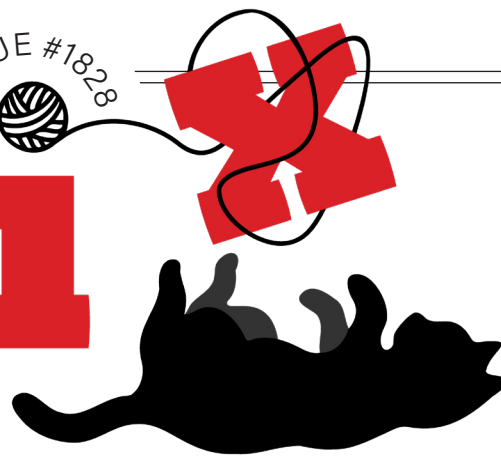


First published in 1949, *Felix* is released weekly during term time and is distributed around Imperial's London campuses. All students, staff, and alumni are welcome to contribute to the paper.

Felix

ISSUE #1828



KEEP THE CAT FREE | SINCE 1949

NEWS

Imperial Computing grads highest-earning in UK

Computing grads earn a median salary of £64,000 after graduating. How does your degree compare?

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ENVIRONMENT

An interview with Stephanie, ICU DPFS

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Walking in London

Deputy Editor Zanna Buckland explains why you should exchange dinner tables for pavements, and wheels for sneakers.

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Imperial returns to *University Challenge*, after a year out in 2022/23. BBC

Imperial back to winning ways

Felix spoke to Imperial's University Challenge team after its 285-145 demolition of Balliol College, Oxford.

Editor-in-Chief
JAMIE JOHN

After a year out in 2023, in which it failed to make the televised competition, Imperial has returned to *University Challenge*, the BBC's legendary quiz show which pits teams of students from British universities against each other. I sat down with the team – Adam Jones, Sourajit Debnath, Justin Lee, captain Suraiya Haddad, and reserve Mattia Elkouby – a week after their majestic first-round performance was broadcast.

→ [READ MORE ON 6](#)



Rolando Charles / Felix

Imperial students face delays to progression after UCU boycott

→ [READ MORE ON 4](#)

DECLARATION

At *Felix*, we believe that it is always in the interest of the students to be in the 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:

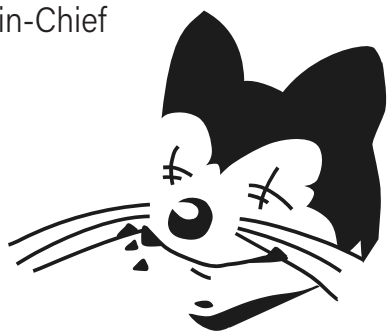
We will, to the best of our ability, tell you the whole truth and nothing but the truth.

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:
JAMIE JOHN
Editor-in-Chief



The Felix Board:



JAMIE JOHN
Editor-in-Chief,
News Editor



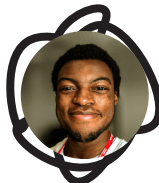
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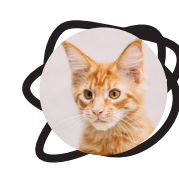
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EDITORIAL

Felix is well and truly back

On Tuesday, the Union held its annual Freshers' Fair, hosting over 380 clubs and societies at Imperial. I was struck by how many students stopped by *Felix's* stall this year.

The *Felix* society has, at the time of writing, 139 members; over 50% more than at the same point in time last year. I am greatly encouraged by the fact that so many students are interested in learning more about both the paper and news at the College.

My own journey to the paper and to the position of Editor-in-Chief was unlikely. I have always loved writing, and was an avid reader before joining university, but upon joining Imperial, I largely gave up those interests, sacrificing them in order to focus on my degree.

After long days of lectures and problem sheets, I had very little motivation to read or write. But in my second year, I wanted to challenge myself and start writing again, and so I joined *Felix*.

I joined the paper in late October of 2020, when COVID-19 was spreading rapidly across the country, and scientists were predicting a winter NHS meltdown. The country was just about to go into a second lockdown, and Imperial was delivering its courses remotely. Consequently, I had very little contact with the editorial team at *Felix*; all editing and copyediting was done remotely. We would access the *Felix* computers remotely using TeamViewer, and I remember there being a lag between my computer and the remote desktop that made copyediting very frustrating.

Nevertheless, the role proved to still be an excellent introduction to the paper; I learned how to use Adobe InDesign, - the software we use to lay out the paper - and began to understand what goes into producing a newspaper, and the type of content within it.

From there, I took on more responsibility, becoming Science Editor, and then last year, a news writer and Deputy Editor-in-Chief. Over the past two years of in-person involvement with the paper, the thing I have enjoyed most is the camaraderie and sense of community - a stark contrast from those early pandemic days. I had never been a particularly outgoing person before joining the paper, nor had I been especially interested in news. But at *Felix*, I found a friendly group of people who were willing to trust me with responsibility, and nurture and foster whatever nascent skills I did have.

This week, our office in West Basement (Beit Quad) was the busiest I have ever seen it. The more senior editors among us were excited to see so many people brought together over our shared passion for writing.

I hope that if you visited our Freshers' Fair stall, heard about *Felix* at your departmental welcome talks this week, or saw the paper in your student halls, you got at least some sense of that passion. If you haven't already, join our society on the Union's eActivities page, and email me (felix@imperial.ac.uk) if you'd like to write for us.



NEWS

Marking and assessment boycott hits students

Imperial students face delays to progression, grade confirmation, and exam results.

News Writer
MOHAMMAD MAJLISI

Students at Imperial have had their progression, grade confirmations, and examination results delayed, following a marking and assessment boycott (MAB) by the University and College Union's (UCU) Imperial branch.

Students across four departments (Physics, Mathematics, Computing, and EEE) have faced the brunt of the disruption. Several cohorts have been awarded only provisional grades, although, of the 3,065 students graduating this year, only 15 still await confirmation of their final classification.

The MAB, which is classed as action short of a strike, began on 17th May and is expected to continue until 18th October.

Only 55 of Imperial's 2,107 academic

and teaching staff are participating in the MAB. The action was called in response to Imperial's local pay award. Since 2005, the College has negotiated pay directly with staff representatives from the local branches of three trade unions: Imperial UCU, Imperial Unite, and Imperial UNISON, together known as the Joint Trade Unions (JTU).

The College has offered a median year-on-year pay increase of 5.5%, up to a maximum of £5,000. The JTU argue that this is a real-terms pay cut, and have instead asked for a pay rise of 10.5%, in line with inflation. They say a 10.5% increase would retain the value of Imperial's median pay since 2005, but Imperial claims this is unaffordable.

Negotiations have failed to produce an agreement. The College has offered a one-off £500 cost-of-living payment in November, but says it will rescind it if the



UCU members picketing outside Imperial on Monday 4th October. Rolando Charles / Felix

JTU reject its annual pay offer.

Boycotting staff have been angered by the College's decision to deduct their pay. Imperial is withholding 25% of pay from boycotting staff for the period of their participation in the MAB. Some staff say they have been forced to stop participating in the industrial action, as they are no longer able to cope with the financial implications.

Some staff have reportedly been hit with pay cuts of 125%, when strike days have fallen during the MAB. When on strike, staff are not paid at all.

Staff have expressed their anger at Imperial's response on social media. "Bullying and punitive pay deductions haven't worked...if Kings and UCL can make progress on pay negotiations, why can't Imperial?" reads one well-received message on the College's internal Viva Engage platform.

UCL agreed to a demand by its local UCU branch to increase its London weighting allowance to £4,500 from August 2023, and Kings College is in negotiations for a similar £4,500 August pay deal.

"The remuneration packages for several of the institutions that Imperial would regard as competitors have now vastly improved the salary deals of their staff," explains Vijay Tymms, Imperial UCU's branch president. "Every university relies on the goodwill of its staff...if that's no longer there, then it's going to be very difficult for them to recruit and retain the calibre of staff they want at Imperial."

Students have mixed feelings towards the MAB; those in the worst-affected departments in particular feel a sense of resentment and worry over the delays in receiving results and coursework

feedback.

In February 2023, Imperial College Union's student council expressed support for the MAB and all strike action from the previous year. 60.6% of Union Council voted to support the MAB, with 18.2% voting against, and 21.2% abstaining.

Some students have questioned why they have to face a boycott. Tymms argues that a boycott is the only way to force College management to listen to UCU demands, as grant and paper strikes (striking by not writing papers or submitting grants) are deemed ineffective.

What next?

Strike days have been planned for 2nd, 3rd and 18th October. It is unlikely that grades will be returned soon after 18th October, as many of those who are striking are teaching staff, and will be delivering classes in addition to catching up with marking. Further disruption to education is expected in the months ahead.



A UCU member appeals to onlookers outside Imperial. Rolando Charles / Felix



UCU members picketing outside the College Main Entrance on Monday 4th October. Rolando Charles / Felix

→ FROM P. 1: UNIVERSITY CHALLENGE

This year, the show underwent a revamp: long-time presenter Jeremy Paxman left, and was replaced by Amol Rajan, BBC Media Editor and former editor-in-chief of The Independent newspaper. Paxman was renowned for his withering retorts to participants (“That is a completely useless answer”, “Only out by 600 years or so”). Rajan, in contrast, was encouraging, and, behind the scenes, says the team, very nervous.

Imperial’s team has an illustrious past, sharing the record for most series wins (four) with Magdalen College, Oxford, and the University of Manchester. Unlike Magdalen and Manchester, who last won in 2013 and 2011 respectively, Imperial’s last victories came more recently, in 2022 and 2020. Those wins featured *University Challenge* legends like Michael Kohn and Brandon Blackwell. Blackwell built up a following during his time on the show and became affectionately known as ‘Imperial Brandon’. He was a contestant on *Who Wants To Be A Millionaire* in 2012, winning \$43,100, and in 2022, starred on *The Chase USA* as a ‘Chaser’.

Did the team feel pressure to live up to this legacy?

Not initially, says Suraiya. “I just wanted us to enjoy the first round, and not to lose.”

Justin smiles in agreement. “Yeah, the pressure of the legacy might have been stressful, but it’s significantly less stressful than worrying about not making a complete fool of yourself on TV.”

“Although in that first introduction to the team, you don’t know what they’re going to say”, continues Suraiya. “And Amol Rajan said, ‘Oh yeah, they’ve won it four times.’ It was such a hyped-up introduction to the team that then I was like, ‘Now I’m a bit more nervous.’”

In fact, one previous Imperial *University Challenge* winner was a big help in training this year’s team, says Sourajit.

“Even though she had graduated, Fatima Sheriff [a 2022 winner] would come to college for our weekly practice session. She was in contact with us all the time, and would help us sidestep a lot of the ‘local minima’ we would have been stuck in otherwise. We didn’t have to face some of the problems other teams did, because we already knew what to expect and how to go about things.”

Imperial’s quizzing success is all the more extraordinary given the College’s focus on STEM. Other university quiz teams benefit from a more academically-diverse talent pool, with the ability to recruit students studying humanities and arts subjects.

Adam sees this as an advantage: “You’re more likely to find STEM students who come home and read a book, or watch a film, than you are to find humanities students who get back and say, ‘I’m going to write some computer programs.’” This, suggests the team, gives each of them a broader overall knowledge base.

In their first round this year, Imperial dominated

Balliol College, Oxford, scoring 285 to Balliol’s 145. Their success came in part due to the speed with which they responded, consistently beating Balliol to the buzzer and then capitalising on the bonus questions which followed.

University Challenge rounds follow a relatively simple format: each round has its own theme, and teams are asked a series of ‘starter’ questions. The first team to buzz in has the opportunity to answer the question. A correct answer is rewarded with 10 points, and three bonus questions, worth five points each. Interrupting a starter question with an incorrect answer is penalised with a five-point deduction.

“You have to out-buzz the other team,” says Suraiya, when I ask about the team’s strategy. “But on an individual level, the calculation we’re all making is, ‘Do I buzz early [before the question has been read out in full], or do I wait for confirmation in the stem of the question and buzz?’”



It was such a hyped-up introduction to the team, that then I was like, ‘Now I’m a bit more nervous.’

Reserve Mattia was an important part of the strategy, attending the televised rounds and playing the role of the opposition in practice sessions. “I was always with the team,” he says, “In the studio and out – constantly writing things down, making notes of weaknesses”.

During practice sessions, the team would watch old *University Challenge* episodes and try to buzz in before those on screen. “It was basically four against nine – the two teams on screen, plus me,” says Mattia.

The captain serves a key role, particularly in bonus rounds, in which they give a final answer after the team confers, or nominate another member to respond in their place. They are selected for their ability to maintain a cool head, make good judgement calls under pressure, and communicate effectively.

“As the captain, I have to assess whether we are actually going to get to the answer in time, or whether we should just move on and get a new question that we might get right,” explains Suraiya.

Together with the rest of the team, the captain is picked by a selection panel consisting of former Imperial *University Challenge* competitors, and sometimes Quiz Society committee members.

The internal selection process consists of two rounds. The first takes place in late October; applicants are

asked to write down their answers to 100 questions, and around 15 high-scoring individuals are admitted to the second round in November. This round mimics the format of the *University Challenge* show; candidates are sorted into teams of four, and team members are cycled in and out to see how effectively they work together. The final four are selected not only for their individual skills, but their ability to function as a unit.

The team is then interviewed by the BBC showrunners, who select 28 university teams to appear on the show from over 100 applicants.

Filming takes place over three weekends, beginning at the end of February, but competitors are not allowed to announce the results to anyone but family and close friends.

The team this year comes from a diverse range of backgrounds: Sourajit, for example, worked as an engineer for India’s space agency for two and a half years before joining Imperial. They all agree that prior experience quizzing is critical, but whereas Justin first started quizzing competitively at school in Brighton, Adam only began at university.

Being inquisitive, they say, is the best way to get better at quizzing. “I think the main reason why I’m quite good at quizzes in general is just that whenever I hear about something that mildly interests me, I just look it up on Wikipedia and immediately go down a vortex of stuff where you’re led from one thing to another,” says Mattia.

Beyond that, joining Quiz Society and participating in their events is an effective way to build speed and accuracy on the buzzer. Not every team member was part of Quiz Society before they went to trials, but, says Justin, “You get to know people in the quiz circuit, and to feel your finger on the buzzer for the first time.”

Imperial will appear next on University Challenge in the new year. If you would like to be a part of the 2024 team, trials will be held on 24th and 31st October on the South Kensington campus, 26th in Charing Cross, and 27th in White City. Please email quiz@imperial.ac.uk for any questions about the process. Follow @imperialquizzes on Instagram, @imperialquiz on X (formerly Twitter), or Imperial College Quiz Society on Facebook to stay up to date.

Imperial in top 10 again

Imperial appears in the top six of all UK university rankings this year, and is first place in the *Daily Mail*’s new university guide. It is in the top three universities in Europe, and top 10 in the world, according to the Times Higher Education World University Rankings and QS World Rankings

ICU launches Student Experience Fund

Editor-in-Chief
JAMIE JOHN

Imperial College Union (ICU) has created a fund to help students who would otherwise be unable to afford it, to take part in the Union's activities and events. Eligible students will receive a sum of money which can be spent on Clubs, Societies & Project (CSP) memberships and events, in addition to other Union events such as Summer Ball.

All students on an Imperial Bursary, with an annual household income of less than £60,000, will automatically receive an allowance from the fund. The allowance will be credited to their Union accounts, and can be spent on purchases from the Union shop, with the exception of retail products such as merchandise.

Those awarded the highest sum (£65) will receive enough to cover over 98% of CSP memberships.

The fund is the brainchild of Dylan Hughes, 2022/23 Deputy President (Clubs & Societies). Its announcement comes after ICU's Clubs, Societies & Projects Culture Review last year, which set out long-term goals to improve the culture and experience of students at Imperial.

One of the goals put forward in that review was to create a fund to give all students the opportunity to participate in high-cost activities.

In future years, the Union says it intends to refine the fund to include all those who are less able to partake in student activities.

Annual household income	Funding per student
Up to £16,000	£65
Up to £50,000	£45
Up to £55,000	£25
Up to £60,000	£20

Imperial Computing grads highest paid of any UK undergrad degree

News comes as applications for computing-related degrees surge nationwide.

Editor-in-Chief
JAMIE JOHN

Graduates of Imperial College London's computing degrees are the highest paid of any undergraduate degree course at any university, according to *The Times* and *The Sunday Times* Good University Guide 2024. They earn a median salary of £64,000 six months after graduation – compared to the £26,000 average across all subjects and universities.

The Good University Guide reports an increase in demand for computer science and business studies courses, accompanied by a decline in

applications for humanities subjects. Computing-related courses are the fastest growing degree choices in the country this year, with applications now 10% higher than in June last year. Students are moving towards subjects which offer a well-paid and stable career, in a rapidly-changing job market.

Imperial's two undergraduate computer science degrees (Computing, and Joint Maths & Computing (JMC)), have the highest ratio of applicants to places (20:1 and 22:1, according to 2022 data) of any undergraduate course at the College.

In related news, Imperial's Business School this year launched its first-ever undergraduate degree course – the BSc in Economics, Finance and Data Science (see *Felix* #1827). Speaking shortly before the course's launch, Dr Pedro Rosa Dias, its academic director, said that the programme was developed to address the need for a "new generation of graduates in economics and finance who are able to use data science to guide businesses, public bodies, and international organisations in today's digital economy."



How does your degree compare?

Median undergraduate salary six months after graduation

Subject	Salary
Computer science	£64,000
EEE	£42,000
Mathematics	£40,000
Chemical Engineering	£38,500
Medicine	£36,000
Aeronautics	£35,000
Bioengineering and Biomedical Engineering	£35,000
Physics	£35,000
Mechanical Engineering	£33,500
Biological sciences	£32,000
Civil Engineering	£32,000
Materials	£31,000
Chemistry	£30,878
Geology	£28,500

Source: *The Times* and *The Sunday Times* Good University Guide / Higher Education Statistics Agency

Imperial alum Andreas Mogensen becomes ISS commander

Mogensen studied Aeronautics at Imperial from 1995 to 1999, before becoming the first Dane in space.

**Editor-in-Chief
JAMIE JOHN**

Astronaut and Imperial graduate Andreas Mogensen has become commander of the International Space Station (ISS). On 26th September 2023, he took over from Sergey Prokopyev. He piloted SpaceX's Crew Dragon spacecraft to the station, becoming the first non-American to serve as pilot of a US spacecraft.

Mogensen studied at Imperial from 1995 to 1999, obtaining an MEng degree in Aeronautics. In 2007, he earned a PhD in Aerospace Engineering at the University of Texas at Austin. He was selected as an astronaut by the European Space Agency (ESA) two years later, when he was working at Surrey Space Centre at the University of Surrey.

In 2015, Mogensen became the first Dane in space when he flew to the ISS as part of the 'iriss' mission. He said his journey to become an astronaut started when he was a student at Imperial; he went on two expeditions to South America, supported by Imperial's Exploration board. Mo-

gensen said he was asked about the expeditions during the ESA's astronaut selection process.

The commander of the ISS is responsible for the safety, health, and wellbeing of the space station's crew, and works with the flight director on the ground to oversee operations on the station. Mogensen is the sixth European to take on the role, and will serve for the remainder of his mission, which ends in early 2024. By the end of the mission, he will be the longest-serving European ISS commander.



Left: Andreas Mogensen
NASA (Public Domain)



Mogensen's Huggin mission launches aboard a SpaceX Falcon 9 rocket. European Space Agency

Reynolds Bar refurbished

Reynolds Bar on Imperial's Charing Cross Hospital campus has been refurbished. Reynolds, located in Hammersmith, will be open from Monday to Friday.

On Monday, Tuesday, and Thursday, the bar itself will be open from 4pm to 11pm, and on Wednesday and Friday from 4pm to midnight.

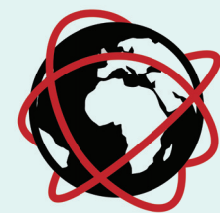
A café will be open in the same space from 8:30am to 8pm, serving hot food. *Felix* understands that there are plans to put further funding towards improving the Hammersmith Campus.



Reynolds Bar on Imperial's Charing Cross campus. Imperial College London

NEWS THREADS

Weekly bulletin



Marking and assessment boycott hits students

Students at Imperial have had their progression, grade confirmations, and examination results delayed, following a marking and assessment boycott (MAB) by the University and College Union's (UCU) Imperial branch. Staff are taking the industrial action over the College's 2023/24 pay award, which they believe is a real-terms pay cut. Imperial says their demands are unaffordable.

Four departments have faced the brunt of the disruption (Physics, Mathematics, Computing, and EEE). Of the 3,065 graduating students, only 15 are still awaiting confirmation of their final degree classification. The boycott is expected to continue until 18th October, with accompanying strike action on 2nd, 3rd and 18th October. Further disruption to student education is expected. ' (pp. 4-5)

Imperial Computing grads are the highest earning of any UK undergrad degree

That is according to *The Times* and *The Sunday Times* Good University Guide 2024, which found that graduates of **Imperial's computer science degrees** earn a whopping £64,000 median salary six months after graduation. EEE grads come in second, earning a median of £42,000, and geologists are at the bottom of the pile, with a £28,500 median salary six months after graduation. The Guide reports that both computer science and business studies degrees have seen a surge in demand, due, it says, to the healthy remuneration packages and job stability afforded by careers in those fields. (p. 7)

Bubble tea at EEE



Lumen Café bubble tea. *Felix*

Lumen Café at the entrance to the EEE building on the South Kensington campus has now opened. The cafeteria, previously called EEE Café, underwent a refurbishment over the summer. It now serves 10 different varieties of bubble tea, with a selection of six different toppings, and five sweetness levels. Drinks cost £3.50 for students, £4.20 for staff, and £5.25 for guests. The café is open from 11am to 7pm. See the menu below.

STEP 1:

BUBBLE MILK TEAS

- Original Milk Tea
- Brown Sugar Fresh Milk
- Mango Milk Tea
- Matcha Milk Tea
- Taro Milk Tea

FRUITY TEAS

- Mango Green Tea
- Peach Green Tea
- Lychee Green Tea
- Passionfruit Green Tea
- Strawberry Green Tea

STEP 2:

TOPPINGS

- Tapioca Pearls
- Lychee Coconut Jelly
- Mango Popping Balls
- Strawberry Popping Balls
- Green Apple Popping Balls
- Peach Popping Balls

Add any additional topping for 50p

STEP 3:

SWEETNESS LEVEL

- None
- Low (20%)
- Medium (50%)
- Standard (100%)
- High (120%)

Students

£3.50

Staff

£4.20

Visitors

£5.25

We are always looking for story tips - whether that be changes on campus, like the new FiveSixEight menu, or serious cases of injustice. You can contact us by emailing felix@imperial.ac.uk.

SCIENCE

First Science Nobel Prizes are in!

Science Editor

TAYLOR POMFRET

At the time of editing, the Nobel Prize in Physiology or Medicine, and the Nobel Prize for Physics, have each been awarded.

Beginning with Medicine, the winners of the prize go to Professors Katalin Kariko and Drew Weissman. The pair share the prize for their work into developing the technology behind the mRNA Covid vaccines. The same mRNA technology is now being researched for other diseases, including cancer.

Now for Physics, this year's recipients – Pierre Agostini, Ferenc Krausz and Anne L'Huillier – have been awarded the prize for their work in Attosecond physics. The three laureates' experiments produced "pulses of light so short that they are measured in attoseconds". An attosecond is equal to one quintillionth (10^{-18}) of a second. This work demonstrated that these almost unimaginably short pulses – like an ultra-high-speed shutter – could be used to study how electrons behave.

*Become
a Science
Writer!*



OSIRIS-REx Triumph: Bennu Samples Return to Earth

—
**What's Bennu hiding?
OSIRIS-REx samples
hold the clues.**

Science Editor

TAYLOR POMFRET

Launched on 8th September 2016, NASA's OSIRIS-REx spacecraft began its voyage to a near-Earth object (NEO) named Bennu; and following its seven-year long expedition, the spacecraft successfully delivered a sample of the asteroid back to Earth on 24th September 2023, becoming the first US mission to do so.

The site of NASA's latest historic project, the asteroid Bennu is an ancient relic of our solar system's early days. Having existed for over 4.5 billion years, scientists think that this puts Bennu's existence within 10 million years of our solar system's formation, making Bennu's present-day composition an exciting prospect for scientists studying early planetary formation.

With its unusual shape, Bennu is suspected to have broken off from a much larger carbon-rich asteroid about 2 billion years ago. It then likely formed within the Main Asteroid belt between Mars and Jupiter – drifting much closer to Earth since. As the contents of Bennu are so old and date back to the formation of our Solar System; Bennu may contain organic material similar to those involved in the chemical processes that kickstarted life on Earth.

Speaking with *Felix* back in May, in Issue 1825 Head of Science at NASA and Imperial alumnus Dr. Nicola Fox shared her



Sample return capsule from NASA's OSIRIS-REx mission touching down at the U.S. Department of Defence's Utah Test and Training Range. The sample was collected from the Bennu asteroid in October 2020. Keegan Barber / Wikimedia



In the 22nd century Benu will be on a close trajectory to Earth – so learning what the asteroid is like means that we could design a mission, if we needed to actually move the asteroid away.

excitement for the Osiris-Rex mission:

“I will say one of our core goals at NASA is to look and search for life. That doesn’t mean, to search for aliens in that sense – but we do have on the Webb telescope equipment that can look for signatures that could enable life to be sustained elsewhere. Bringing back samples from an asteroid, which originates from the very beginning of our solar system when our planets were forming - we think it will have signatures in there which maybe will tell us why planets form, and why we can sustain water and therefore why we can sustain life”.

“We can look at [OSIRIS-Rex] for many reasons: looking for what are the building blocks for early planet formation, in the 22nd century Benu will be on a close trajectory to Earth – so learning what the asteroid is like means that we could design a mission, if we needed to actually move the asteroid away.”

OSIRIS-REx stands for the Origins Spectral Interpretation Resource Identification Security Regolith Explorer. Each of the words in the acronym was chosen to represent an aspect of this mission. “S” for security represents one of the most important aspects of the mission, the security of Earth from hazardous NEOs. The spacecraft will allow scientists to better understand the Yarkovsky effect, the force exerted

on an object when sunlight is absorbed and released. When sunlight hits a rotating object like Benu, the day side heats up; and as the asteroid turns, the night side cools and releases heat; resulting in a thrust force. This small amount of thrust can alter the trajectories of orbiting bodies over time. Utilising this effect is one scenario currently under investigation to alter the course of potentially Earth-impacting NEOs. Possible strategies implementing the Yarkovsky effect include painting: the surface of the asteroid or focusing solar radiation onto the asteroid to alter the intensity of the Yarkovsky effect, to diver the asteroid away from a collision the Earth.

Scientists will now analyse this sample at the Natural History Museum. Speaking with BBC News, Prof. Sarah Russell at the museum adds: “We know from looking at meteorites that asteroids are likely to contain a zoo of different organic molecules. But in meteorites, they’re often very contaminated, and so this sample return gives us a chance to really find out what the pristine organic components of Benu are.”

On 25th April 2022, NASA confirmed an extension to the mission. After dropping off the sample on Earth, OSIRIS-REx became OSIRIS-APEX (‘Apophis Explorer’), who’s target is much like Benu, a near-Earth asteroid called 99942 Apophis. Apophis will have an extremely close pass by of Earth on 8th April 2029, with OSIRIS-APEX planning to rendezvous with the asteroid a few days later, on 21st April 2029. The spacecraft will perform a manoeuvre, similar to the sample collection at Benu, by using its thrusters to disturb Apo-



Benu may contain organic material similar to those involved in the chemical processes that kickstarted life on Earth.

phus’s surface, in order to expose and spectrally study the subsurface and the material beneath it.

NASA will be holding a press conference on 11th October to give its first take on what has been returned. In the meantime, the specimens will be held at NASA’s Johnson Space Centre (JSC). A quarter of the Benu sample will stay with researchers specifically on the OSIRIS-REx team. JSC mission managers then plan to divide and preserve the asteroid material to enable scientists in participating research groups across the world the chance to study the samples.

NASA says scientists will study the samples for “decades to come”.

OSIRIS-REx: 7-year Timeline

Launch - September 2016:

OSIRIS-REx launches at 7:05 pm ET from Cape Canaveral, Florida, on an Atlas V rocket. After a year orbiting the Sun, OSIRIS-REx receives a “nudge” from Earth’s gravity, sending it on its path to asteroid Benu. About two million kilometres away from the asteroid, the spacecraft will then begin its approach phase.

Asteroid Observations - December 2018:

OSIRIS-REx arrives at Benu. The spacecraft’s instruments survey the asteroid, creating a 3D map of its surface features and shape. The spacecraft performs flight paths designed to ensure that it can reach the sampling site safely. OSIRIS-REx rehearses its sampling manoeuvres.

Sample of Benu - October 2020:



OSIRIS-REx pictured during Touch-and-Go sample acquisition event. University of Arizona / Wikimedia

OSIRIS-REx deploys its Touch-and-Go Sample Acquisition Mechanism (TAGSAM), which touches down briefly on Benu’s surface and collects a sample. The collected material is safely stored in the sample return capsule.

Return - May 2021:

After spending 889 days at the asteroid, the spacecraft begins its orbital departure from Benu and makes its way back to Earth.

Capsule touchdown - September 2023:

OSIRIS-REx releases the Sample Return Capsule for touchdown. The sample lands in the Utah Test and Training Range on 24th September 2023.



The sample return capsule from NASA’s OSIRIS-REx mission is transferred to a cleanroom. Keegan Barber / Wikimedia

ENVIRONMENT

An interview with Stephanie Yeung

Imperial College Union's DPFS on her sustainability ideals.

Environment Editor
MARIE MORI

Our environment editors sat down with Stephanie Yeung – Imperial College Union's Deputy President (Finances & Services) – to give her the chance to introduce herself to our readers and discuss her sustainability goals for the academic year. This was what Stephanie had to say:

On why sustainability matters to her

Stephanie attributes her enthusiasm for sustainability to a science project she conducted when she was eight, where she first learned about global warming. "It started with household habits like turning off the lights", she described, "and making sure we're not [producing] waste where we don't need to." In her school years, she joined a competition and pitched for a "group that focused on beach cleanups and advocating for general plastic waste awareness" – which went on to receive some seed funding. At her second year at Imperial, she was the Ethics and Environment Officer, and despite this experience being during COVID-19 times, she says it has "helped inform a lot of the things [she does] now with regards to sustainability."

On the use of disposable plastic cups in the Union bars

Stephanie sees the use of disposable plastic cups in the Union bars as one of the most unsustainable practices at the Union. She explains that the Union uses plastic because "people get drunk and become more clumsy, and we don't want glass shattering – it's a health and safety

risk." However, she has been "looking into options and continuing discussions with the venues team to see whether we can transition into reusable options – even if it's still plastic."

On incentivising sustainable modes of transport

Stephanie highlights using trip policies to encourage more sustainable modes of transport. "Let's say a society wants to go abroad to somewhere in France. Rather than flying, they can take the train," she says. "Even if the Eurostar costs more, we would be willing to fund you to take the train. We want to make sure societies have the option to choose the more sustainable means of transportation where possible. We want to give incentives for CSPs and [give grants accordingly], [which would] make CSPs rethink the way they operate – I think a lot of it is a culture change."

On going digital

The union is going digital where they can. "This is one of the biggest moves we've made in marketing," she explains. Rather than giving out stacks of flyers, we're trying to minimise this into QR codes so that people can access information on our website."

On CSP sponsorships

Last year, Felix published an article revealing the vast sums of money fossil fuel companies give Imperial CSPs (Issue 1814). When asked about this, Stephanie commented: "Unfortunately money is situated with those in power and a lot of [these companies] tend to not be as ethical or as environmentally friendly as they should be...namely [the fossil fuel giants] like Shell and Chevron". On the first of August, Imperial's board of trustees passed a new policy on the 'Principles of Socially Responsible Engagement'. The aim of these principles is to ensure that any third-party relationships are consistent with the Union's mission and values. "It's about trying to move us into the direction such that we are only partnering with ethical and environmentally-friendly cor-



Stephanie Yeung. Imperial College Union

porations and businesses. We put a lot of money into our CSPs and we want to make sure that money goes to good places. [These principles were] passed very recently, so we are navigating how we're going to encourage our CSPs to move away from these partnerships. If any society wants to [partner with these kinds of companies], there will be a more thorough [questioning process]: How does this benefit your members? How does it benefit the students? How does that outweigh [the negative environmental effects]? Ultimately, as a union, we want to ensure student benefit. There are some societies – such as Chemical Engineering and Materials – that will be linked by nature [to these types of companies]. But they are also very open to this discussion – they were

also involved in the formation of the principles. The [traction has been positive] overall, but the principles are still in the works.”

On sustainability initiatives at Imperial

When asked which sustainability initiatives at Imperial she'd like to highlight, Stephanie points us towards the series of environment-related societies and campaigns at Imperial. In particular, she highlights Imperial Climate Action, saying: “They've been very active in terms of lobbying for change. They have been and continue to stay involved with us, and I think their voice has been seen. Having that collective voice there helps the College see that change is needed. It gives us the ammunition to demand change from the College.”

A monthly sustainability forum is also in the works. “The forum will be a place for students to share their thoughts, no matter how small”, Stephanie reveals. “It's for me to have a direct channel with anyone who's interested. For each forum I'm hoping to set up a theme so that there's a central topic to talk about. For the first one in October, I'm hoping to focus on the Union's plans, how students can get involved, and to get student feedback on these initial plans.” Future forums will be centered around COP28, the impact of climate change on health, climate anxiety, and more.



Poster for Environment & Sustainability Forum (at the Union Building in Beit Quad), Imperial College Union

On her favourite animal

“I love elephants”, she smiles. “I have a picture of me and all my elephant soft toys – there's at least 16 of them. I love them, and one in particular is very tattered. [Elephants are] such cute, benevolent creatures.”

Environmental education and reliable journalism are crucial

Deputy Editor
ZANNA BUCKLAND

Silent Spring (1958) is arguably the most recommended book for students and academics in conservation, ecology, and the environmental sciences. Written by Rachel Carson – a marine biologist who graduated from the Pennsylvania College of Women and Johns Hopkins University – the book explains the impacts of widespread synthetic herbicides and pesticides on humans and ecosystems. She also discusses the reasoning for their continued use at the time and the lack of regulation despite recommendations from the scientific community.



During the late 1950s, the United States government employed the insecticide DDT in eradication programs for pests like fire ants and mosquitos. This inadvertently led to the deaths of countless wildlife – particularly birds – as well as mass crop damage; events which were the primary inspiration for Silent Spring. What shocked me most when reading this book wasn't simply learning of such horrific incidents, but how little I had heard about them before and how difficult they were to fact-check.

One would expect an ecological tragedy of this severity to be as well-known as the sinking of the *Titanic* – but ask a random person on the street about them both, and they will almost certainly only know about one.

The message of *Silent Spring* still rings starkly true; not only with toxic chemicals, but also in the case of microplastic distribution. Carson's discussion of the accumulation of pesticides in living cells and tissues eerily resembles the pervasiveness of microplastics in organisms and ecosystems.

The knowledge that my bloodstream is presently filled with a myriad of miniscule toxic particles makes my skin crawl more than any fictional horror tale could. And yet it's not front-page news, I wasn't taught it in school, and I didn't find it out from anyone I know. If even the most educated among us are potentially unaware of such things, how can we hope to thoroughly enact positive change?

Large-scale conservation efforts are the responsibility of governments and corporations, but the average citizen needs to stay informed and engaged to keep those entities accountable. We all need to be aware of what's going on in academic research, what significant environmental events are transpiring around the world, and what governing bodies are and aren't doing about them. This is why effective education and journalism are crucial – without reliable journalism, all advocacy is rendered pointless.

In a press conference on Wednesday 20th September, UK Prime Minister Rishi Sunak explained that target dates for several net-zero pledges are to be shifted forward (e.g., implementation of a ban on new petrol or diesel cars moving from 2030 to 2035). This comes after his approval of new Rosebank oilfield as well as exposure of his family's ties to fossil-fuel company Shell. Sunak insists the UK is still on track to meet its original target of reaching net-zero carbon emissions by 2050, despite original commitments being tentatively on track at best.

If you have a stance on my column, or regarding the UK's revised climate-action plan, I invite you to contribute to the discussion right here in the Environment section.

COMMENT

Black, young and ambitious

Tofunmi Oloke discusses her experiences at Imperial.

Comment Writer
TOFUNMI OLOKE

Coming off of a gap year filled with travels, relaxation, and growth, I was unsure about what to expect when I started Imperial. After a rather miraculous application process for medical school, Imperial was the place that offered me the chance to spend the next 6 years of my life studying the course I had dreamed of as a child. I also got to study in London, which was a big bonus for me as it meant one thing; I would meet black people.

During my school years, I could count on one hand the number of people in my year at school who came from a similar background to me, or looked like me. And whilst that did not necessarily hinder my social experiences growing up, I could not help but feel that moving to the city where most of the young black population is concentrated would be the best choice for me. Throughout my teenage years I had envisioned what I wanted my twenties to look like. I desired a new environment — and Imperial was just that.

I was exposed to a completely new world, a place where I could relate to people — not just socially or emotionally, but also culturally. I felt empowered, being surrounded by such intelligent and creative black individuals. They also knew how to have a good time. The events put on by the University of London Afro-Caribbean society were amazing, I got to dance with my friends and

enjoy the distinctive sounds of afrobeats and amapiano- which was a nice break from the ‘oontz oontz’ of a regular nightclub. Imperial’s ACS provided me with a sense of community and a space to connect with other black students studying other courses. Through them I would meet my ACS parent, and now President, Tani. She gave me encouragement and support throughout my first year, which I am eternally grateful for. It also gave me a space to connect with my faith, as Imperial Gospel Choir held amazing concerts, with vocals reminiscent of the CDs my father used to play in the car as he drove me to school.

Football is a sport I enjoy playing and watching, and so naturally I joined Imperial Medics Women’s Football. It gave me insight into the realm of university sports and whilst I am still yet to attend ‘Slug’, the nightclub medic athletes attend on a Wednesday night, I am incredibly grateful that I have a space for myself to enjoy my hobbies and step back from medicine.

Moving to London also allowed me to try out new things, leading to me developing interests in fashion and music. Being the creative director and host of ICSM Fashion Show was one of my proudest moments last year. It encouraged me to leave my comfort zone and experiment with my style. Whilst I may not become the next Martine Rose or Virgil Abloh, I’m very proud of my growth in confidence and ability to give things a go. As a black girl, growing up, I felt the need to minimise myself and not take up



Imperial students know how to party! Tofunmi Oloke

space. The idea of being visible was uncomfortable to me. Being at Imperial has given me that confidence to stand out — to defy my subconscious constraints and what I perceived as society’s expectations of me.

As I embark on my second year, I hope to continue down this path of growth and self-discovery. I believe my identity as a black person is something to be proud of. I want to continue sharing my culture with others and also learn more about it. I want to be the type of person younger

Tomi would look up to. I want to enter spaces I had never dreamed of entering before- and I am sure I am at the right University to do so.



I hope to continue down this path of growth and self-discovery



Little bit of late night fun. Shравan Sharma

No left-winger should ever take drugs

Comment Writer
CALUM DRYSDALE

The modern left-wing culture that predominates among teenagers and twentysomethings in the United Kingdom and in many other parts of the developed world has an attitude towards drug taking that can at best be described as sympathetic and at its worst, vigorously supportive with 1 in 5 (21%) young adults aged 16–24 years admitting to taking an illicit drug in 2022. At the same time, this age category is more left wing than any other before it. A recent YouGov poll found a 75-point difference in voting intentions between left- and right-wing parties among 18–24-year-olds. In my own experience among students, exhortations on the rights of workers are common while radical beliefs such as a call for revolution go unremarked. While one could argue from these statistics that a hard-core libertarian minority are keen on both Thatcher and ketamine, my experience has been that taking drugs has become associated with the left. The moral and political basis for this however, remains unclear. The few people who have given the matter any thought, claim to channel the 60's belief in political psychedelic experience, that drug taking is a path to political and spiritual freedom. I believe, however, that the vast majority simply subscribe to a libertarian consent-based view, and that they should be able to do whatever they like with their own bodies.

There seems to me to be a fundamental contradiction between the left wing and pro-drug positions. Drugs and the estimated \$32 billion international narcotics trade, cause untold damage to people's live and disproportionately affect the global working class. By purchas-

ing illicit drugs, one is giving money to institutions that have supported guerilla warfare and cartel violence in South America, the eradication of women's rights in Afghanistan and closer to home, violent deaths and incarceration of young, often black men, in the West. The vast sums of money involved in the trade have been used to bribe officials the world over, not only weakening often precarious national bureaucracies around the world but also providing a route for the smuggling of vulnerable people for sexual exploitation and the movement of weapons for organised crime. Finally, the widespread availability of powerful narcotics has made lives harder for addicts and those inclined to addiction resulting in X increase in addicts, many of whom are poor, and working class.

So how is it that while cartels and their adjacent organisations cause incredible harm to working class people, the bien-pensant classes refuse to turn against drugs?



Anyone who claims a serious belief in the interests of workers should avoid drugs and condemn those that take them as individualistic materialists

up 23% as drugs have flooded into the state. At the same time, legal growers of marijuana have found themselves priced out of the market by illegal growers who can now more easily hide their crop. The population of the state has also regretted its decision, with 63% of voters now calling for the revoking of the previous ballot measure. In hindsight it is not difficult to figure out why. When addicts and dealers have less reason to be afraid of the police, they will carry more drugs. When police cease to take drugs off the streets in seizures, there will also be more drugs for addicts to take, causing more overdoses and family tragedies.



Little bit of late night fun. Shравan Sharma

ARTS

Art from the Lost World

How paleoartists have shaped the way we view dinosaurs.

Arts Editor
GILBERT JACKSON

One phrase that often floats around in artists' circles is 'Art for Art's sake'; the idea that true art need not serve a function, but can simply be an outpouring of ideas, ingenuity, and emotion. However, art can also serve functions from time to time; it can shape our understanding of society, history, and, as

you shall soon find out, science!

Science and art have been intertwined for millennia: after all, the rendering of a faithful diagram, schematic, or naturalist depiction requires a certain amount of artistic skill. However, when your apparatus or faunal subject matter is right in front of you, you are safe in the knowledge that you will know whether or not your artistic rendition is faithful. If your subject matter happens to have been dead for millions of years, and you have little to go on but bone fragments and rock impressions, you are left with the daunting task of trying to depict truly unimaginable creatures.

This was the task set for the artists of the 18th and 19th centuries when the subject of palaeontology began to take flight; the understanding that these mysterious bones found in caves and holes were in fact the remains of creatures from a lost world. However, it was not a task that hadn't been accomplished before; many

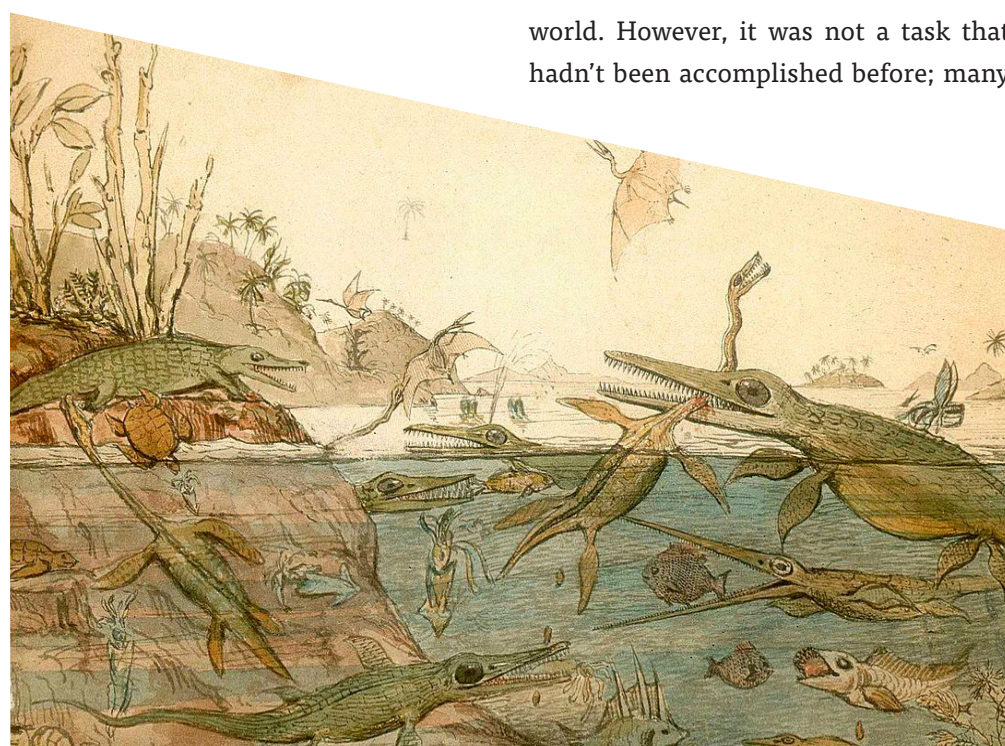
scholars believe that depictions of mythical creatures like dragons, cyclopes, and hydras were in fact based on the remains of extinct animals excavated from mines and quarries in the ancient era. However, this time, the Victorian artists could not let their imaginations run wild like the ancient Greeks did. With more complete skeletons being excavated, the depictions had to actually be faithful to the source material.

Henry De la Beche became the first artist to portray the lost world with a 'A More Ancient Dorset' which features depictions of *Plesiosaurs* and *Ichthyosaurs* based on remains found by palaeontological pioneer Mary Anning. The art shows that these animals were very much aquatic lizards (although the idea of them frolicking alongside modern turtles and other such aquatic creatures is absurd).

Another example that came along was by famous landscape artist John Martin, who created the 'Country of the *Iguanodon*' which depicts titanic, dragon-like

lizards battling it out in a hellish landscape (of course, hellish landscapes were Martin's speciality). This would later become inspiration for 'The *Iguanodon* Pair', two sculptures of an *Iguanodon* exhibited at the Crystal Palace, which can be found today at Crystal Palace Park. Of course, in both the landscape painting and the sculptures, significant liberties are taken. A recurring theme of Victorian depictions was that the Mesozoic era was an apocalyptic world with monstrous lizards fighting on the regular. Of course, our better understanding of bone structures allows us to now know what an *Iguanodon* really looks like and so today we can look at these paintings with humour about how 19th-century subconscious belief was likely fuelled by protestant ethics and the idea that the lost world was truly Godless and nightmarish.

For a while, these depictions became etched in the minds of the youth and the academic. The idea that dinosaurs, as their name - 'terrible lizards' - suggested,



De la Beche's 'Duria Antiquior'. Google Cultural Institute



Syntarsus - the first depicted feathered dinosaur. Sarah B Landry

John Martin's 'Country of the Iguanodon'. Google Cultural Institute

were scale-platted, sharp-toothed, and rather hefty was the norm until the 1970s. In the 1970s, American palaeontologist John Ostrom pieced together a complete skeleton of the dinosaur *Deinonychus*. The skeleton shed unprecedented light and evidence on the link between dinosaurs and birds (although this link had been theorised by Thomas Huxley in the 1800s). Dinosaurs shared many similar anatomical features with birds, and so Ostrom became the first to depict a dinosaur as a swift, agile, bird-like creature, and soon others, like Robert Bakker and Sarah Landry (the first to depict a feathered dinosaur), followed suit.

These new depictions became what is known as ‘The Dinosaur Renaissance’ and resulted in an outpour of new dinosaur-related media and interest, such as the 1990 Michale Crichton novel *Jurassic Park*. To top it off, the discovery, in Liaoning Province, China, of a Lagerstätte (a rock formation containing extraordinarily preserved specimens) showed that a significant number of well-known species like the *Tyrannosaurus rex* and *Velociraptor* were also coated with feathers. This change in the artistic depiction of dinosaurs can be seen when comparing the designs used for *Jurassic Park: The Lost World* to *Jurassic Park III*.

Paleoart has a powerful hand in how

we visualise ancient life; from early depictions of apocalyptic hellscape and dragon-like monsters, to flourishing jungles filled with feathered fauna. With its powerful imagery, it led to a resurgence of interest in the 1970s, prompting nu-

merous books and films about the ancient world, and it has got to the point where it is rare for even a child to not be exposed to dinosaur depictions. However, the joys of being able to see into this world could not have been possible with-

out the significant artistic contribution from paleoartists; to be able to visualise whole ecosystems and worlds from nothing but bones and imprints, and depict them on canvas is proof that they hold a place amongst the greatest artists.



Two feathered *T. rexes* fighting. Franz Anthony



Still from *Jurassic Park*. Universal/Everett collection

La Tour de Forza!

A review of the Royal Opera House's production of Verdi's 'La Forza del Destino'.

Arts Editor
GILBERT JACKSON

Set in a time of war and chaos, Verdi's opera of lost love, death, revenge, and fate, is brought back to Covent Garden in a revival of Christof Loy's 2019 rendition of 'La Forza del Destino'. The opera was overseen by associate director Georg Zlabinger with conductor Mark Elder and choreographer Otto Pichler.

From the very start we see Loy's ingenuity shining forth in his direction; during the overture we see the main characters as children reenacting traditional religious scenes such as the Pieta, as well as showing sibling conflict and familial disobedience. Together this works as a mechanism for foreshadowing and setting the overall tone for the opera which immediately gauges our interests and sets our expectations for the night ahead. This, in tandem with the set design and Loy's choice to use film of the 'gunshot' scene, provides us with a production that reminds us of subtle themes such as religion, absence, and death while we sit and indulge in mellifluous arias detailing honour, revenge and love.

The roles of Leonora and Don Alvaro are played by Sondra Radvanovsky and Brian Jagde; of which both show great musicality and fortitude in their singing and acting. However, their particular portrayal of Verdi's classic soprano and tenor are somewhat unyielding. They fall into the trap of providing too much force with their singing, and it was apparent in the third act that Brian lacked control of his upper register during the more sensitive passages, leading to two voice breaks in his passagio.

Unfortunately, both must relinquish pride and place to Etienne Dupuis' 'Don Vargas' and Rodion Pogossov's 'Melitone'; Dupuis provides a much-needed sentimentality and emotionally-driven style of singing while Pogossov provides a more agitated tone that complements



A production that reminds us of subtle themes such as religion, absence, and death while we sit and indulge in mellifluous arias detailing honour, revenge, and love.

'Melitone's sarcastic and grating nature.

Special mention must be given to Otto Pichler's choreography for the production, which expertly drives the third act in particular. The chorus and choreo troupe shine through with their expert blend of cabaret and Turkic dance, that energises the scene with both a mystical and sensual quality bestowing a carnal quality to the story to contrast with the more romantic and chivalric love portrayed in the music. Mark Elder masterfully directs the Royal Opera House (ROH) Orchestra with exemplary quality; his direction of the woodwind section and their frequent solos was done with a grace and masterful skill that have come to be expected of him. A wonderful setting of one of Verdi's finest operas.



Don Vargas befriending Don Alvaro. Camilla Greenwell



Act 3 cast performing choreographed 'Rataplan'. Camilla Greenwell

MUSIC

Slaughter Leeds, Dawg

Philadelphia Indie Rock Band Slaughter Beach, Dog, killed it at Leeds Irish Centre.

Music Editor
JOE RIORDAN

For avid fans of the music section, I have found closure with Leeds train station. For new fans, I'll give you the rundown. In 2018, I saw the band Bad Sounds, and all the trains home were cancelled. I got stuck in Leeds, and it was a nightmare (a more descrip-



Joe Riordan



Joe Riordan

tive version of the night can be found in Issue 1788). However, last night was a dream. The train departed on time, and arrived on time: and that still wasn't the best thing to happen all night. The best thing to happen all night happened roughly two hours before I entered Leeds station – Slaughter Beach, Dog walked onto the stage.

Created during the indefinite hiatus of the band Modern Baseball (MOBO), Slaughter Beach, Dog is the current project of Jake Ewald and Ian Farmer (former MOBO singer and bassist). The new band has a much folksier sound than Modern Baseball did, with fewer songs resulting in mosh pits yet just as many songs resulting in tears.

The set list was bulked out with new tracks from the band's recent album *Crying, Laughing, Waving, Smiling*. Considering it was only released under a week ago, the crowd got involved. Maybe it's Northern crowds, maybe

it's the undying, endearing community still obsessed with any sign of a Modern Baseball reunion. One thing does continue from Modern Baseball's music and that's the catharsis of watching and experiencing the band perform.

Listening to "104 Degrees" in the Leeds Irish Centre the bartenders questioned why people would come watch a band where the drummer can't drum, the bass player can't play, the guitarist only has one riff, and the singer is an utter buffoon, unimaginable amounts of energy were released.

All I can suggest is to watch the band live on YouTube as Spotify recordings do not do them justice. The community and mythos surrounding the band is so strong and I experienced that last night for the first time. Even though I wish I could have seen Modern Baseball perform, Slaughter Beach, Dog are the natural progression, living up to the hype.

D, I'm really shooketh

Doja Cat departs from her usual bubblegum pop-rap sound to give us *Scarlet*.

Music Writer
AMANDA PAUL

Rising to prominence in 2018 with meme hit “MOOO!”, Doja Cat had been steadily making her way into mainstream media ever since. Her second album *Hot Pink* spawned hit singles such as “Say So” and “Streets” which went viral on TikTok and catapulted her status into a household name. With the release of her third album *Planet Her*, she firmly cemented herself as a big player in the pop-rap and R&B space with characteristic candy-coated production, sweet, smooth vocals, and quick-witted, lip-syn-cable flow.

So when *Scarlet*'s lead single “Attention” dropped, she stirred both her fanbase and haters alike. The single's production grabs you straight away, with arpeggiated harp riffs, 90s hip-hop drums, and possibly my favourite bassline of the year; a sound I hadn't heard her experiment with before. On top of the track's distinct production, Doja's bars and flow also impressed, riding the beat like a pro with fun rhythms, switching up her intonation between verses, and delivering clever lyrics – it kind of reminded me of J. Cole. It certainly turned heads and impressed many people who had brushed her off as a serious rapper previously and it was quite the departure from her usual pop-dominated sound.

Aside from “Paint the Town Red” which was quite reminiscent of *Planet*

Her tracks, the other singles also teased the new album's sound well. “Demons” showcased a fast-paced, punchy sound featuring fragmented stabs of strange string melodies, a gritty, shouty chorus, and verses which ranged from soft-spoken, almost childlike to very rhythmic and filled with attitude. I feel like Doja's confidence in her own rap skills has grown as her career progressed, and we can certainly hear it more through the way she's playing with her delivery. “Agora Hills”, the most recent single, is Doja's way of showing us she hasn't forgotten pop entirely – mixing an atmospheric, ethereal production (think cruising down the highway in California with the top down and your boo in the passenger seat). With her signature buttery-smooth singing voice, and an addictive valley girl accent which scratches a spot in my brain I didn't know existed, I have a feeling it will appear high up in my Spotify Wrapped this year.

As a whole body though, I would say *Scarlet* is not Doja Cat's most cohesive nor most exciting work. While I appreciate the need to prove herself to haters by putting out an album with no features, embracing her rap roots, and showcasing her versatility, it seemed like there was a lost connection between tracks and yet they also sounded quite similar. I could sense the presence of fillers, and it also seemed like the album was split into two halves; if this was purposeful it was not clear and it just felt like she switched projects halfway through.

As for her proving that she's capable of more than TikTok-worthy bars, there's a smattering of good lines such as, “lost a lil' weight but I ain't never lost the tushy, looking good but now my bald head match my...” and “since when was y'all my bastard children, go 'head and raise y'all self” paying homage to Nicki Minaj's signature, recurring line “all these bitches is my sons”. But overall, Doja Cat's wordplay, double and triple-enten-



**PARENTAL
ADVISORY
EXPLICIT CONTENT**

Album cover for *Scarlet*. Pitchfork.com

dre, and extended metaphor abilities fall short of the greats. Each line is quite on the nose and whilst I appreciate not having to work too hard to get it, give your audience some credit, Doja. My favourite tracks which show off her rap skills would probably be “Fuck The Girls (FTG)” and “Ouchies” for the flow and delivery and “Go Off”, an homage to a confident, independent girlfriend, for a song with lyrics that flow and really tell a story.

Conceptually, the album is right where I like it. Maybe I'm still an edgy teen at heart but I'm always a fan of artists releasing albums amidst a period of public controversy (think Taylor Swift's *Reputation*); Doja's recent online beef with superfans, people scrutinising her ever-changing

aesthetics, and critics of her rap abilities was apparent in the album. I love it when artists clap-back!

Overall, this is a good album and I enjoyed listening to it. There were certainly some moments where I was a little bored, perhaps the order of the tracks placed songs that were too similar next to each other, and lyrically I was left a little underwhelmed, sonically though I was very glad to hear a different facet of Doja Cat and get to experience a darker, more nuanced side to her personality through her music. I look forward to seeing where she will go next.

Keep up with writer Amanda Paul via her Instagram @amanda_p.x

BOOKS

Margaret Atwood, Southbank Centre, Burning Questions

A short literary journey.

Books Editor
FIYINFOLUWA OLADIPO

Whether you're a fresher or a College longtimer, the quest for locations in London that quell the heart of the literature lover is vast and without borders. Books editor Fii reflects on one of these locations and his experience witnessing Margaret Atwood at an 'in-conversation', celebrating the release of her book, *Burning Questions*, and the miscellaneous musings that come with it.

I. Star-spangled cowboy / sauntering out of the almost-/ silly West

Yellow is never the colour of melancholy. Yet, walking upon the Golden Jubilee Bridges, five minutes late but, in reality, fifteen minutes early, a deep melancholy bleeds onto the Thames as I look to the colossal concrete mass of Southbank Centre, just south of the river. This place – the walk from Embankment Station, up the steps and to the footbridge, delivering you to a plaza just outside Southbank Centre – is familiar. All the stimuli are now a tired formula. Zombie Londoners and statuesque tourists, selfie-takers and saxophonists, ant trails of schoolchildren and the ghosts of screaming toddlers, and even myself upon this bridge

(seeking an ever-so-brief respite from my degree) have become wearisome. At night-time however, Southbank Centre does not appear so much familiar as faintly disappointing, overwhelmed by yellow and blue hues running up its sides; a commemoration of the invasion of Russia into Ukrainian territories.



Staircase to Southbank Centre. Jim Osley

The Southbank Centre is best thought of as a complex entity. It was originally built in 1951 as part of the Festival of Britain (the name 'Southbank Centre' itself did not come into existence until the '80s). The Centre was a remedy of sorts to cultural, emotional, and economic craters formed in a post-war Britain, but has since evolved and matured its identity. It has survived changes in administration and government and cemented itself as a place for the foremost celebration of the arts – particularly classical music and literature – within the continent. Its roster



Shot of the Southbank Centre. Paul / Flickr CC BY-NC-ND 2.0

of buildings includes Royal Festival Hall (the only enduring remnant of its initial construction), Queen Elizabeth Hall, and the Hayward Gallery, as well as being home to the National Poetry Library. (Fun fact: I first visited Southbank Centre as commended prize-winner for a national poetry competition).

I am considering running. The Royal Festival Hall is near in sight but with the internal pressure created by my simulated lateness it could be a mile away.

It is a building that is both pretty and ugly. Its brutalist architectural exterior is hard to digest at first but creates a perfect antithesis to the creativity that it houses. It is a genius idea, although the Royal Festival Hall, where I will soon be awaiting Margaret Atwood, does not share many of its initial design choices. Outside, a bust of Nelson Mandela sits in stoic silence, beautifully in its casted wrinkles lie the pledges of a sworn pursuit to tear down the very institutions that the country it sits in helped to construct. I once took a bold photo of a friend sitting on a distractingly orange bench next to it.

This October 17th, Southbank Centre will host the sixteenth edition of the London Literature Festival inside its cold exterior. This year's event has Jada Pinkett-Smith headlining, with Mr. Fox writer Helen Oyeyemi delivering the *New Statesman*/Goldsmith Prize Lecture (perhaps Felix will fund me to attend this event, having sorely missed the last one featuring Norwegian writer Karl Ove

Knausgaard).

If I were to somehow miss this event though, sore would not be the word to describe it. Unfortunate, possible. Frustrating, definitely. But not sore. 'Sore' implies the pain of having known what was to be missed.

Some context for the reader: this is not an event I am attending simply out of interest. It is a reconnaissance mission, in its basest form. An opportunity to try new and different things, to expand my literary horizons after having (joyfully, I must mention) read many books of African/postcolonial origin. Think Chinua Achebe, Chimamanda Ngozi Adichie, Bessie Head. This is an era of new writers I have learned about, from Gustave Flaubert to George Saunders, David Foster Wallace to drips of Leo Tolstoy.

I haven't come across much Margaret Atwood prior to this, besides an excerpt here and there, and the occasional poem. As much as this event exists as an interview to show Atwood's publications off to the public, this is a personal exposé as well. A chance for me to circumvent all the writing and get to know Margaret Atwood herself, and whether she should join this very masculine list of 'new' writers.

It is important to mention that the time at which I am seeing Margaret Atwood is tense. On 19th October, Atwood tweeted on X (formerly Twitter) a link to an article published by Rose DiManno on her native-Canadian news site, *Toronto Star*. This tweet quoted the title of

the article: ‘Why can’t we say ‘woman’ anymore?’, within the context of continued outcry against J. K. Rowling over comments made regarding transgender identity.

Now having arrived; I ask, is Margaret Atwood’s status as a beacon of feminism and, well, common sense, a question in the balance? An elephant to obstruct the view from my seat.

II. you are innocent as a bathtub / full of bullets.

To add colour to this (literally), I am in a green corduroy shirt with dark blue jeans; the overall look is semi-formal without speck of pompousness (hi Mum!). The motif of yellow and blue light shining upwards carries on into the Royal Festival Hall itself, where organ pipes reach high behind the platform where Margaret Atwood will soon be taking stage, now only by a couple chairs, a table, a bottle of water that stands as the centre of attention.

The room is predominantly female. Median: middle-aged. I awkwardly saunter to my seat, and I am greeted by mid-conversational smiles by the two women I am seated a seat away from. From here, I can view Atwood in her limited glory, but still overlooking enough of the auditorium to be able to comfortably stare off into the distance without looking weird.

I realise that most of the people are likely fans of the 2017 TV series *The Handmaid’s Tale* or its source material (the overlap being considerable I imagine). However, this event is advertised as a chance to hear Margaret Atwood discuss the release of her new book *Burning Questions* and expand on her thoughts in her exemplary non-fiction pieces between 2004 and 2021. I also realise that Atwood in this context is possibly fulfilling the role of writer more than celebrity; less a chance to get to know her writing than a chance to get to know her, and this becomes a possibly significant confounding factor to my reconnaissance mission.

“The show will be starting soon.”

The lights dim – applause. It begins.

Enter acclaimed novelist, Margaret Atwood.

Margaret Atwood with a determined shuffle, gentle in her gait, but fully receptive to our wild ovation (myself included). She is dressed in all-black, a red scarf draped around her neck and almost reaching the floor. She is 82 and I imagine that the nature of this reaction is



Fiyinfoluwa Oladipo

something that she knows not to move her core, having been subject to a multitude of awards and praise across her years of writing (recently winning the elusive Booker Prize for her novel *The Testaments*, continuing the narrative set in motion by the widely adored *The Handmaid’s Tale*, 30 years later).

The event itself turns out to be not one interview, but multiple. The format goes, i. interviewer asks Atwood a question, ii. Atwood responds, iii. interviewer does this again, but with more gusto and a curveball, iv. Atwood responds, v. the screens of the Royal Festival Hall project a famous person e.g., a poet, a politician, an actor – Benjamin Zephaniah, Diane Abbott, Ann Dowd (who plays Aunt Lydia in the television adaptation of *The Handmaid’s Tale*), vi. Atwood responds.

You could get from this that Margaret Atwood is a skilful interviewee. Or that she is just wise. Either one suffices. She weaves Cold War-era stories with personal anecdotes, and crafts each answer to the audience. At some point, the question of Atwood being some kind of modern-day Cassandra comes up (a figure in Greek mythology cursed to speak prophecies that would never be

believed by its listeners), and she lightly talks down such sinister perceptions. It’s a great interview, and one I can’t seem to take enough discrete notes of in a series of (now gone) WhatsApp messages sent to myself.

The question on her tweet on 19th October comes up, but honestly, I can’t remember the words that were said. I know these few things however: that the

of irony; I have more to learn from my mother than from a paid event to see Atwood.

III. the litter of your invasions

The event winds down soon after. Things conclude. The fission reaction starts thereafter. A huge congregation broken down into tiny half-heard conversations.

I enjoyed my time visiting Southbank Centre; it represented much more than the single event I attended. It was a chance at escape, and to try something new. The north bank of the Thames is speckled white with city lights. I think of the journey to be made back in the sultry March weather.

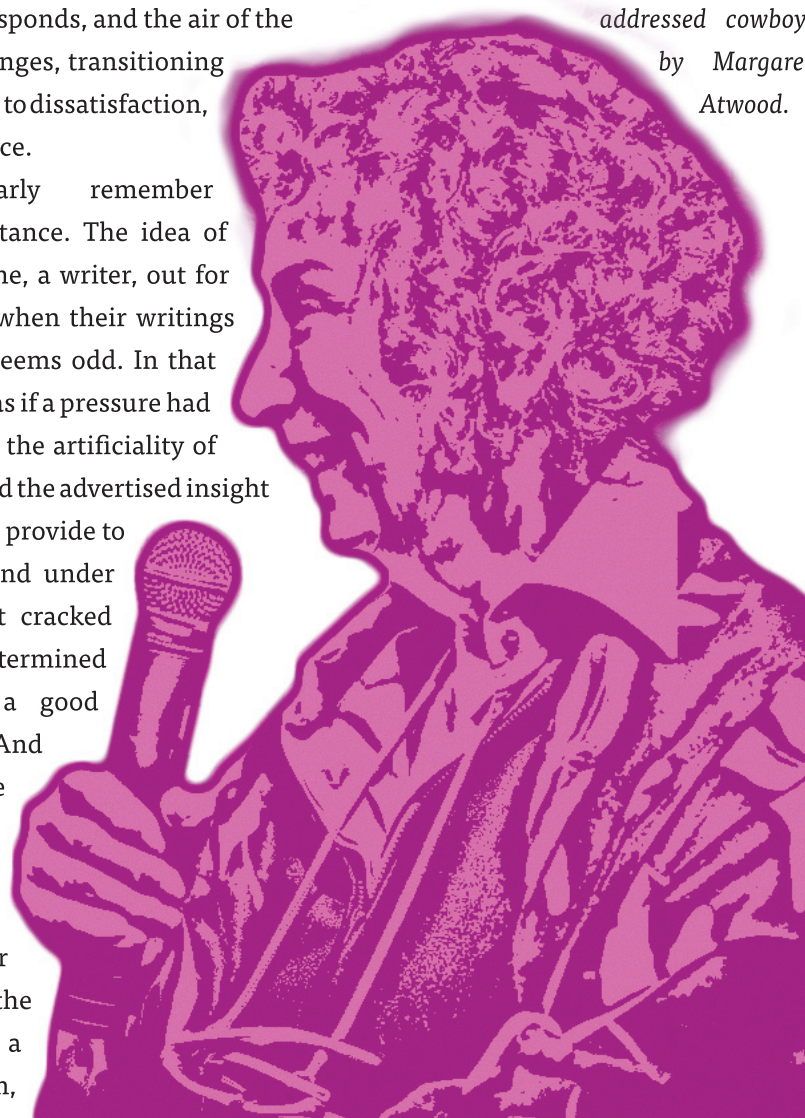
And, approaching the steps of the Golden Jubilee Bridges, I hear a woman in her early twenties say something intriguing: “You know I really enjoyed her, but I feel Chimamanda was so much better!”

Well, in that case – Chimamanda, where are you?

Subheadings taken from ‘Backdrop addressed cowboy’ by Margaret Atwood.

interviewer tactfully asks the question, possibly wary of getting on Atwood’s bad side, Atwood responds, and the air of the auditorium changes, transitioning from hesitation, to dissatisfaction, to glib acceptance.

I particularly remember that glib acceptance. The idea of seeking someone, a writer, out for their opinions when their writings precede them seems odd. In that instance it was as if a pressure had been applied to the artificiality of these events, and the advertised insight it might try and provide to the attendee, and under this pressure it cracked at an undetermined location. For a good 10 seconds. And within those 10 seconds, Atwood might as well have been my mother (hi Mum!), or the lady I was sat a seat away from, or anybody. A brief moment



Collage of Margaret Atwood. Graphic by Mike Buzadj, photo by Frankie Fouganthin

FOOD & TRAVEL

Canvassing London while achieving your 10,000 steps

Our Deputy editor explains why you should exchange dinner tables for pavements, and wheels for sneakers

Deputy Editor
ZANNA BUCKLAND

Forget sweaty clubs and noisy pub nights, or overpriced London restaurants and activities – the best thing to do in London is to go for a walk! Whether it be through one of London's many stunning parks or along the famed Thames, a simple walk through the city's streets is a great way to orient oneself upon moving here (looking at you freshers!).

Even for seasoned students, a walk can reset the brain after a long day or week of studying or help beat traffic or kill time on a journey. If you ever look up a route on Citymapper and see that the walk is just 10 or 15 minutes longer than travelling by Tube or bus, why not opt to go on foot instead? Ever so slightly cheaper, a good bit of exercise, and infinitely more scenic; I promise you won't regret it.

Alternatively, pick an area you want to explore and just wander through it. A few fascinating areas to visit that are relatively near campus are Chelsea, Hammersmith, Notting Hill, and Battersea Park and Power Station. You're sure to stumble upon excellent eateries, cosy cafés, and splendid shops

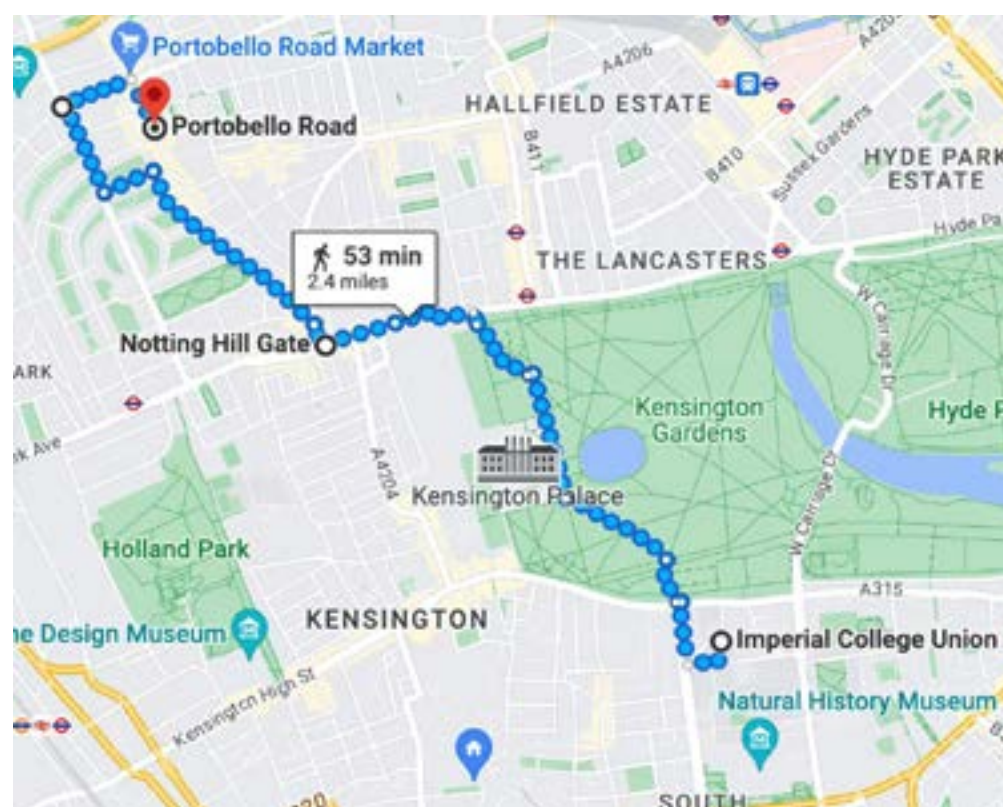
along the way – London has loads to offer if you take the time to look around. The city will look especially lovely in the coming months, when winter is on the way and Christmas lights start shining.

Here are a couple of routes I've done from Imperial's South Kensington campus multiple times, and would recommend. Northwest through Hyde Park to Notting Hill Gate, and up to Notting Hill and Portobello Road (Walk A), or due east along Knightsbridge Road, through Green Park, past Buckingham Palace and St. James's Park, and all the way to Southbank on the Thames (Walk B). These will look like long walks, but, trust me, it's refreshing (and warming) to get your body moving.

I've had many an engaging and eye-opening conversation with a friend on these walks; it's an incredible way to get to know someone quickly, and without distraction. I implore you to give it a try, and if you find anything exciting on your journeys, let your fellow students know by writing an article about it and sending it in to us!



Isaac Winson



Google Maps estimates Walk A to be 53 minutes and 2.4 miles (3.8 km). Charlotte Probstel



Google Maps estimates Walk B to be 1h 20 minutes and 3.5 miles (5.6 km). Charlotte Probstel

Foul food or bad buy?



BuoyHealth.com

Living by yourself means you should take care of your physical, mental and importantly, your gut health.

Food & Travel Editor CHARLOTTE PROBSTEL

The “fluid-only” diet is a short-term lifestyle helpful to fight the occasional stomach bug or as most people know – food poisoning. Generally, we get poisoned by the food that we enjoy daily due to undercooking or poor sanitation in the kitchen. Both lead to the cultivation of one of many bacteria that makes you want to know where the closest bathroom is, just as a back-up. Since it is the beginning of the term, and some of the newest *Felix* readers may never have cooked before, or never cooked alone before, it seems fitting to educate on the causes, symptoms, and remedies of food poisoning.

Imagine this...

You have been sitting at your desk for a few hours trying to comprehend triple integrals when you decide to stand up for a cup of coffee in your kitchen. Your stomach churns. You feel a pain so enduring you sit back down again. You feel hot, nauseous, and perhaps the need to vomit. And oh – you need the bathroom quick. You end up spending the rest of the day at home. But how did this happen?

Three ways to get food poisoning

A general understanding of food poisoning occurs when food is not safe to eat. This could be due to one of three reasons. First, the kitchen or area in which the

food has been prepared is not cleaned well enough such that the bacteria from other foods, hands or objects (phones, wallets) are easily spread from the containers to the hands of the people preparing the food to the knives, fridge door, light-switch, or water tap. The bacteria start spreading quickly in the kitchen. Secondly, the food is undercooked. Each bacterium dies at a specific temperature range (roughly 75°C for meat) and if the food is prepared below that temperature, you may think your burger is ready, when it really isn't. The recent documentary *Poisoned – The Dirty Truth About Your Food* on Netflix can give a good explanation as to why this may occur when eating out. Lastly, the food has expired.

Best Before, Use By and May Contain

Simple to explain, the ‘Best Before’ date indicates quality and is often meant for frozen, tinned, or dried foods which can last quite a while – for example, spices or pasta. The ‘Use By’ date is meant for safety and food should not be consumed past that date. This is not a discussion. Even if your grand-aunt who has cooked for fifty years, and who has the nose of a hunter-dog says the cheese is fine, please do not eat it. If you are interested in this, check out the start-up BlakBear – an Imperial start-up developing in-package sensor for real-time evaluation of if the meat is spoiled. Furthermore, the food needs to be stored correctly for the ‘Use By’ date to be accurate, so check the label for storage means. The ‘May Con-

FOOD SAFETY GUIDE

Follow these 4 simple steps to help reduce foodborne illnesses

CLEAN

Before, during and after you prepare food, wash your hands with soap and water for at least 20 seconds

Rinse fresh fruits and vegetables under running water before eating or cutting

Wash utensils, cutting boards and counter tops with hot soapy water

Do not wash meat, poultry or eggs

SEPARATE

When preparing, storing and cutting food, separate raw meat, poultry, seafood and eggs from fruits and vegetables

Keep raw meat, poultry, seafood and eggs separated from other food in your shopping cart and refrigerator

Use separate cutting boards, plates and knives when preparing meat

COOK

Use a meat thermometer to ensure food is cooked to a safe internal temperature before consuming

145°F
Whole cuts of beef, pork, veal and lamb (allow to rest for 3 minutes before eating)

145°F
Fresh pork, including fresh ham (allow to rest for 3 minutes before eating)

160°F
Ground meat such as beef and pork

165°F
All poultry, including ground chicken and turkey

165°F
Leftovers and casseroles

145°F
Fish (or cook until flesh is opaque)

CHILL

Refrigerate perishable food within 2 hours

40°F
Set your refrigerator at 40°F or lower

Defrost and thaw frozen food in the refrigerator

Do not defrost and thaw food on the counter. Bacteria can grow rapidly when food is kept at room temperature

American Institute for Cancer Research | PO Box 97167, Washington, DC 20090-7167 | 800-843-8114 | aicr.org

Infographic on the 4 principals of food safety. American Institute for Cancer Research

tain’ label on the back of the packet is a legal issue. For companies to avoid being sued due to cross-contamination of food during industrial productions, the ‘May Contain’ label may say ‘May contain soya’ when you are eating a simple bag of popcorn.

Foul foes

The Centre for Disease Control and Prevention (CDC) notes that there are four prominent bacteria found in our food.

First, the Norovirus and Salmonella are similar illnesses (though Salmonella is a bacteria, while Norovirus is a virus) as they portray the same symptoms of nausea, loose stool, vomiting, headache, fever and tiredness. Symptoms appear roughly one to two days post infection and are easily spread by close contact or touching the same surface (e.g. in the kitchen or bathroom). Norovirus is the official name of the winter vomiting bug or stomach bug’ and is the most common

cause of acute gastroenteritis (vomiting and diarrhoea). *C. Perfringens* is a bacterial infection with similar symptoms except for the lack of vomiting and the earlier onset of symptoms – six to 24 hours post infection. *Campylobacter* is another bacterial infection that results more on bloody stool and stomach cramps and takes longer to notice – two to five days. All four illnesses are treatable at home with lots of rest and fluids (tea, water) but not coffee. Coffee is a diuretic (produces urine) which increases water excretion. Loose stool already drains a lot of liquid out of your body, hence drinking a lot of water replenishes your body with the water you lose to the toilet bowl.

High-risk foods

According to the UK Food Standard Agency, any meat – turkey, chicken, duck, pork, minced meat, beef or bird – includes a low risk of the bird flu (Avian Influenza) when not cooked properly. Some guidelines are to cook until you can no longer see any pink meat. Unless trained, a rare beef patty should not be cooked DIY. Furthermore, stuffing should be cooked separately, as stuffed birds take longer to cook and may not cook thoroughly. Now, you may ask yourself: *Can I eat meat with bacteria on it?* Generally, it is the responsibility of the consumer to cook the meat to kill all bacteria. Most bacteria come from the handlers (butcher, industrial workers) and not the meat itself. The bacteria are often on the surfaces, hence cuts of meats can be considered safer than mixed meats (minced beef or sausages) since the bacteria is purely on the surface. Problem solved. But what about the vegans and vegetarians?

Still high-risk foods

Vegans and vegetarians abstain from meat products and vegans do not consume any dairy (milk, cow milk yoghurt, cheese, cream etc.), honey, fish eggs, eggs or other animal produced foods, hence the chances of them consuming any animal-based bacteria are low. That is, if their vegetables are not farmed close to an animal farm, where the irrigation water from faeces could contaminate the water for the plants. As a vegan myself, I started to cook my spinach rather

than eat it raw. Bacteria can transfer onto the vegetables, grains or fruits during growth, harvest, packaging, transportation, distribution, presentation in the grocery store and even by the consumer's own hands.

Frozen

A general money-saving hack is to buy produce frozen. Frozen peas, for example, can be bought by the kilo for roughly £3 to £4 and stored for a long time. Frozen vegetables are amazingly cheap when used in soups or stews, as there is not a big difference in nutritional value, but only in texture. Frozen fruits are great for smoothies, yoghurt bowls, protein shakes or for any other dish that focuses on the fruit's flavour and not shape, size or firmness. The catch with frozen food is the time. Frozen food keeps bacteria (mould) from growing – but that does not mean that there are not present. Just 'asleep'. Chemical reactions within the frozen food are delayed, hence they do not spoil – but once you reheat your food, the little bacteria awake from their long winter-nap and can become dangerous. Defrost slowly for a few hours – in a separate container in your fridge and not at room temperature or in the microwave and cook within a few hours. With meat products, particularly fish, defrosting fast by placing the produce under hot water can start cooking the food, hence be careful and instead wait a bit longer. Do your calculus homework while you wait.

Eggs: fridge or cupboard?

In the US, for example, eggs need to be stored in the fridge. In the EU, they last well in the pantry. In the UK, it is not so simple. Every box must inform the consumer if the eggs need to be 'refrigerated or stored in a cool dry place'.

Recalls

It is unusual to wander the supermarket, where an empty shelf stands still with a little A4 paper printed with the word 'Recall' printed on it. This means a product that was there recently has been removed for safety reasons. What sort of safety reasons? On 15th September 2023, Morrisons – a chain supermarket in the UK recalled its own Spanish Chorizo Rings

because of salmonella. On 7th September, Costa recalled some sandwiches and wrap products because some had small stones in them that could cause choking. Two days before, on 5th September, Lidl recalled McEnnedy Corn Dogs because some were found to have listeria monocytogenes in them, a bacterium responsible for many food-poisoning-like symptoms. Two weeks before, Avoca recalled their vegetable lasagne, fish pie, duck liver pate, carrot coconut coriander soup and more than 20 other items as they may have contained pieces of metal in them. The Food Alert page hosted by the Food Standard Agency reports something new every week. Since February 2021, this website has announced 170 recalls because of bacterium (Hepatitis A, Salmonella etc.)

or small pieces (glass, metal, plastic etc.).

Industries make mistakes

Now the question should not be: *Is the food in the UK safe?* but rather: *Do I, as consumer, know if this food is safe for me?* Considering the vast demand for quickly and cost-effective produced food in our society, mistakes and errors can occur. The best way to protect one's stomach and gut is by learning about food safety, to avoid blindly following a label that has been printed more than a thousand time and to use our societies most unused sixth sense: our common sense.

Stay safe.

FOOD SAFETY MYTHS AND FACTS

Can you tell if food is safe to eat by its look and smell?
NO. Most microorganisms that can make you sick don't change the look or smell of the food.

Do I have to refrigerate leftover food?
YES. Food becomes unsafe if left at room temperature for more than two hours.

Is food dropped on the floor OK to eat if you pick it up within 5 seconds?
NO. Microorganisms can transfer to food immediately and cause disease in some cases.

Can dish cloths spread dangerous bacteria?
YES. Dish cloths and sponges can carry and spread dangerous bacteria. Disinfect them in sanitizing solution or boil in water.

Should raw poultry be washed before cooking?
NO. Washing poultry can spread harmful microorganisms to hands, surfaces, utensils or other food.

Can I get sick from food I ate 3 days ago?
YES. Some dangerous microorganisms take longer than a few hours to make you sick.

Is it safe to thaw frozen food at room temperature?
NO. Thawing food in the refrigerator or in cold water prevents the growth of microorganisms.

Do organic fruits and vegetables need to be washed?
YES. All produce, including organic, should be washed with clean water to remove physical contaminants and reduce the risk from any harmful microorganisms or chemicals.

<https://www.fao.org/food-safety/>
<https://www.who.int/health-topics/food-safety/>

Infographic to answer some common questions. World Health Organisation

CATNIP

Imperial study reveals the largest risk factor for being murdered is “having a bright future”

Murder Correspondent NEGAFELIX

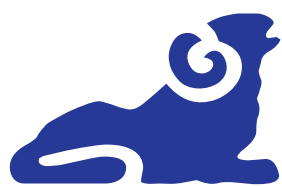
An imperial study has analysed news reports of murders that occurred in London and found that 97% of the victims were described as having “a bright future”. This was an unusual description, leading researchers to call for students revising for their exams or doing homework to stop immediately to earcher. Cam Srawley told NegaFelix that his team of criminologists had used cutting-edge methods in their research. “We

counted all the adjectives that were used in newspaper articles to describe murder victims.”

Activist Ziz Hane also called on politicians to implement policies to end what she called “blatant discrimination”. She told NegaFelix that “it is unacceptable that stupid children are missing out on the chance to get murdered. I am calling for policy makers to implement measures to establish equity in this area and to end the old boys network that yearly results in a majority of the population are not even getting a look in by potential murderers.” A Tory spokesperson

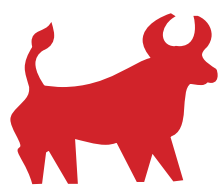
told NegaFelix that along with having to learn Maths and English until 18, potential murderers would also have to attend compulsory classes on how to avoid discrimination when it came to choosing their victims.

The government have urgently distributed the advice to top schools telling teachers that they may be charged with manslaughter if their students are killed. The advice has already had an impact on murder rates. Feb Senton, an Imperial student stabbed as he walked back from the library was called “quite dim” and “the least favourite child in the family”.



ARIES

This week new historical analysis suggests that the second shooter on the grassy knoll was an American XL bully



TAURUS

This week you start selling a new male swimwear design which completely covers the shaft but displays the top of the testicles like a small bikini top



GEMINI

This week the mayor tells us that the city has a healthy relationship with crime



CANCER

This week the leprosy cancels out with the Fukushima sushi and you maintain a stable number of fingers



LEO

This week ends on a cliffhanger. Next week...



VIRGO

This week you make big progress in couples' therapy. Your boyfriend uses “I feel” statements to call you stupid.



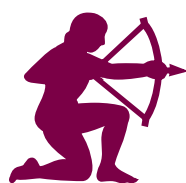
LIBRA

This week you find out what isolation does to a man



SCORPIO

This week you are one spin of the slot machine away from your big win



SAGITTARIUS

This week you have a psychotic episode but Gavin says series 3 is when it gets good



CAPRICORN

This week your ancient mummy curse insurance needs renewing



AQUARIUS

This week you splash out on the gold-plated mummy curse insurance



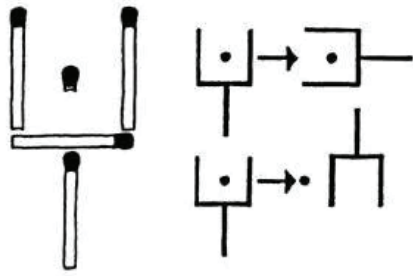
PISCES

This week your landlord trades you a leaky sink for a sneaky link

PUZZLES

Puzzles Editor
ISAAC WINSON

Hello Puzzlers! This puzzle is a classic – can you remove the 'onion' from the glass by moving only two matchsticks? The first attempt here still has the onion in the glass, and the second takes three moves to do.



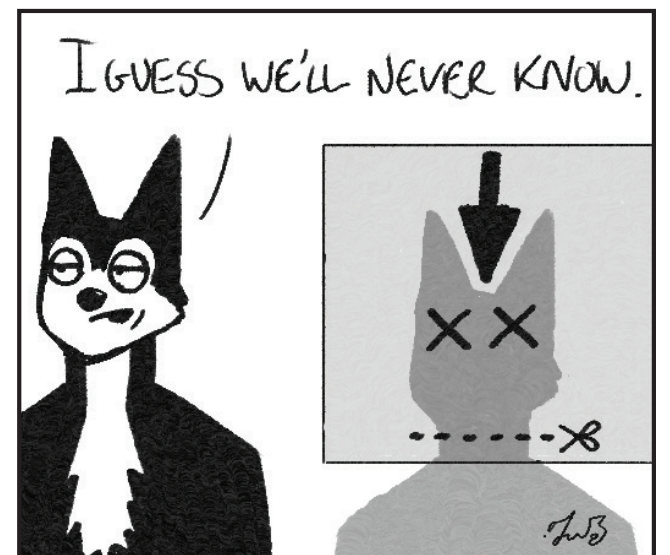
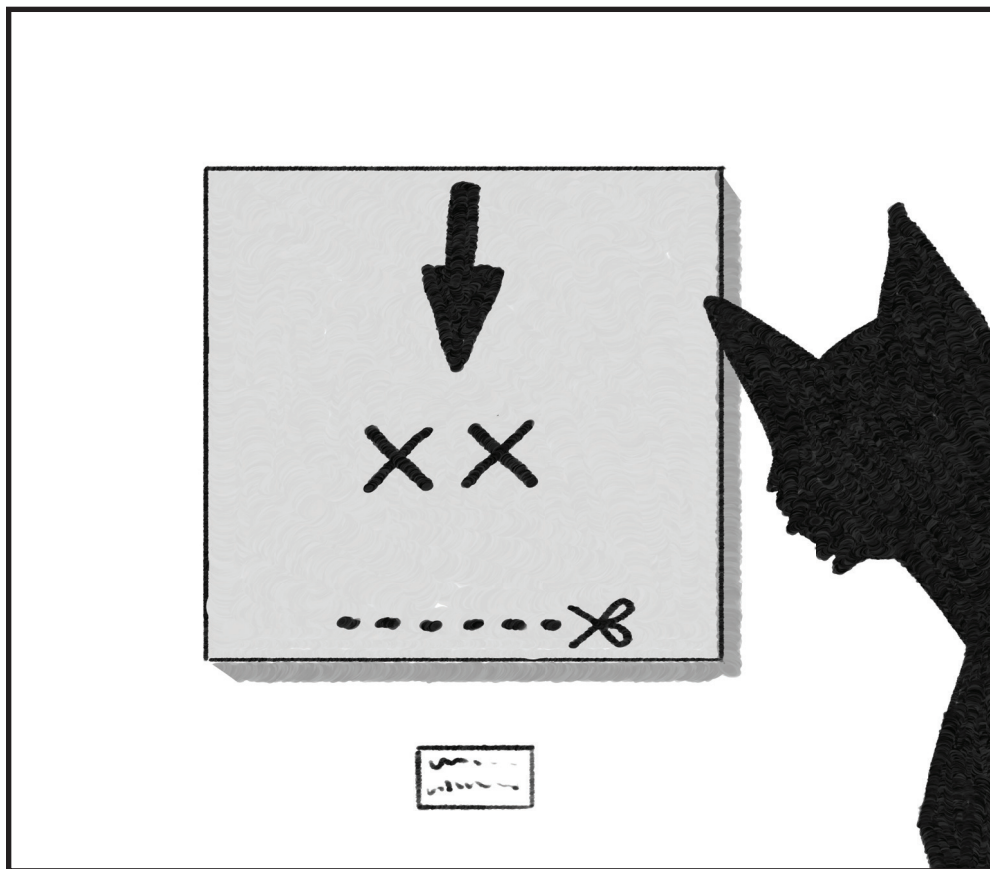
Matchsticks and 'the onion'

Last week's answers

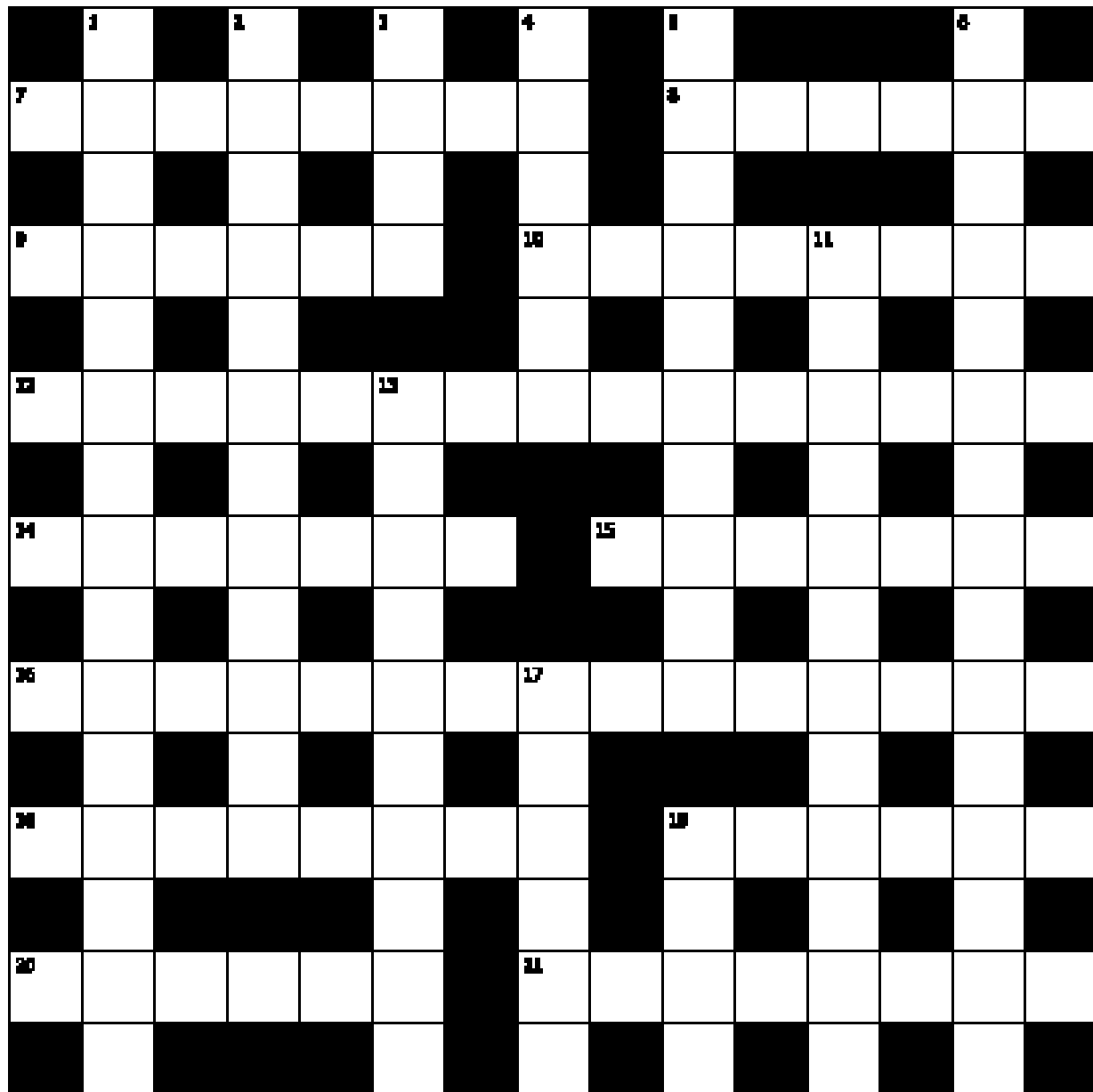
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C	A		V	E	N	N	D	I	A	G	R	A	M		
E			E	K	O	N				E					
D	R	E	S	S	E	S	D	O	W	N	S	S	E		
D	N						D	E	T	A					
E	R	E	T	R	O	F	L	E	X	A	S	S			
G	O	W					E	E		M	Y				
R	O	U	S	E			E	M	B	O	S	S	I	N	G
E	T	E					U			N	O				
E	L	E	C	T	R	I	C	G	U	I	T	A	R		

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

FELIX #009



CROSSWORD



Across

- 7 Beyond what is immediate and obvious (8)
- 8 Capital city of Portugal (6)
- 9 Type of simple abstract computational machine (6)
- 10 A thick cotton material with raised ridges (8)
- 12 American actress known for *The Morning Show* (8, 7)
- 14 Fruit bread with nuts, candied fruit and marzipan (7)
- 15 Cut up (7)
- 16 An interview given by a prominent person to the news (5, 10)
- 18 Region in southern Africa now divided into Zimbabwe and Zambia (8)
- 19 Showing ability to accurately assess situations (6)
- 20 A plant of the daisy family known for pain relief (6)
- 21 Midwestern state nicknamed 'the Prairie State' (8)

Down

- 1 County in south west England home to famous cheese rolling competition on Cooper's Hill (15)
- 2 Specialised by area (12)
- 3 Dynasty ruling China from 1368-1644 (4)
- 4 seller of household goods (6)
- 5 A biscuit of nuts, fruit, coated with chocolate (10)
- 6 An DIY incendiary device (15)
- 11 Not aware of danger (12)
- 13 Elegant type of edge in sewing (6, 4)
- 17 Common additive to bread (6)
- 19 Friend (4)

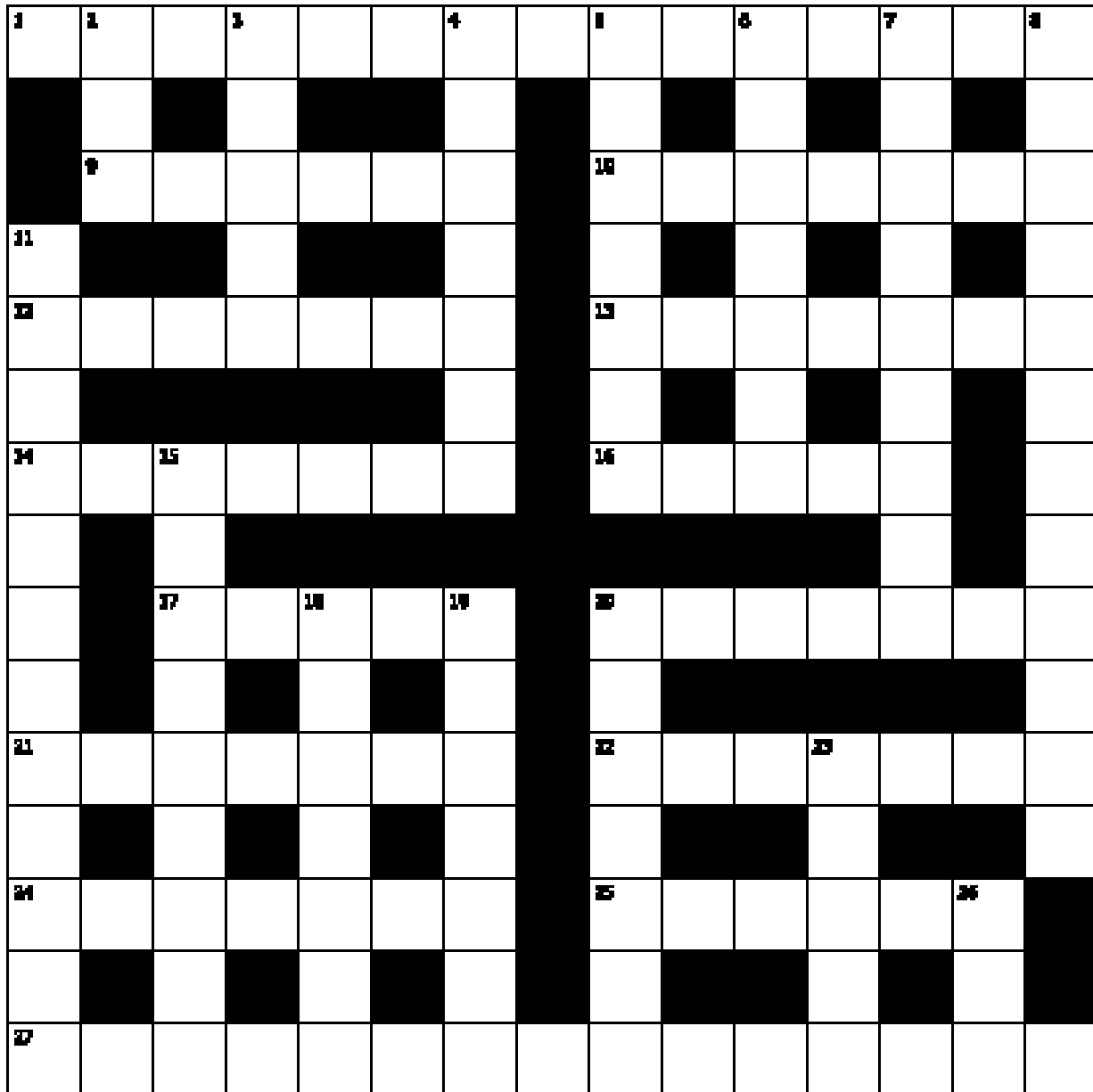
SUDOKU - EASY

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

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

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

CRYPTIC CROSSWORD



Across

- 1 The insects make a cowardly sandwich trooper (6, 9)
- 9 Tasty shell to get in down under (6)
- 10 Left rig a very loud european leaf muncher (7)
- 12 Brother of an island wizard found in giant onion (7)
- 13 Backwards Tory to spin an activity of the church at night (7)
- 14 American morsels are of a large volume - sit it either side (7)
- 17 Placed amongst the fabric (5)
- 18 Feline regarding left supply - food! (5)
- 20 I'm a G! Ironic - if you look back, I fold. (7)
- 21 Sounds like a few notes are in agreement (7)
- 22 A place to admire the air bludgeon (3, 4)
- 24 Think back - the top celeb was very down to earth (7)
- 25 Dishevelled scholar loses his shilling, becomes concerned with singing (6)
- 27 Sucker for a sweet thing, place to meet Mr Pepper (10, 5)

Down

- 2 Frozen waffle falls from gravity - gets bruised (3)
- 3 Fool in exclamation at cow catcher (5)
- 4 Tired lines lose eastern front to low points (7)
- 5 Let them be themselves (7)
- 6 The source of showers is endless! The bed for fruit is full of moisture (7)
- 7 It's sick (9)
- 8 Overbearingly dropped Victor for one of the lonely people (7, 5)
- 11 Amateurish tip at an odd wall is stop on mystery tour (1, 2, 3, 6)
- 15 Collection in charge of way to relax (4, 5)
- 16 Put a whole number on the viewer, see what they say (9)
- 19 Test ore shakily - could be a prize worth keeping (7)
- 20 Unkempt coiffeur loses you for an enforcer (7)
- 23 Soldier follows a frenzied monster, leads to a queen's treasure (5)
- 26 A chuckle lies in all olives (3)

SUDOKU - MODERATE

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

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

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

Autumn Elections '23



Nominations Open

Monday 9th October

Nominations Close

Tuesday 17th October

Voting Open

Monday 23rd October

Voting Close

Thursday 26th October

Results Announced

Friday 27th October

FIND OUT MORE!



imperialcollegeunion.org/elections

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SOCIETIES

Fresher minds, Fresher air, everyone's aboard for Freshers' Fair

The Freshers' Fair would only be complete with candy and stickers to lure students in, an abundance of welcoming smiles, and QR codes galore.

Societies Editor

CHARLOTTE PROBSTEL

The morning's fresh air at 9:30am welcomed the 2-3 volunteer stallholders of each of the 150 or so societies as they set up their stands, making them pretty enough to lure in new members, but not too large as to disturb the anticipated incoming flow of people at noon.

The Imperial College Union organised its annual Freshers' Fair this past Tuesday 3rd October, in order to introduce new students – Bachelors and Masters – to all the societies of the Union. Each society received one

perial, Careers & Skills, Academic, Campagins & Liberation and as usual, Sports and Medics. Compared to last year, more space was allocated to each stall, which was greatly appreciated and hopefully will be improved on again next year. Last year, the walkway across Queen's Lawn was as congested as a tube station after a Harry Styles concert.

As usual, most stands try to present themselves three-fold; their past, their concept, and their future plans. The past might include trophies, successful shows, impactful speakers that visited, or competitions that they won.

Concept is pretty simple; most of the time, the name

scientific topics among peers.

Future plans most often include a schedule of each term's major activities, events, and socials. For example, the Volleyball society is already planning a trip to Portugal in April.

This year, I decided to interview some of the stallholders and some of the people walking around. When asked what students focus on when pitching their society, the main one was on promoting social events and explaining costs. With the rising cost of living, a £45 membership may be too much for some students (see News on p.7). Some societies split their membership into a lower annual fee and a higher monthly fee, to give some mem-



Left: Dalby Court transformed into a great hall of flags and languages from all around the world. Right: The Cricket team introducing their sport and playing a game. Rolando Charles

table and was allowed two members at a time to pitch their unique society to anybody passing by. All the societies were split into various zones by theme; Creative and Hobbies, Global (Cultural), Community, Partners of Im-

of the society gives away their purpose. However, sometimes that isn't so clear – take us for example, as *Felix* is not a cat food society, but the student newspaper. Pint of Science is a society dedicated to going to pubs to discuss

bers flexibility to pay when they can. The most expensive societies are sports societies, as their memberships generally cover transportation costs, league memberships, and equipment costs.

On the other side of the table, visitors had an equal share of positive and negative comments. First of all, most enjoyed when there were more people per stand available to talk to. Since the Union's policy limited stalls to two committee members at a time, it became extremely difficult to talk to everyone before some promptly turned around and left before even taking a sticker. Furthermore, visitors did not enjoy QR codes being pushed into their faces even after expressing their disinterest in a society. Societies aim to get as many sign-ups as a way to inflate their importance, but we all know that quality matters more than quantity. The other issue is funding; the larger the member pool, the more funding a society can claim from the Union, which is something we all strive for. Luckily, the Union finds a way to finance all societies through various funds and grants, hence we do not need to empty our personal pockets for our passions.

The fair spans all four corners of the South Kensington campus. As usual, the Cultural (Global) and Sport societies were located outside, as they are the biggest groups to cover. This year, the weather decided to shift into a slight rain at 2pm, dowsing hundreds of students, their posters, and their food. Luckily, the weather slowed down around 3pm and the sun blessed us all for the final hours of the fair. Around 4pm, the hype had died down and some societies decided to pack up. The bustle and mass movement of the fair always creates a high-energy event that requires lots of socialisation, smiles, repetition of pitches and conversations.

Most students finish the day with stickers, posters,



The *Felix* Newspaper stand was covered in our best previous newspapers, door hangers, stickers, and old bound editions. Rolando Charles

pens, and merchandise from at least 10 different societies that they promised to check out later. Their true loyalties will reveal themselves the week after tryouts and welcome socials. I don't blame any Freshers who may

have felt overwhelmed with information and faces after Tuesday. We all agree that Freshers' Fair is the most fast-paced day in a full week of fast-paced introductions. So, as I mentioned in Issue 1827, try out as many societies as you want this week, but try not to overcommit yourself.

Last, but most certainly not least, it is never too late to join a society. There are more than enough resources to by which to contact them (Union pages, email, Instagram, Facebook, X) and get involved. Perhaps you want to wait out this year and get settled at Imperial, then join a society or two next year. Don't worry, nobody is going anywhere!

Until next time,
Charlotte



President Rishi from Hindu Society pitching to a new member. Check out their Instagram by scanning the QR Code here. Rolando Charles

**Do you want to get
your society or event
interviewed and
published?**

Contact us at felix@ic.ac.uk