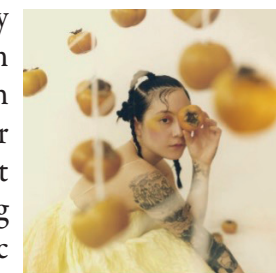
The Glaswegian trio is back with another project, and it is a success among their long-time fans. Going for an unforeseen rock-hinted sound, they released ten well structured, radio-friendly tracks. Rather catchy, *Screen Violence* holds very strong singles in an already consistent tracklist. Unexpectedly, The Cure's Robert Smith shows up for a feature placed as the centrepiece of the album, complementing Lauren Mayberry's gleaming vocals. Naturally, her talent is evident throughout all songs. Even if the production is not quite on the same level and the instrumentals may get repetitive, her voice is the persistent motor that gets *Screen Violence* running. Give it a try if you enjoy Paramore or London Grammar.

Catch them at O2 Academy Brixton on Mar 16th



Japanese Breakfast – *Jubilee* | Synthpop |

The band embodied by Korean-American musician Michelle Zauner returns with a new album and a poppier sound, putting her elegant vocals in the spotlight. Ranging from pop anthems to idyllic ballads, the project preserves its summery vibes from start to finish, providing a very easy listening experience. It has interesting grooves, captivating basslines, and a surprising number of classical instruments, uncommon for this genre. The production is top-notch, realised by Zauner herself and well-known names such as Alex G. *Jubilee's*



relaxing quality is sure to be appreciated by those who like Clairo and Mitski.

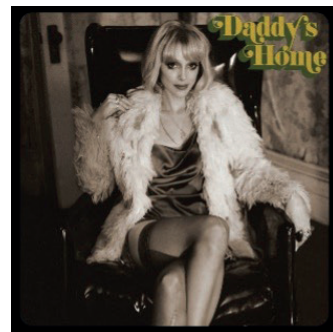
Catch her at Kentish Town Forum on Mar 30th

St. Vincent – Daddy’s Home | Psychedelic Soul | *Daddy’s Home* is more than a music album, it is a complete audio-visual homage from Annie Clark to the psychedelic 1970s. Drastically shifting her aesthetic from the *MASSEDUCTION* era, her songwriting

gets a soulful refurbish, infusing introspectiveness into funky beats. Accompanied by a renowned Jack Antonoff production, St. Vincent’s performance is intimate: sometimes going in a sensual direction, sometimes going for a style that is cosier and heart-warming. This way, she pays tribute to idols such as Pink Floyd and Candy Darling, dedicating entire tracks to them. But she does not limit herself to celebrities, also evoking her father and childhood friends. Indeed,

St. Vincent’s exuberant personality is the core of the project, making it very unique. Check it out if you have an interest in Fiona Apple or HAIM.

Catch her at Hammersmith Apollo on Jun 29th.



Felix Recommends

Mark Hollis by Mark Hollis

Written by **Ben Bateman** Music Writer

When I first listened to Talk Talk properly, it was a rainy day in February and I was taking the train to work in Manchester. Their lead singer, a guy called Mark Hollis, had just died, and my dad sent me something about an album of theirs called *Spirit of Eden*, and once I’d listened to it I was hooked. Hollis’ barely

discernible poetry over a mishmash of horns, strings, and guitars was weirdly elegant, considering the recording process was so loose and without purpose. Later on, a friend of mine told me about the other Talk Talk album that came out after *Spirit*. *Laughing Stock* was darker than its predecessor. It was distressing to listen to at times; it had the lowest lows and highest highs of any album I’d heard. By the time

Talk Talk had released *Laughing Stock*, they’d faded from the significance that their pop roots had given them, and they were down a bassist. They split soon after its release. Whether the media and record labels recognised it, though, they’d just released two albums that would define alt-rock and post-rock in the future. But Hollis still had one more thing to get off his chest before he’d retire from music and fame for good.

Enter *Mark Hollis*. The bread shaped like the Lamb of God on the cover stares at you, misshapen face and eyes looking almost teary. In Mark’s own words, “When I saw it for the first time I had to laugh, but there’s also something tragic about it at the same time.” Listening to this after the previous two records feels like you’ve finally escaped whatever hell or heaven was happening in those albums, and you’ve found a precarious peace somewhere. The opening track greets you with silence, followed a soft, quiet piano, accompanying a quiet hum from Hollis. ‘The Colour of Spring’ – the track shares a name with Talk Talk’s last widely successful album, although it doesn’t share much else with its namesake: the only sounds for the majority of the playtime are that quiet piano, and Hollis’ high indiscernible singing occasionally roaring into a louder shout, only to dip down in volume once more.

Other tracks infuse Hollis’ jazz influences with a more traditional acoustic guitar-based rock. ‘Inside

Looking Out’ and ‘The Gift’ have both, in different ways. The former starts off quietly and intimately like the opening track, before building in timbre with Hollis’ voice, ending with a small chorus of clarinets playing so quietly you can hear the wind blowing through them more than the actual note. ‘The Gift’ kicks off with a

steady drum rhythm, with the same guitar and bass working together to create a noticeably slightly sinister atmosphere, with a small whoop here and there on the harmonica to compliment Mark’s softly spoken words – sounding here almost like a threat. The track finishes messily with the same chorus of discordant woodwind instruments, leading perfectly into the next track.

The rest of the album passes like a dream, hand held by Hollis’ voice as he guides you through a quiet portrait of still life, contemplation, regret and hope. My personal standout is what I’d consider to be the best example of Hollis’ fusion of the styles that inspired him throughout his career. ‘The Daily Planet’ could be confused for a jazz tune as it starts,

with various woodwind instruments playing with each other in the otherwise silent recording studio. Then with the introduction of some drums, and a bass accompanying the constant droning of the woodwinds in a discordant dance, it becomes hard to guess where the lead clarinet might be heading next. Just as you’re starting to figure it out, the guitar and piano kick in, with Hollis leading the charge. The chord progression in the verse is gorgeous, and the jarring change

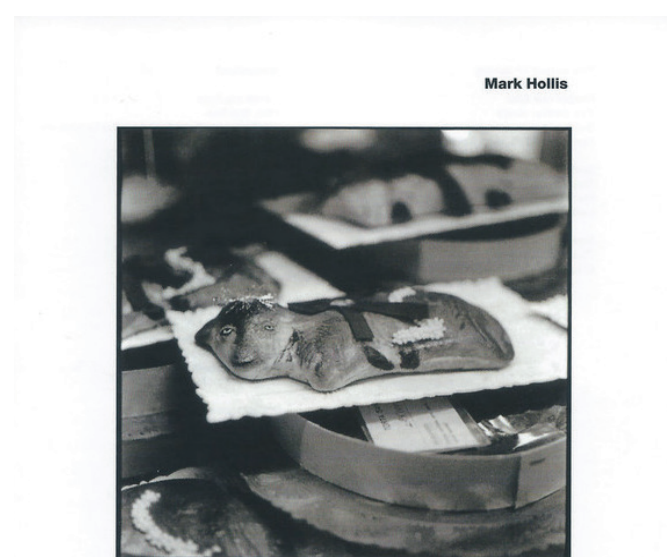
from the woodwinds to this leaves you a little taken aback – even though only a few instruments have changed places here. As the song fizzles out after the last verse, we get a shaky and emotional coda. “Hurts to see, over undertone,” Hollis whispers over just a couple of clarinets and bassoons, “Shame, last to laugh, no.”

“

THEY’D JUST RELEASED TWO ALBUMS THAT WOULD DEFINE ALT-ROCK

“

IT’S THE FINAL WORD OF A MUSICIAN FRUSTRATED BY FAME, WHOSE ONLY INTENT WAS TO CREATE SOME ART AND BE DONE WITH IT



The song is seen out by a few seemingly random notes from the woodwind section, lingering on a dissonant guitar chord as long as it possibly can.

Mark Hollis is peculiar, in the sense that I love it just as much as the two preceding Talk Talk records,

though it feels profoundly separate and removed from them both. My friend who recommended *Laughing Stock* didn’t gel with this album at all. And I don’t know anyone who feels the same unspeakable love for it as I do. But I still believe if there’s any record which proves what an incredible musician Hollis was, it’s his self-titled solo effort. After *Laughing Stock*, *Mark Hollis* feels open and light – the opposite of its predecessor. It’s the final word of a musician frustrated by fame, whose only intent was to create some art and be done with it. And done with it he was – Hollis retreated from the fame he got from Talk Talk,

spending the rest of his life in peace and quiet with his family. He faded from the public eye until his death in 2019.

MUSIC

Interview

Passing the Aux to Rakin Gilani

Interview by **Rosie Millns** Music Editor

Every week Felix speaks to an Imperial student to find out what the Imperial community has been listening to. This week we spoke to Materials student and the bass god of Imperial, Rakin Gilani, the bassist and frontman of Rakin and The Rakins.

What is the last song you listened to?

'Man Don't Care' by JME. He is my favourite type of grime, I think because of the witty lyrics.

Do you have any memories you associate with that song?

My dad showed it to me. He now references the lyrics at everything.

What is your favourite lyric in that song?

Right off the bat, my favourite lyrics are "If one of you try and violate me / You get a punch in the face with my front door key / Punch in the neck with my back door key / Box in the mouth with my X6 key / Box in the eye with the fob / I use to log into my HSBC." How else would you start a song?

You're stranded on a desert island and can only listen to albums for the rest of your life – go:

Buck Fever – Estradasphere. That album is endless entertainment. It goes from heavy metal to big band jazz to 8-bit videogame music to screamo. There's so much variation, so much different shit. They're just a group of Canadian college students, and they sound exactly the same live. In song songs there are some really intense and complex sequences, and they just run through it easily. There's also a fiddle player. My favourite songs on the album are 'the dapper bandits', which is a story with a chase scene, a bit in a club, and also 'the bounty hunter', which is just a solid piece.

Nonagon Infinity – King Gizzard and the Lizard Wizard. When I first heard this album it sold the entire band to me, and then they went on to release a million more albums. It is great to be a Gizz fan as they're always churning out really cool good music. I used to listen to this album on the bus to school because it infinitely cycles, so I would just listen to it on repeat for the hour I had to travel.

Brown Sugar – D'Angelo. I always put this album on. I was listening to it to get through lockdown, because it has a trance effect on you, it really chills you out. The vocals are crazy. It sounds like he's saying words, but nothing he says makes sense or has meaning, it's just noises. There's not much to say about it, you literally just have to listen to it.

You're at a party and someone passes you the aux. What are you putting on?

The innate dickhead in me would put on something to troll everyone, like maybe a track from this electronic album that just samples washing machine sounds. But to be honest I'd probably put on a Jay Z and Kanye collab, like 'Clique', or 'edamame' by bbno\$. It slaps.

Who is your guilty pleasure artist?

Justin Timberlake. Has to be. I had Justified on CD in my car and me and my friends would sing along to it. I went to an all boy's school, so we had four untalented singers hitting all the high notes in 'Senorita' and 'Cry Me a River'.

Who is your musician crush?

D'Angelo. He's too sexy. He's always high or horny, the dude is too sexual. He actually stopped making music for a while because he was being sexualised too much at gigs and didn't want to be.

Onto your music - you filled in for bass with Quadronauts at last Friday's Welcome Ball before Big Narstie, but what is your favourite song to play on bass?

This has made me realise how much I play. I'm usually asked to fill in, so it's not normally music I usually like that I play, but I still get into it if it's got a good bassline. There was a song by Snarky Puppy that I played with Imperial's Big Band. I can't remember the name but I love that one. When I played the fresher's ball, Quadronauts sent me a set of 8 songs to learn, and said we would be performing 3, and I didn't listen to any of them and learnt them by ear at rehearsals. Turns out I had never heard 'Under Pressure' by Queen before. I picked up bass to learn songs by Royal Blood, which I still enjoy playing.



Rakin Gilani doing what he does best - shredding on bass - at last Friday's Welcome Ball.

Photo credits to Lloyd James

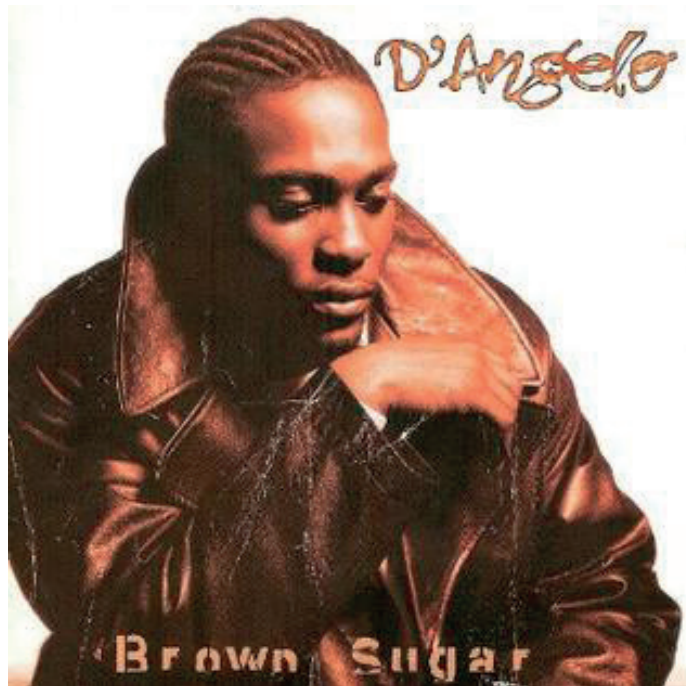
What bands influenced Rakin and The Rakins?

I like to think of Rakin and The Rakins as like the start of music, where it all began. People will look back at them like the second coming of Christ or the invention of the wheel. We don't have any influences, but we exclusively play Stevie Wonder.

Finally, any last words?

Listen to the band formerly known as Rakin and The Rakins, and big up Archie Taylor for being in every bit of music I've ever done.

If you want to talk about your favourite songs in Felix, email us at music.felix@imperial.ac.uk!



FRIDAY 15TH OCTOBER 2021

FILM

Edited by: EVA BORRAS

Film Review

Hidden figures

Directed by: *Theodore Melfi*

Starring: *Taraji P. Henson, Octavia Spencer, Janelle Monáe, Kevin Costner, Kirsten Dunst*

Year: 2017

Aurélia Bordes Film Writer

Hidden Figures is a 2017 feature about 3 brilliant Black women who played a crucial role in the Space Race between Russia and the US. Katherine Johnson, Dorothy Vaughn and Mary Jackson were originally « human computers » at the NASA Langley Research Center which means that they calculated by hand everything they would be asked to. At the beginning, it was mostly men that did this job but there was a shift at some point because companies realized that women (and - truth be told - any minority) could be paid less to do exactly the same job.

To begin with, Katherine Johnson was a mathematician and a physicist who computed the Apollo 11 mission's trajectory. Given her incredible math skills, she was asked to join a Space Task Group where she was the only Black woman. In a famous episode, the astronaut John Glenn asked her to double check the trajectory of his mission, the Friendship 7 one, because he

did not trust digital computers. With her help, this mission made him the first American to orbit Earth.

Secondly, Dorothy Vaughn was a mathematician who became NASA's first African-American supervisor. When NASA bought their first IBM computers, it said to threatened the job of « human computers ». Dorothy Vaughn thus decided to learn programming (FORTRAN, for those familiar with computer science) and soon became much better than the white men in charge of the IBM machine. She passed her knowledge to her fellow black women « human computers », and saved their jobs. Not only that, but she also taught the white men who were dismissing her before, as is seen at the beginning of the feature.

Lastly, Mary Jackson was NASA's first female African-American engineer. She applied for the position and was told that she needed extra-classes in order to get the position. Those classes

were held in an all-white school so she took the matter to the court and won the right to attend the night classes and learn just like any other student.

The film takes place in the '60s when Black workforce were not allowed to use the same bathrooms as white people so if you choose to watch this film, you find absurd scenes where Katherine Johnson is forced to go to another building to use the toilets because there is no « coloured bathroom » in the building she is working in. Hidden Figures is not a sad movie, in fact it's the contrary, a movie full of hope that will not fail to inspire you. Overall, the film portrays the hardships minorities face to get their voices heard in the scientific community as well as also emphasizing the recognition they slowly get.

Next time someone says we lack important historical women and/or black figures, remind them of the « hidden figures » !

DON'T FORGET TO CHECK OUT THE ONLINE FELIX FILM SECTION!



Film Review

Small Axe: Mangrove

Directed by: *Steve McQueen*

Starring: *Letitia Wright, Shaun Parkes, Malachi Kirby, Rochenda Sandall, Alex Jennings, Jack Lowden*

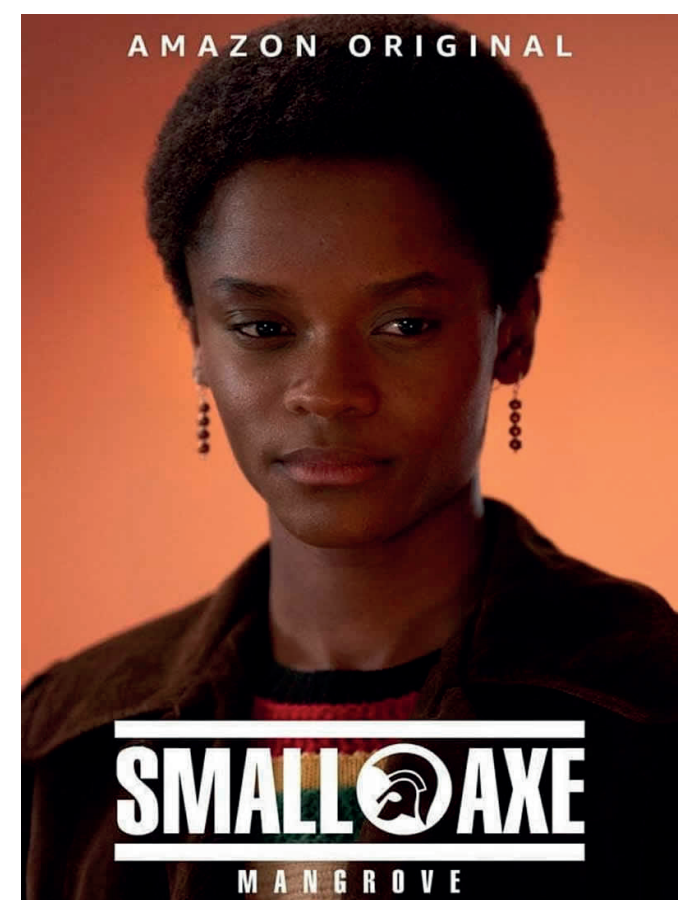
Eva Borrás Film Editor

British filmmaker Steve McQueen became the first Black director to win an Academy Award - Best Picture in 2014, with his film '12 Years A Slave', a film set in the 19th century revealing the heart-breaking reality of slavery as Solomon, an Afro-American violinist is kidnapped and forced into slavery.

After the success of this film portraying Black history in the USA, McQueen decided to develop a five-part anthology series telling four real and one imagined stories about Black people's history in Britain. The first one is called 'Small Axe: Mangrove' which portrays social injustice within the judicial system, tackling the sensitive yet extremely relevant and important topics of racism, police brutality and discrimination among others. Furthermore, this feature explores the life of Frank, a West Indian immigrant living in London during the 50s and the struggles he faces when trying

to set up and run his restaurant called The Mangrove. This restaurant located in London's Notting Hill starts to become a signature place for the Black community as they feel safe, however Frank becomes a subject of harassment by the police for no justified reason and therefore was forced into becoming an activist for his own rights. After countless police raids, Frank and his friends lead peaceful protests in 1970 and are faced with extreme police aggression. This leads to nine attendees of the protests to be unfairly arrested and charged wrongfully with incitement to riot and are subject to a 56-day trial. This is a movie you cannot miss, as director McQueen successfully depicts an impactful story that everyone needs to see.

Imperial College Union has confirmed a film screening of Small Axe: Mangrove to be on 21st October at 6PM at the Imperial Cinema, make sure to check it out!





Want to write for the column?

We're now open for Investment Writers!



The 2019 Algorithon – students firing away at working out the task at hand!

Are you someone interested in Investment or Finance?

Do you have an interest in what's going on in the world e.g. the state of the economy or the latest in macroeconomics?

Would you like to write for the Investment column?

Well, you're in the right place. We're looking for writers who have a keen interest in writing to join our writers' team and publish articles about the world of Investment and Finance to our readers and society every week. Training will be provided so that you can lay out your own articles and learn how a professional newspaper

compiles its columns on a weekly basis. The Investment Society is currently the 2nd biggest society on campus, and we want to keep growing to teach our members what the world of finance is about, without the technical jargon that you often see on the internet. It's a hellish journey, but we're here to help everyone out.

You'll probably be thinking... **I'm interested! – How do I join?** Applications open next week – we're currently working on our Capital Fund, QT Capital so that our members can have the experience to invest with actual money and handle tangible risk, but the writers' team positions will open soon after! **Sign up to our society as well!**

15TH OCTOBER 2021

The Investment Society's event listings page – Volume 3

INVESTMENT



Some members sitting in front of laptops for a quantitative finance panel, 2019

SEC, Lecture 1

Saturday 16th October 2021 10:00 – 12:00 **LOCATION TBC**

And we are off (soon, anyway!)

The Securities and Education Certificate (intentionally acronymed to the SEC) is our very own 4-week lecture course that teaches students the fundamental knowledge about Investment and banking that is required for a career in the fields. The course is examined at the end, so that you can show your future employers a graded certificate to certify your accreditation and completion of the course – it's now in its 5th year of running.

It kicks off next Saturday, in partnership with Imperial College Finance Society.

Please note, you must have registered by the 13th of October and have been accepted onto the course to attend. *You can sign up at investmentsoc.com/SEC and fill out the form.*

Contact us on email for more information:
icu.investmentsociety@imperial.ac.uk

Enrolment emails will have been sent out by now if you have applied – contact us for any enquiries.



Investment Society
Imperial College London



Imperial College London **Finance Society**

Demystifying Chinese Investments with Chinese Alpha
19 Oct 2021
18:00 – 20:30
HUXLEY 308 / 311

The Investment Society will collaborate with ChineseAlpha to understand how to invest in Chinese equity. In this event, you will be introduced to Chinese macroeconomics, followed by regulation concerns and its unique VIE structure, and finally understand Chinese portfolio allocations and research methods.

Contact Ethan Cui (qc420@ic.ac.uk, see right) for more information.

CHINESE ALPHA
powered by XNode

An Introduction to AmplifyMe and the Finance Accelerator Simulation
27 Oct 2021
16:00 onwards
LOCATION TBC

Join Amplify on the 27th October to experience the same trading simulations used by the worlds leading banks to enhance your market awareness. Gain hands on experience of both the sell-side and buy-side giving you exposure to life as a market maker as well as an asset manager.

Contact George Spencer (gws19@ic.ac.uk, see right) for more information)

▲ M P L I F ▼

We're also working on other events to bring you over the coming year!
If you're a society and you're interested in helping us set them up, drop us a shout:
icu.investmentsociety@imperial.ac.uk

Women In Finance

Spring Weeks Guide

PRIDE In Finance

Quantitative Investment

BAME In Finance

Events at Imperial this week

Compiled by Ethan (Qzhe) Cui (Head of Diversity & Inclusivity, qc420@ic.ac.uk) and George Spencer (Head of Sell-Side Corporate Relations, gws19@ic.ac.uk)

COMMENT

Edited by: KHAMA GUNDE

Do PhD supervisors only guide PhDs to write good dissertations?

► *What is the role of PhD supervisors when it comes to supervising PhDs?*

Selina Cao

Research Postgraduate



One answer I came across lately is to help PhDs write good dissertations. But is that all there is?

Does the good only apply to the thesis?

I suggest the answer to be to assist students towards becoming self-reliant and impactful thinkers.

During my job search as a final-year PhD candidate, I came close to the requirements of entering an academic career. The application and interview processes made me wonder what exactly a PhD candidate needs in order to be a well-prepared job market candidate. What came to me very often is not only about a good PhD thesis, but more importantly other key capabilities, such as independent thinking, selling, networking, self-confidence, resilience, and the tacit knowledge of the rule of academic games.

I would be too idealistic to assume that all these skills are the responsibilities of PhD supervisors. But the blurry boundary of responsibilities between parents, PhD supervisors, universities, and PhDs themselves does not stop one asking what is the least a PhD supervisor can do for a PhD candidate. Especially as the majority of the time PhDs spend is with supervisors during the PhD program.

If we agree on the assumptions that most PhDs apply for PhD programs with the goal of entering academia and PhD supervisors are there to help support students' vision, then not only is a good PhD thesis not enough but it also serves as a misleading goal. Very often, job market candidates do not have a finished thesis by the time they start job applications. Focusing on a good PhD thesis may be convenient for PhD supervisors

as professors are normally very busy with their own agendas, but it is not helpful for a PhD student to be fully prepared for an academic career that asks for independent and impactful thinkers.

I believe that PhD supervisors have more opportunities, knowledge, power, and benefits to shape PhD students to become well-prepared job market candidates than other stakeholders. Don't get me wrong – I am not saying that PhD supervisors need to impart everything onto PhD students; where students can just sit and absorb. Instead, I am saying the PhD supervisors' role needs to expand to more than just helping PhD students finish good theses. A good thesis may be a necessary condition but it's not a sufficient condition for a good researcher if academia is the goal.

I suggest that the role of PhD supervisors is multi-dimensional and is about assistance towards self-reliant and impactful thinkers. Here, I want to emphasize three dimensions:

Help PhDs become independent thinkers. PhD students at the start can be very overwhelmed by classic papers and big names in the field. This mindset may prevent students from challenging well-established theories, especially the ones from supervisors. I am not suggesting PhD students should challenge everything supervisors and existing theories say in order to be independent thinkers who succeed in academia. I argue that PhD supervisors should prevent forcing students to accept what they believe is right or discouraging students' thoughts without a conversational discussion to help students understand. Instead, PhDs need to be encouraged and nurtured to think logically themselves, with words of reason, without raising ones' voice and without pushing self-designed rules.

Facilitate and encourage PhDs to find their own identities. The identities

I mentioned here can be academic or non-academic. If academic, then identity can include epistemological, ontological, methodological, and theoretical ones. I am not saying that these identities have to be well-established at the PhD graduation date. It takes time to find these identities and identities are also fluid depending on circumstances. But the journey rather than the result is the most important part. Fear of students making mistakes should not be a reason to control students' path, nor should the drive of self-protection. Students will gain confidence as well as trust that they can decide everything on their own with the respect from supervisors. At the end of the day, it is the responsibility of PhDs to make their own choices. Being driven by self-interest is also more likely to lead to impactful research in the long run.

Show empathy but no praise and no rebuke. Presumably, every PhD supervisor was once a PhD student. This means that PhD supervisors know the hardship of getting a PhD degree. On top of having a high and strict standard for PhD students, it is also vitally important to show empathy, e.g., saying "I feel you. I have been in your shoes. It is very hard", to form a trustful partnership. At the same time, when it comes to training self-reliant researchers, either praise-based or rebuke-based supervision is helpful. While praised-based supervision may cause dependence on external admiration and a competition-oriented rather than a cooperation-oriented mindset, rebuke-based supervision is likely to give rise to contempt and drive far away from a respectful and trustful relationship.

Self-reliant and impact thinkers may not have the best dissertations at the end of PhD programs (as do lots of big names), but they may use the PhD journey to experiment and then figure out their identities, train their independent

thinking skills, cultivate mentoring and teaching capabilities, develop selling and conference organizing skills, and prepare other channels to contribute to societies in their own ways. Knowledge (or we say theories) keeps updating – the best dissertation at one time may be outdated very soon, but the capabilities gained can not only never be outdated but also enable impactful research and mentor good thinkers in the long run. Focusing on producing a good thesis thus constrains the endless possibilities for improving oneself during the PhD journey.

Lots of PhD students do not know the responsibilities of PhD supervisors, preventing them from asking for help when they need it, especially when supervisors are very busy and when academic culture shows hierarchical favour. Similarly, I assume professors may not know or do not have time to notice struggles many PhD students face when very often students are too afraid to speak up, or professors are too busy to be found.

I believe discussing this question openly is a good opportunity to help both parties understand each other before the partnership and achieve synergy during the partnership. It is also important for the environment and community to look at how to better design incentives and rules to foster such trustful and long-term-oriented partnerships.

FRIDAY 15TH OCTOBER 2021

SPORT

Edited by: AMANDA BARDEN
KONRAD HOHENDORF

Imperial takes on the Henley Regattas

ICBC athletes Lizzie Witt and George Shaw

A year that many of us will remember in a bad light was one of success and celebration for one of the universities' sports clubs. Imperial College Boat Club clearly made the most of a year's training in lockdown and came out on the other side of it with successes at the largest domestic rowing regattas in the world. Imperial's boat club has a long standing history of success at both Henley Royal Regatta and Henley Women's Regatta.

This year was no different and the university's rowing club showed why they are known as one of the highest performing sports clubs at Imperial. The format of the Henley Regattas is a gladiatorial style knockout system. Two crews race side by side over the course and only the victors will race again the next day. Racing in this format leaves no margin for error, whilst the compounding fatigue of day upon day of racing can leave the athletes feeling off their best at the start line.

Henley Women's Regatta, which is usually held a few weeks before Henley Royal, on the same course, is an amazing race which can attract crews from around the world. While the timing and

course were slightly different this year, it was no less important to those who took part. From Imperial, the team consisted of a quad and a coxless four. Most of the girls travelled to Henley the night before racing began, on Thursday 1st July, staying in a house near the course, which they were delighted to learn had a pool. It would have to wait until later though as they had an early start the next day.

The first round was a qualifying race, a time trial over the course from which the top crews go through to race at the weekend. As a result of their time

trial performance, the coxless four received a 'by' through the first two rounds, meaning they did not have another race until Sunday. Unfortunately, the quad were up against some tough competition and just missed out on qualifying. Once boats

and equipment had been sorted, the team all headed back to the house to enjoy dinner together. After a session very early Saturday morning before the day's racing started, everyone spent the day relaxing, watching some of the other events and preparing for the next day.

The first round, against Oxford Brookes, went smoothly with Imperial winning by a comfortable margin.

Credits: AllMarkOne



The womens coxless four win their event in a thrilling race to beat old rivals University of London

“ THE LARGEST DOMESTIC ROWING REGATTAS IN THE WORLD



Credits: AllMarkOne

Imperial College mens 1st and 2nd eight race it out on the Thursday of HRR

Now, with spirits in the crew verging on nervously optimistic, despite any mention of actually winning being completely banned for fear of 'jinxing' it, the girls rested up, awaiting the final race. It was to be against the University of London, fellow tideway inhabitants and long-term rivals of Imperial.

The race did not start as planned with UL getting an early lead and some steering issues throwing off the rhythm. The crew collected themselves, however and by halfway had drawn back to level with shouts of support from the bank spurring them on. Their momentum continued, pulling them past the opposition and into the lead. Now, with the finish line approaching, and the Imperial crew still moving away it was not long before the race was over. This was a first win at Henley Women's for all the girls in the four and an incredible end to the season for the women's squad.

This year Imperials men's squad had three crews entered into the Temple Challenge Cup. This showed off the depth of the Imperial squad as it had the most athletes entered in the student's eights event. The Temple Challenge Cup starts on a Wednesday and the eventual winner isn't decided until the Sunday.

The men's squad had some avenging to do as the last time the squad was at Henley, due to extremely difficult draws, every crew entered got 'Wednesday-ed'. However, this was not to be this year. After some grueling racing and a tough five day schedule the Imperial 1st eight made it to the final against a Dutch

international crew ASR Nereus. Unfortunately, the 1st eight didn't have the speed to beat the Dutch crew in the final after a long week of races where the crew had lead all others right from the start. The 2nd and 3rd eights from Imperial also had good days racing with a

particular highlight being the 2nd eights commanding win over the Cambridge crew from Caius and Homerton. Another highlight for the mens squad was having the 2nd eight race against the 1st eight on the Thursday of Henley Royal Regatta, even if it was with the expected result.

Even though the men's squad came away with no Henley medals, it will be a year that the squad will always remember. Watch this space next year as the men's squad looks to take it one step further and win the competition. Special thanks to AllMarkOne for sponsoring us this year and the photos they took.

“ INCREDIBLE END TO THE SEASON FOR THE WOMEN'S SQUAD

