



FLIP TO THE MIDDLE TO SEE
THE TEAM THAT BROUGHT YOU
THIS YEAR'S PAPERS

ISSUE 1826

FRIDAY 16TH JUNE 2023

Imperial researcher might have unwittingly helped develop Iranian 'suicide drones', report finds

► *College apparently unaware of research's existence.*

Jamie John Co-Editor-in-Chief

Researchers from Imperial College London and ten other British universities might have unwittingly helped the Iranian regime to develop technology with potential military applications.

An investigation by *The Jewish Chronicle* has found that a researcher in Imperial's Department of Chemical Engineering worked with scientists from two Iranian universities to improve the performance of the two-stroke engines used to power drones.

Felix understands that Imperial was unaware of the work, and that it did not

form a part of any programme of study at the College, or any other Imperial project.

The study, published in March 2019 in the *Aerospace Science and Technology* journal, recognises the support of Iran's Ministry of Science, Research and Technology in its acknowledgements. The Ministry's current deputy minister, Mohammad Nouri, and its former minister, Kamran Daneshjoo are both on the UK Government's sanctions list.

Felix has confirmed that Imperial College London has not received any funds from Iran's Ministry of Science.

The study investigates the use of

electronic fuel-injection systems in two-stroke engines, and compares their performance with that of carburettor fuel systems. It notes that the latter have "benefits such as high power, low fuel consumption... high flight endurance, tolerance of extreme environmental conditions".

It says: "In the modern world, unmanned aerial vehicles [drones] are used widely in operation because of their key and important benefits, and they play a role in the military".

The UK bans the export of "dual-use"

Continued on page 3...

Imperial tops Complete University Guide for graduate prospects and research quality

► *College comes sixth in overall university rankings.*

Jamie John Co-Editor-in-Chief

Imperial College ranks first for both graduate employment prospects and research quality, according to the Complete University Guide 2024, published last week. The College has beaten Cambridge and Oxford, and its London rivals UCL and LSE to the top spots in both categories. "Imperial degrees are highly valued by employers across the globe", says the guide.

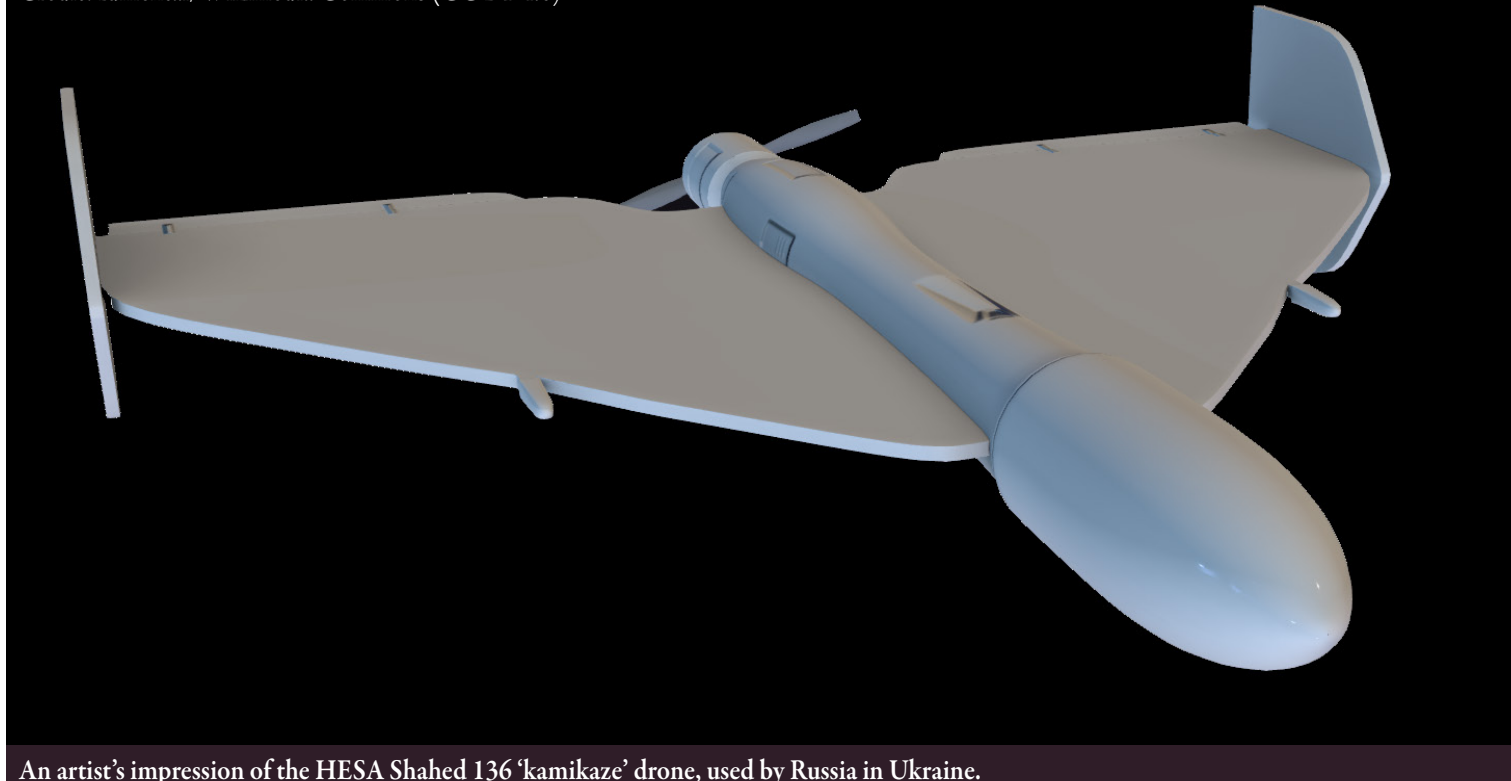
However, Cambridge, Oxford and LSE occupy the top three places in the overall rankings, with Imperial dropping to sixth place, down from fifth place in the 2023 rankings.

For student satisfaction, the College ranks 33rd out of 128 universities.

Imperial's Aeronautical Engineering

Continued on page 3...

Credit: Idmental/Wikimedia Commons (CC BY 4.0)



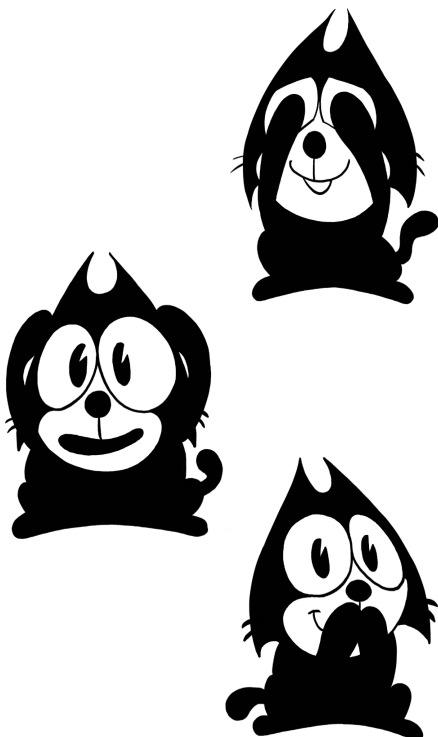
An artist's impression of the HESA Shahed 136 'kamikaze' drone, used by Russia in Ukraine.

EDITORIAL

This issue was produced thanks to the work of:

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And our numerous contributors!



Sayonara!

Writing this at the end of a long day of editing, and with yet another time crunch right before a print deadline, it is incredible to be able to look back on the past year with fondness. Despite having spent hours fixing minor spelling errors and rearranging images on InDesign, and the stress of juggling a full-time degree with what is usually a full-time job, it has been insanely rewarding for all three of us co-editors.

We can't speak for the twenty or so other students on the *Felix* team (see the centrefold for faces!), but we'd like to imagine that the same goes for us all. The responsibility of publishing the writing and artwork of an entire student body comes with its challenges, but at the end of the day, we enjoy the work because it's a respite from our regular old degrees, and allows us to meet and interact with a community of like-minded people.

Over the past year *Felix* has highlighted collective and personal achievements, exposed malpractice,

shared research and knowledge, and hopefully also made a few readers laugh along the way. Having a platform through which to communicate thoughts and ideas to other students and faculty is a valuable resource, and we urge anyone and everyone to make full use of *Felix* in the coming years.

Send us your articles, reviews, drawings, comments, or anything else you've created, and we'll be sure to find space for it somewhere in our pages!

We'll be returning to weekly publishing in the new academic year, with a new full-time sabbatical officer as *Felix* Editor, along with other big changes, so make sure to stay tuned.

It's possible that some of us sacrificed a few percent of our exam grades to bring you this paper, so make it worth our while by having a flick through to see what's in store.

Signing off from the *Felix* office!

Zanna, Jamie, and Isabella

16th June 2023

Statement of Intent

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 we, the *Felix* Editors, 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, Isabella Ward, and Zanna Buckland
Co-Editors-in-Chief 2023**

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**Continued from page 1...
Imperial-Iran...**

technology – which can be used for both civilian and military purposes – to Iran, or anyone “connected” with the state.

There is no suggestion that the researcher in question intended to aid the Iranian state. However, the study could have significant military applications, according to Farzin Nadimi, an expert on Iran’s military, and a senior fellow at the Washington Institute.

“Almost all Iranian drones are powered by two-stroke engines, including the Shahed-136, which is extensively used in the Ukrainian war”, he told *The Jewish Chronicle*. The Iranian HESA Shahed 136 ‘kamikaze’ drone

entered service in 2021. In October 2022, the UK Government imposed sanctions on Iranians responsible for supplying Russia with the drones.

Nadimi went on to say that since the mid-1980s, Iran’s universities have played a “significant role” in its drone warfare programme.

The *Chronicle* says it has unearthed hundreds of other papers, in which researchers at UK universities have collaborated with Iranian universities under sanction by the Government. Among them, alleges the *Chronicle*, is a paper co-authored by researchers from Imperial, Liverpool, and Sharif University in Iran, on the use of lasers to manufacture “high value added parts [sic]” made from titanium alloy for the

aerospace industry.

MPs have expressed concerns over the findings. “It is quite possible these collaborations are assisting in the gender apartheid within Iran, and its hostile interference and violence across the Middle East or even helping to massacre civilians in Ukraine”, said Alicia Kearns MP, chair of the Commons Select Committee on Foreign Affairs.

An Imperial College London spokesperson said: “All Imperial research is subject to Imperial’s Ethics Code and we have robust relationship review policies and due diligence processes in place, with our responsibility to UK national security given the utmost importance.”

This is not the first time the College’s

researchers have come under scrutiny for their work with sanctioned states. In December 2022, *Felix* reported that an Imperial professor co-founded a firm implicated in facilitating the tracking and profiling of the public by the Chinese government.

In September 2022, *The Times* reported that the College had shut down two research laboratories funded by Chinese defence companies, after the Government refused to grant export licences for their work. This followed an earlier *Times* investigation in February of that year, which found that Imperial had accepted £55 million from Chinese institutions, including £5 million from companies under sanction by the USA.

**Continued from page 1...
University rankings...**

and Bioengineering degrees ranked first in their respective subject league tables, with a further 12 Imperial undergraduate degrees ranking in the top ten for their subjects.

How are the results calculated?

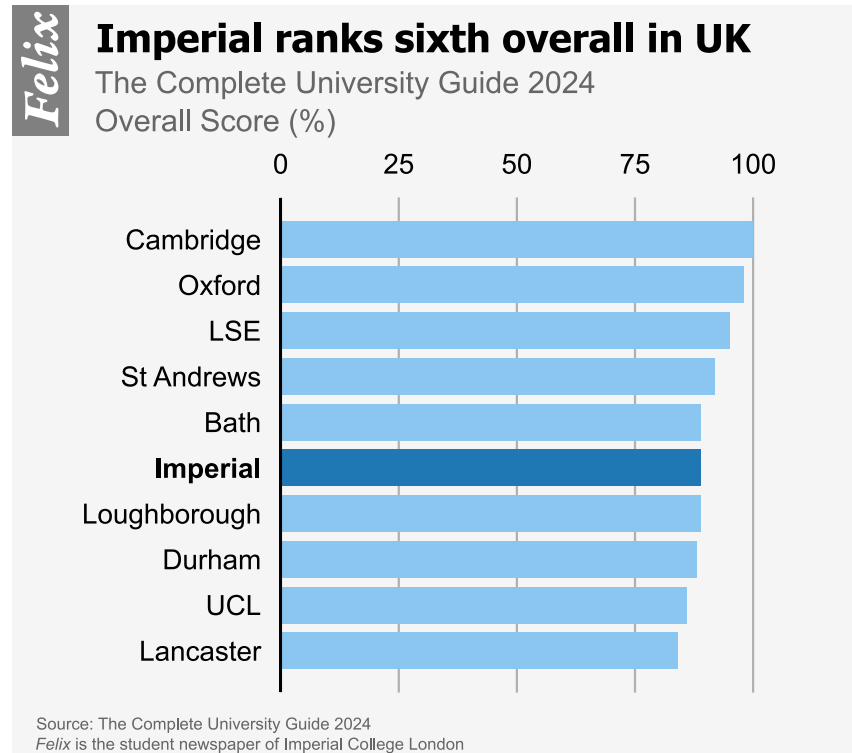
Graduate prospects are rated from 0 to 100, using data from the Higher Education Statistics Agency’s (HESA) Graduate Outcomes survey. The survey took place fifteen months after the graduation of students in HESA data for 2019/20.

The graduate prospects rating is calculated by dividing the number of

graduates in employment or further study by the total number of graduates with a known destination. This number is then expressed as a percentage. Only highly skilled employment is included.

The Complete University Guide’s research quality rating is based on the 2021 Research Excellence Framework (REF), which ranked Imperial first in the UK, finding that the College provides a greater proportion of ‘world-leading’ research than any other UK university. The REF takes place every six years and assesses the quality of research performed by UK higher education.

An overall score for each university is calculated using a weighted average of ten measures, including the two above. Subject-specific scores are calculated in the same way, except only six measures are used.



Winner of the Sophia Prize 2023

Climate defeatism: an engineered despair

By Daniel Hesk

Optimism is difficult when it comes to thinking about climate change, but it is ultimately a necessary attitude to have for taking action. Daniel Hesk has written a beautiful article on the causes of climate despair, looking inwards to the climate scientists whose apocalyptic messaging seems to be infected with a futile helplessness, and outwards to the psychological sleight-of-hands played by corporations to guilt the engaged citizen into thinking that they are the only ones with agency in this fight.

Hesk's optimism isn't blind nor deluded; he understands the many forces in play that are stunting progress in climate action, including some close to home. He implores you to understand the issue better, to know who to blame and who to fight, and to stay committed to this collective effort, in whatever way you can. All in all, Hesk's article is a worthy winner of the Sophia Prize.

Read the article in Issue #1824, Comment

The
gree

By Nell
Read t



Runners Up

Imperial start-up wins £1 million Earthshot prize

By Taylor Pomfret

Read the article in Issue #1815, Science



UK must switch to green energy NOW

Pates

Read the article in Issue #1820, Comment

In November, Felix launched the Sophia Prize for Environmental Writing, which would award an excellent writer £400 for contributing an article to the paper this year.

Not just any article however: the prize goes to an ‘outstanding, inspiring, and accessible article that helps tackle climate defeatism and covers, or conceives of, an economic, cultural, or scientific innovation that helps fight global warming.’

On this page you will find the winner and runners up of the competition, as chosen by an ex-Environment section editor. The Sophia Prize will run each year for the next two years. Be sure to continue submitting pieces on the topic of tackling climate defeatism and global warming to be featured, and to be in for a chance of winning £400!

THE YEAR IN NEWS 2022/23

The Physics department's low NSS scores

Physics department “unhelpful”, “dismissive” and “two-faced”, say students

Imperial's Physics department among bottom five in country from 2017-2022, according to NSS student satisfaction scores

News

by Jamie John and Isabella Ward on 23 February 2023

in Issue 1821



“It was absolute chaos”, says Alex, when we ask them about their time as an undergraduate in Imperial's Department of Physics. “It just felt like you were getting by somehow.”

Anger at Imperial Athletes

Growing discontent with Imperial Athletes initiative

Imperial sports clubs frustrated by “miscommunication, inconsistency and lack of transparency”

News

by Isabella Ward on 6 January 2023

in Issue 1816



Last term saw growing discontent with Imperial Athletes, the main administrative body for all Imperial's sports sector societies.

Imperial Athletes (IA) is an initiative designed to act as a bridge between the Union and Move Imperial, the College's sports administration team. At its launch in 2020/21, the head of Move

The arrival of ALERT

ALERT: Imperial's newest member

ALERT statue to be installed on Imperial College Road despite Union opposition and no student consultation.

News

by Jamie John on 1 October 2022

in Issue 1806



Photo: Felix

On Friday 26th November 2021, Felix first reported on the now-infamous ALERT statue, running the headline “Dongoor Plaza – Imperial College lawn re-opens as statue plans seen”. Since then, the statue has become the source of much controversy as a consequence of the 2m appendage protruding out of its lower torso, which many have interpreted as its penis.

The creator, acclaimed British sculptor Sir Antony Gormley, has denied this. In an interview with *The Times* on 7th August this year, he praised students for questioning “the decisions and context in

Sir Antony Gormley
OBE RA: The man
behind the member

Silwood Security disputes

Security whistleblowers allege “bullying regime” across Imperial

Having lost out on annual leave for 13 years, Security staff “betrayed” by HR and “bullied” by Imperial Security seniors.

News

by Isabella Ward on 24 May 2023

in Issue 1824



Photo: Thomas Angus

In December 2021, Security staff from Silwood Park submitted a grievance against senior members of the Security team, Human Resources (HR), and Campus Services management. They complained of wrongful cuts to their pay and annual leave, and a lack of transparency in these decisions, underlined by deceitful and coercive behaviour by senior members of staff. The independent investigator upheld their complaints.

Over one year on from the ruling, there has allegedly been little accountability or action.

Having finally given up on holding out for change, Security staff from Silwood Park

“

I've never quite figured out if the management team are

SCIENCE & TECHNOLOGY

Edited by: TAYLOR POMFRET
ANGIE LO

The blind mole rat: an animal with cancer-resisting abilities

► Science writer Wang Guo discusses how blind mole rats can resist cancer and live long lives, and what that could mean for the future of human healthcare.

Wang Guo Science Writer

Cancer is a disease of intrinsic origin, characterised by the uncontrolled replication of cells. This is driven by aberrant genetic mutations, which differ from patient to patient. This huge variability makes cancer extremely difficult to cure as each patient's cancer has unique traits of resistance to different types of therapies. An effective response would be to tailor treatments to the cancer cells of each individual patient, also known as personalised medicine. This significantly increases treatment effectiveness, but unavoidably also increases costs and response time. But what if there were a cancer-defence mechanism that could be applied to every single type of cancer, regardless of their particular set of mutations? Such a mechanism is not present in humans, but can be found in long-lived animals – one such creature being the blind mole rat.

The blind mole rat paradox

The blind mole rat is a paradoxical specimen that contradicts the general laws of nature. It is a small animal, but surprisingly can easily live for at least 20 years – ten times longer than the similarly-sized common mouse. Despite being a social animal, in close contact with others of its kind, the blind mole rat rarely suffers infectious diseases. They are also incredibly resistant to both natural and induced tumorigenesis compared to other mammals. This incredible animal is undergoing thorough study by cancerologists, biogerontologists, and other researchers to understand what allows it to maintain its health against all of life's adversities.

The significance of transposable elements

Scientists believe the blind mole rat's success may have do to

with retrotransposable elements, a specific type of transposable element. Transposable elements (TEs) are short DNA sequences that do not encode proteins, nor perform any apparent function at first glance. They are excellent at self-replication; the creation of hundreds of copies from a single TE, which can then be inserted into other parts of the genome.

Retrotransposable elements (RTEs) – the key to the blind mole rat's resistance – transcribe DNA into RNA, which is then transported from the nucleus into the cytoplasm. RTEs also encode an enzyme called reverse transcriptase. Inside the cytoplasm, this enzyme synthesises new copies of DNA using the transcribed RNA.

RTEs as a defense mechanism against cancer

Researchers found that, in the cells of blind mole rats, higher levels of RTEs were expressed before the cells underwent apoptosis. Also known as programmed cell death, apoptosis is an immune response that also prevents cells from becoming cancerous. But how is overexpression of RTEs beneficial for apoptosis and how does it grant the mole rats their incredible cancer resistance?

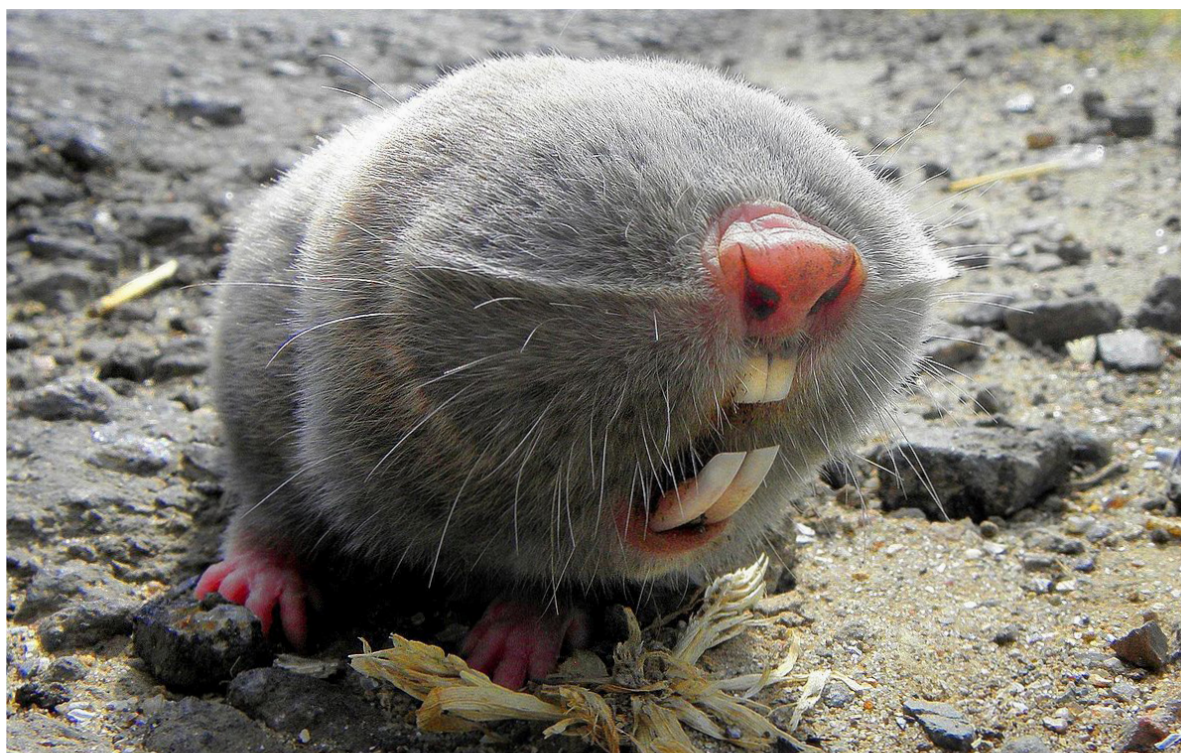
Apoptosis is activated when DNA is found in a cell's cytoplasm, which is considered a red flag by the cell, as DNA is normally found in the

nucleus. The more DNA is found in the cytoplasm, the stronger the response. This can happen during infections, when some viruses produce their DNA in the cytoplasm, but the same effect can also be produced by overexpression of RTEs.

As RTEs produce DNA in the cytoplasm with the help of reverse transcriptase, in a pre-apoptotic cell, hundreds of thousands of RTEs are transcribing their DNA into RNA and each RNA molecule can produce hundreds and even thousands of DNA copies. This emits a very strong signal for the response that causes cell death, so the cell has no chance to become cancerous in the blind mole rat.

Blind mole rats are not necessarily the most beautiful animals, but they have unique biological features such as their abnormally long lifespans in relation to their body size. Although there is still a long way to go in the study of this species, their ability to use transposable elements to their advantage is a mechanism that can serve as inspiration for novel anti-cancer therapies.

Scan this QR code
to access the
original study:



Credit: Wikimedia Commons

The blind mole rat's incredible resistance to cancer has captured the interest of many researchers.

Edited by: SIMRAN PATEL
MARIE MORI

ENVIRONMENT

Cold-water swimming at Hampstead Heath Ponds and Lido

► *Are the mental health benefits associated with blue spaces restricted to those who can afford to pay?*

Nilani Chandradeva Environment Writer

By August 2022, I was three months into my cold-water swimming obsession. I had been swimming regularly at the Mixed Pond on Hampstead Heath and, supported by the friendly lifeguards and fellow swimmers, had become hooked on the experience of immersing myself in both cold water and nature. I had spoken to several women in the changing rooms after our swims about how best to prepare for swimming in the winter. “Just keep going”, they told me, “And buy these neoprene gloves and socks, they really make a difference. Most of us don’t bother with wetsuits.”

If you make it to the colder months – like I somehow managed to – you can join the ardent winter swimmers and break into the iciest waters for a chilly dip. It’s been over a year since I started swimming on the Heath, and I’ve fallen in love with the tranquillity of the Ladies’ Pond, and become fascinated by the athletic commitment of swimmers at the Lido. I even enjoyed a trip to the Men’s Pond when the Highgate Men’s Pond Association (HMPA) hosted a swim and breakfast for all open water swimmers.

Located in Zone 2 of North London, Hampstead Heath has four swimming sites: the Kenwood Ladies’ Pond, the Highgate Men’s Pond, the Mixed Pond, and a chlorinated and unheated open-air 60m swimming pool: Parliament Hill Lido. The ponds and lido are open year-round and are supervised by lifeguards, although in winter the Mixed Pond is only open to the Hampstead Heath Winter Swimming Club. These ponds are wild swimming sites, but bathing water quality is monitored weekly by the Environment Agency.

Over the past year of swimming on the Heath, I have wondered what draws swimmers there and what

prevents more people from going. In May 2023, I conducted an anonymous survey, circulated amongst different swimming groups and committees of the three ponds and lido. The survey was completed by 140 swimmers.

Swimmers commented on both the significance of being in nature, and the impact that cold-water swimming has on their mental health. One swimmer at the Men’s Pond said, “There’s something a little magical about swimming whilst a massive heron swoops over your head to land or you spot a rare kingfisher flying into the bush – not quite like a chlorinated indoor pool!”

Over 90% of respondents said they were motivated to swim at the ponds or Lido due to mental health benefits. I asked Alastair Campbell – previously the press secretary to former Prime Minister Tony Blair, and co-presenter of ‘The Rest is Politics’ podcast – to describe his experience of swimming at the Lido.

“I have an addictive personality and the cold-water swimming addiction is what I call a healthy one.” he said. “I got into it when I stopped enjoying running as much as I used to, and bit by bit I was really drawn into it – becoming almost like a physical and mental need to start the day. If you had said to me five years ago that I would be willing the water to get colder, I would have thought you were crazy. I remember the first time I got below 10°C at the Lido, and I couldn’t believe I had done it... I don’t know why it helps my mental health. I just know that it does. There is also a really good crowd of regulars at 7a.m. at the Lido, and I think we feed off each other in terms of how the swimming helps us.”

There is a growing body of evidence around the health benefits of cold-water swimming. In 2022, the first feasibility study on the impact of sea swimming

on depression was published in the *Mental Health and Physical Activity* journal and showed a reduction in the severity scores for depression and anxiety. Given emerging research and the positive experiences reported by Hampstead Heath swimmers – one of whom described swimming at the ponds as a “mental health workout” – it is concerning that access to the Heath’s cold-water swimming spaces is becoming limited by compulsory charges imposed by the City of London Corporation. Until March 2020, it was free to swim at the Hampstead Heath Ponds. Payments of £2 or £1 for adults and concessions respectively could be volunteered by those that could afford it and wished to pay. Now charges of £4.50 for adults and £2.70 for concessions are compulsory.

Jeremy Watson and Mike Smith –

Treasurer and Chair respectively of the HMPA – explained that whilst the HMPA, Mixed Pond Association, and Kenwood Ladies’ Pond Association tried to rally against the charges, there was little opportunity to act as the introduction of the charges was swiftly followed by the COVID-19 lockdown.

They also explained that whilst free swimming was available to people over the age of 60 between 7:00 and 9:30 a.m., the time bracket did not coincide with the free travel for over 60s offered by Transport for London. This reduces uptake of free swimming by those who do not live within walking distance of Hampstead Heath or have access to other means of transport. When the HMPA asked the City of London Corporation to extend the free swimming for over 60s to midday, they were told there was

Credit: Nilani Chandradeva



The Mixed Pond, Hampstead Heath, in August 2022.

insufficient funding to do so.

I contacted Dr Mark Harper – senior author of the aforementioned sea swimming article, consultant anaesthetist at Sussex University Hospitals, and author of the book *Chill: The Cold Water Swim Cure*. I asked Dr Harper to describe the benefits of cold-water swimming, and why natural resources like the blue swimming spaces on Hampstead Heath should be protected so that everyone can reap the benefits, regardless of income.

Dr Harper said, “Outdoor swimming provides a comprehensive ‘package’ of proven mental and physical health benefits, through green therapy, blue therapy, exercise, community, and the unique properties of cold temperatures. By providing free access to resources such as Hampstead Ponds, the benefits to the wellbeing of society far outweigh the income generated.”

In July 2020, the Save Our Ponds campaign was launched to call on the City of London Corporation to – according to the petition – “reverse their recent anti-democratic decision to impose compulsory charges for entry to the Hampstead Heath bathing ponds”.

The petition mentions that the 1871 Hampstead Heath Act, which secures “free and open natural space for people to enjoy in perpetuity” has been “diluted if not defiled” by the City of London Corporation by charging for entry to the ponds.

Members of the HMPA committee and survey respondents emphasised that since the introduction of these charges, the demographics of people visiting the ponds have changed. One anonymous swimmer at the Ladies’ Pond and Mixed Pond said, “I’ve swum at the ponds for 25 years and through the winter for 12 years. I am saddened by the changes that have happened in the last few years – the increases in charging and subtle and not-so-subtle attempts by the Heath Management to commercialise the pond, by making it less accessible to people who really need and value it but cannot afford the entrance fee.”

The HMPA are planning to recruit a diversity officer to their committee, who will be responsible for increasing access and diversity at the Men’s Pond. However, the committee members explained that the scope of this role would be far greater if the compulsory

“There’s something a little magical about swimming whilst a massive heron swoops over your head to land or you spot a rare kingfisher flying into the bush - not quite a chlorinated indoor pool!”

charges were not in place. Whilst concession rates are available, the fact that many swimmers noticed a shift in the backgrounds of people coming to the ponds suggests that the concession rates are either too expensive, or that many who cannot afford the full fee are ineligible for the concession fee.

The Hampstead Heath swimming community feels very inclusive. One swimmer at the Ladies’ Pond said, “There are few places where women gather in community and it feels important to have spaces like that.” A member of the Hampstead Heath Winter Swimming Club said, “Winter Swimming Club at the Mixed Pond creates a fantastic community. It is straightforward to join

and needs to be protected.” However, a swimmer at the Men’s Pond said, “I have swum in the Men’s Pond for nearly 30 years and the whole experience has been adversely affected by the changes brought in since COVID, including mandatory charging. It is a real pity that others will not be attracted to the Pond by open access and the previous quirkiness, including naked sunbathing.”

At the end of May this year, the City of London Corporation banned naked sunbathing at the Men’s Pond. In the *Camden New Journal*, Dan Carrier described that the tradition of naked sunbathing dates back over 100 years. One anonymous swimmer stated that naked sunbathing at the Men’s Pond is of “national importance to LGBTQ+ history”. There is concern amongst swimmers that the invoking of such rules and compulsory charges will make the ponds less inclusive over time.

The City of London Corporation were asked to explain why compulsory charges are in place, why free swimming for over 60s is only available between 7:00 and 9:30a.m., and why naked sunbathing has been banned at the Men’s Pond after almost a century. They refused to provide a response.

Overall, it seems that the compulsory charges of swimming at the ponds and lido are reducing access of these sites for many people who might benefit from cold-water swimming. For the ponds in particular, which are natural resources described by many as a source of mental health support, more work needs to be done to ensure that access to these blue spaces is available to people from many different backgrounds. Despite the financial obstacles imposed by the City of London Corporation, which are unlikely to change, the volunteer-led pond associations are determined to find other approaches to increase access to these historical swimming sites.

Credit: Nilani Chandradeva



School of Public Health (Faculty of Medicine) PhD students: Kelly McCain, Beth Cracknell Daniels, and Nilani Chandradeva (left to right) enjoying the breakfast and swimming event hosted by the Highgate Men’s Pond Association (Saturday 15th April 2023).

ENVIRONMENT

Of plants, pollution, and profit: how plants can be used to decontaminate soils and waters

► *Dr Claude Grison's innovative research into greener soil and water decontamination is explored in this article by Lorraine.*

Lorraine Deberon Environment Writer

The anthropogenic degradation of the environment is often discussed in terms of climate change, and biodiversity loss. But there is another type of damage happening beneath our feet and over the horizon – that of the soils and waters. Agricultural pesticides and fertilisers, industrial and domestic chemicals, and heavy metals from urban infrastructures all damage soils. Subsequently, they can spread to water sources by runoff and ultimately enter the food chain. Thus, these contaminants have environmental, health-related, and societal impacts. For example, lead poisoning has been shown to influence the brain development of children and infants – making them more prone to aggression and impulsions – and is linked to increased criminality rates. Additionally, a new class of contaminants – UV-filters – interferes with the reproduction of corals and some of the fish which inhabit them. The achievement of many of the United Nations' sustainable development goals, such as protecting life on land and under water, preventing land degradation, global access to clean water and sanitation, and building sustainable cities will depend on our ability to protect our soils and waters.

Phytoremediation: using plants to decontaminate soils and waters

For a long time, we could only improperly decontaminate this pollution, and often at the expense of producing more toxic waste. However,

Dr Claude Grison, a French biochemist, may well have found a solution to this. Originally specialising in antibiotic bacterial resistance, the course of her career changed when four university students asked her whether plants could be used to decontaminate soils. Faced with the general lack of knowledge about this issue, Dr Grison decided to modify her research axis to answer this question.



Credit: Envato Elements

Although some plants can thrive in polluted environments and absorb contaminants, the major obstacle to using them as part of decontamination efforts is the danger of subsequent ingestion by insects or grazers, thus spreading the hazardous compounds up the food chain. But Dr Grison saw these heavy metal-dense plants not as a liability, but as an opportunity. Indeed, she rendered it possible to extract metals

and other substances from such plants. These compounds can then be used as catalysts to accelerate the synthesis of molecules of interest in pharmaceutical and cosmetic industries, thus creating economic impetus for this method. Importantly, these procedures do not in turn generate toxic waste. They are being put to the long-term test in New Caledonia, where nickel mining has left the soil damaged and sterile. So far, five

of certain species, spent coffee, and green tea grounds can be transformed into filters capable of absorbing contaminants in fresh and salt water. Moreover, these filters are efficient: two hours are sufficient to capture a variety of harmful chemicals, such as UV-filters, insecticides, and herbicides.

Another field experiment on the primrose willow can be presented as a case study: an invasive species in the Rhône river in southern France whose intricate root system allows it to naturally absorb contaminants. However, its proliferation threatens native ecosystems. When removed from the rivers and canals, its roots can be dried, ground, and turned into filters – without chemical transformation – which are then able to purify water of zinc, arsenic, and iron. Once the filter is used, the metals it has captured are used as catalysts for medical or cosmetic compounds. Thus, this phytoremediation method contributes to invasive species management, creates no toxic waste, and is economically profitable.

The potential for Dr Grison's research to create a greener economy led to the founding of two companies, Bioinspir and Laboratoires de Bioprotection, which specialise in the sustainable production of pharmaceutical and cosmetic compounds through phytoremediation. Her out-of-the-box reasoning and the ground-breaking applications of her research also earned her the 2022 European Inventor Award.

species, chosen for their growth abilities on heavy metal-rich soils and their closeness to the island's natural flora, are growing on the experimental site and being used to recover toxic waste and turn it into molecules of interest.

After tackling soil contamination, Dr Grison confronted water pollution. Again, the astonishing properties of plants provide an opportunity for decontamination. The powdered roots

Tales of unsung wilderness: magnificent, menacing, mild – the European hornet

► *In the last article of this series, Shreyas Kuchibhotla encourages his readers not to fear, but rather appreciate the beauty of the European hornet.*

Shreyas Kuchibhotla Environment Writer

There are few insects that scare people more than the wasp. A beautiful day in the park with a picnic basket is often marred by the unwelcome arrival of these yellow and black marauders, the low drone of their rapidly beating wings announcing their sinister presence. While wasps themselves are highly misunderstood creatures and not as aggressive as we are led to believe, there is one valiant soldier among their ranks who apparently despises them as much as we do – the hornet.

You never forget the first time you see a European hornet (*Vespa crabro*). These absolutely massive insects are striking in every way – bright red and yellow missiles cruising through the air above you with the timbre and tone of a chopper. Queen hornets can reach more than 3cm in length, with a wingspan of almost 4cm – this might not sound particularly threatening at first, but that’s more than half the length of your thumb. After hibernating all winter, the queens emerge to look for a spot to build a nest. It is during this period that they are most likely to be seen, randomly appearing in front of you and exploring a hole in the ground or a tree hollow for a few seconds before taking off. They may also sometimes make their way into houses, and at such a close range might appear even more intimidating.

The hornet is Europe’s largest social wasp and one of the largest in the world. It consumes anything from sap and nectar to honeybees. In fact, it is a particularly good exterminator of other predatory insects such as wasps and dragonflies, even occasionally taking on praying mantises. It is a formidable hunter, with powerful jaws and a lethal

sting to boot. This, of course, is what we’re really scared of.

The metaphorical saying ‘don’t kick a hornet’s nest’ came to be through humanity’s experimental evidence that the real one isn’t to be trifled with. Many tell, with horror, stories of being repeatedly stung by these insects and suffering through the pain for weeks. I won’t sugarcoat it – these animals can sting, and, unlike bees, they are capable of extracting and reinserting their stinger without taking any damage. However, while the hornet’s venom is quite potent to its prey, several reports (including a live stinging video on the wildlife education channel ‘Jack’s World of Wildlife’) state that it isn’t nearly as painful to us as its reputation suggests. More importantly, the hornet wants nothing to do with us. As long as you aren’t dangerously close to a nest or causing it any serious bodily harm, you’re safe. In fact, anecdotal evidence says that even when disturbed, they would rather issue a mild warning bite than use their stingers.

Unfortunately, this knowledge is rather recent, and these beautiful bugs have been widely feared, reviled, and persecuted, so much so that they are now endangered in some European countries. Southern England is a stronghold for them, and we are lucky to have a healthy population in London – one that has apparently increased in the recent past. I have been lucky to see them twice, and emerged none the worse for the experience! The first time was on the way to campus to study for a particularly tortuous set of exams – on the path in Kensington Gardens leading towards the Royal Albert Hall. I was passing by a tree when I heard that trademark buzzing and saw a giant queen descend onto

the grass, explore for a few second, and then fly right towards me. The second was in a dried-up pond further up the path, when another hornet made quite the entrance among a horde of flies, and took off. Unfortunately, neither time did I have my camera with me.

Both times I was within a few feet of this supposedly murderous insect, but not once did it attempt to sting me. Hornets, like any other animal, just want

to mind their own business as long as you do yours. So, if you ever have the privilege of spotting one of these fantastic insects in London, don’t let their reputation scare you. Keep a safe distance, of course, but admire that gorgeous red and yellow being for what it is.

Credit: Shreyas Kuchibhotla



A large European Hornet (*Vespa crabro*) alights at the base of a tree in Kensington Gardens, London.

“I have been lucky to see them twice, and emerged none the worse for the experience!”

Edited by: ELIF CIVELEKOGLU

COMMENT

When did fiction get so political?

► *A look at the role of history and identity in **Memories of Murder** and **Return to Seoul***

Anonymous Comment Writer

Despite the many opportunities to stray into escapism and detachment from the realities of its readers that it presents, fiction is often stuck with being ‘of its time and place’. Rarely do we see a book or a movie carry its plot with an internal logic distinct from that of our own. Even the most fantastical of science fiction and fantasy that are set in the most outlandish settings rely on tropes, themes, and archetypes that have somehow remained consistent throughout human history.

This isn’t an accident or a bad thing – these constraints allow for clearer communication of the author’s ideas to the reader, allowing for a more immediate and direct understanding of the story’s meaning.

Thinking of novels like *The Brothers Karamazov*, or *The Magic Mountain*, where the communication of ideas takes priority over realism – the characters do not act or speak as humans, as the conceit of a fictional story would suggest, but as mouthpieces for the theological or political stances that were prevalent during the times that the books were written. For Dostoevsky and Mann, the aim of fiction wasn’t merely to tell a story – a narrative spinning on its own, independent of anything else – but to use it as a medium through which they could present their thoughts and engaged with their audience.

Recently, I came across two movies that do a similar thing. *Memories of Murder*, directed by Bong Joon-Ho and released in 2003, follows two detectives as they investigate a string of rapes and murders that occurred in Korea in the late 1980s. The investigation is a mess, with bureaucracy slowing down every step of the procedure, and the brittle egos of the detectives devolving the effort into a desperate chaos.

Notably, *Memories of Murder* is loosely based on real-life events: a string of rapes and murders between 1986 and 1991 by a killer who was, at the time of the film’s

release, uncaught – a conscious choice by Bong. This period in South Korean history can be characterised as one of political and social turmoil, one which saw the end of a militaristic dictatorship after a decade of coup d’états, revolts, and massacres, but one which also saw the country’s strides into modernity, for example with Seoul’s hosting of the 1988 Summer Olympics. The film, as it portrays its incompetent and desperate characters try and ultimately fail to find meaning among the kaleidoscope of half clues and coincidences, constantly asks the audience, many of whom must’ve lived through that time themselves, to remember and engage in that cognitive dissonance once again.

Davey Chou’s *Return to Seoul*, released last month, depicts Freddie Benoît, an adopted daughter, going back to South Korea to try and find her biological parents. Each meeting between the family has the awkwardness

and difficulty of any such gathering, exacerbated by the language barrier. The film portrays where Freddie is in life, at several points over the course of a decade, each time she meets again with her biological family, hopping between jobs and partners.

In spite of the protagonist’s magnetic confidence and aptitude, both of which serve her well through each checkpoint of the movie, there is a sense of inevitable futility in every attempt at reconciliation, no matter what the clichés about how time heals and the unbreakable bonds between family may say. There is a constant resigned look in her eyes that dislodges any presentation of self-assuredness, which neither the audience nor the film’s characters fail to notice.

The feeling of distance and lack of familiarity with one’s family and national identity is one that has materialised multiple times during the nation’s recent

history, for example, in the multiple television broadcasts that attempted to reunite families separated by the Korean War, such as 1983’s 453-hour *Finding Dispersed Families* program.

In both of these movies, I don’t feel like as though the stories and settings were incidental. Bong’s decision to portray a specific historical event, as opposed to a disconnected fictional invention, seems deliberate. Chou’s engagement with the topic of family and immigration is one that particularly resonates with his audience. He does not intend simply to tell a story, but instead to use it as a vehicle to articulate the experiences and emotions attached to a place and time.

As I watched these two movies, I felt that, as much as I enjoyed the narratives on their own – brilliantly acted and directed as they were – it was the way that I could interact with the stories through my own experiences that made them meaningful.

Credit: IMDb



Memories of Murder by Bong Joon Ho (2003)



Return to Seoul by Davey Chou (2023)

Do you identify more with the egg or the sperm that made you?

► *In this unique iteration of the well-known ‘the chicken or the egg?’ question, sperm is taken into consideration. This Comment writer asks which one the chickens identify with more.*

Figmund Sreud Comment Writer

If you were to describe yourself at a point in time before you were born, would you gravitate more towards saying you were from a sperm or an egg? Obviously, the correct answer is both, as both contributed an equal amount to who you are now. But on an intuitive level, what do you identify more with?

I asked a total of 50 people this question – 23 women and 27 men. For men, 17 answered sperm while the other 10 picked egg. Contrastingly, 19 women answered egg while the rest picked sperm. It appears that the answers are gendered, with men generally picking sperm and women picking egg; a gender-matched rate of 63% for men and 83% for women. I couldn't identify any qualitative trends in those who went against the grain, though there was one interesting instance where a son and his mother both gave non-gendered responses – maybe something in the blood. Another fun result was that Bard answered egg, whereas ChatGPT, with some persuasion, said sperm.

So what does this mean? Are the men who answered egg more effeminate than those who answered sperm? Are bisexual people more likely to give non-gendered answers, as one of my interviewees suggested? The answer to all these questions is: I don't know, I'm not a psychoanalyst.

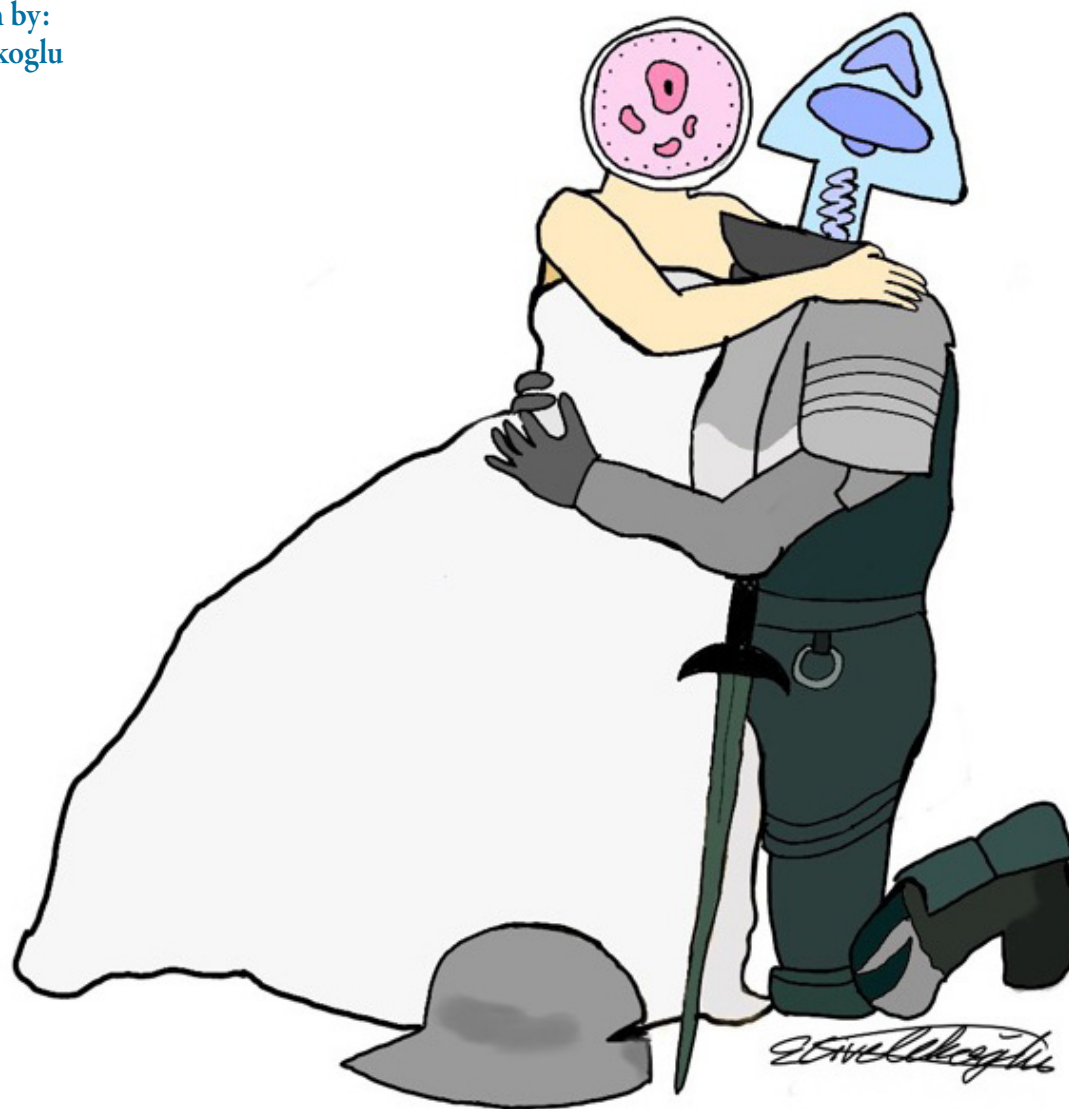
One interesting theory is that the gendered way in which the egg and the sperm are portrayed in media informs our identifications. In Emily Martin's 1991 book *The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles*, she finds the description of the 'egg as damsel in distress, shielded only by her sacred garments; sperm as heroic warrior to the rescue'. She argues that this designation is incongruous with the 'facts of biology', and instead informed and constructed in cultural terms, suggesting that the

gendered responses in my survey aren't an instinctual affinity, but are instead imposed through societal depictions of gender. But of course, this is all conjecture.

So what do you think about this? Feel free to write response articles with your ideas, and send them to: comment.felix@ic.ac.uk.

Or write about something else you find interesting!

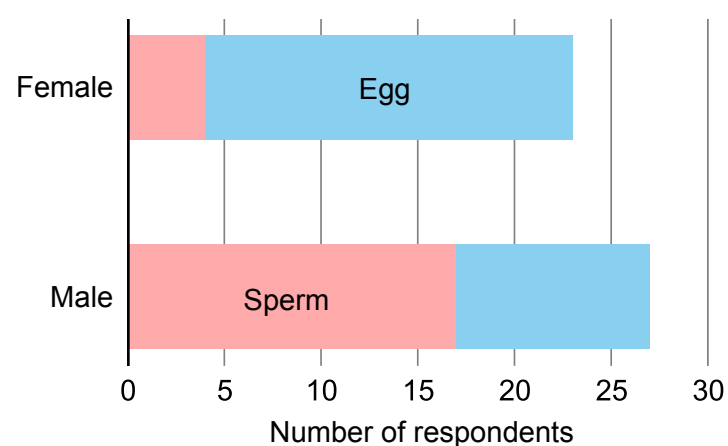
Illustration by:
Elif Civelekoglu



The 'egg as damsel in distress, shielded only by her sacred garments; sperm as heroic warrior to the rescue'.

“Do you identify more with the egg or the sperm that made you?”

Answers categorised by biological sex



Source: Survey by the author

Visual representation of survey responses.

ARTS

Edited by: **GILBERT JACKSON**
SOPHIE POINTON

Architecture through the ages – unveiling Western European architecture

Arts editor Gilbert Jackson discusses *how the art of structure has evolved over time.*

Gilbert Jackson Arts Editor

Of all the visual arts, one of the most visible, striking, and awe-inspiring is the field of architecture. Architecture is the fusion of both the visual and the mathematical, and provides us with towering structures of cultural significance as well as the homes within which we dwell. Like all art, the periods and styles of architecture are also dictated by the tastes of the time and the purpose for which a given structure is designed. In many countries, therefore, we see buildings and structures which stand next to, but nonetheless contrast with, each other due to the many different styles of architecture that can be present in small vicinities.

It is a liberating feeling to know that we are surrounded by so much art in our lives, but even more liberating to be able to answer the questions of why these buildings stand where they are, why they look the way they do, and why they're all so different from each other. Architecture, even at a surface level, can be the key to not only appreciating the art we see around us, but also giving us insight into the history which surrounds it, and the feelings and preferences of people in previous generations.

Herein is a comprehensive (but by no means exhaustive) list of architectural styles and their significance, so that all of you may be able to walk past a building and appreciate its significance and place in history.

The Classical Period

The Classical period is one of the most well known of the architectural styles. It traces its origin, needless to say, back to the Classical period of antiquity which was dominated by the architectural styles of Greece and Rome. This style came about as a culmination of advances in both mathematics and in marble-working, which is not surprising given the sheer abundance of marble in both Greece and Rome at the time. We can easily spot a Classical building by its use of numerous columns in the portico (front entrance) which also features capping (flamboyant column tops) as well as the use of a pediment.

The use of columns is so ingrained in Classic architecture that each type of column and capping is given its own architectural style: Ionic is the simplest form of column, with just a flat cap, Doric features a scrolling cap, and Corinthian features majestic floral capping. While most of the original Classical buildings are now in a state of decay, during the Renaissance

and the early-19th century, a revival movement called 'Neo-Classical' was incredibly popular and was used as the architectural style for many state buildings across the world during the age of empire: notable examples include the US Capitol Building, Admiralty Arch, and the Brandenburg Gate.

The Romanesque Period

The Romanesque period (known in the UK as the Norman period) followed on from the Classical period and dates back to the establishment of the Roman Empire. The Romanesque period spawned from further advancements in mathematics which led to the design of both the curved arch and the dome, as well as the adoption of a new construction material; the brick. Where marble had to be hewn from a rock-face, carved, and transported at astronomically slow paces, the brick was cheap, easy to manufacture, and very portable; for the Romans and their quickly-growing empire, this was a

self-supporting semi-circular arches were implemented in many entranceways, and finally, the incorporation of the self-supporting dome. The result was the construction of impressively large and very sturdy buildings which have stood the test of time, and many prime examples can still be seen to this day, including The Pantheon in Rome, Hagia Sophia in Istanbul, and St Bartholomew the Great in London. So inspiring was this style that, like with Classical architecture, a 'Neo-Romanesque' revival was brought about in the mid-19th century with examples including The Natural History Museum, our own School of Chemistry building, and of course, the Queen's Tower.

The Gothic Period

The Gothic period is so called because it was initially mocked by many proponents of the Romanesque style, who thought it barbaric (hence Goth-ic), however it has quite the opposite effect. Gothic architecture is perhaps the most recognisable style around, and was pioneered by the architects of France, Northern Italy, and Germany in the mid-10th to 15th centuries. Whereas both the Classical and Romanesque periods required large pillars and columns to support their large structures, the Gothic style is devoid of this preferring much slimmer columns. This is possible due to two features of the Gothic period: firstly, the use of pointed arches instead of semi-circular ones allows the forces acting on the arch to dissipate more easily, and secondly, the liberal use of buttresses, which are external supports that allow lateral forces acting on walls to act towards the ground instead, allowing for buildings to be much taller.

Gothic architecture was liberally used in Western Europe for civil, religious, and domestic buildings which now dominate the architectural landscape of most Western European cities. As for all long-lived periods, substyles emerged: in France, Decorative Gothic took hold and is highlighted by extravagant stone work and the use of 'rose windows', while in the UK, Perpendicular Gothic was a popular choice which featured elongated columns and windows. Famous Gothic examples include Notre-Dame cathedral in Paris, Westminster Abbey in London, and Cologne cathedral. Like all 'good ol' reliable' periods of architecture, the Gothic period underwent a revival in the mid 19th century called – you guessed it – 'Neo-Gothic'. This particular phase was prominent in the UK and the US, and was used in such buildings as St Pancras Station,



Notre-Dame cathedral in Paris, France.

huge plus, and many domestic buildings across the empire were built in this style. It was only until the reigns of later emperors that civil and religious buildings were also built in this style, displacing the Classical style.

What makes this style unique is that flamboyant columns were dispensed with and replaced by very wide columns, the use of the archway was all the rage,

the Houses of Parliament, the Cathedral of Learning in Pittsburgh, and Yale University.

The Western Islamic/Moorish Period

While Europe was reeling from the collapse of the Roman Empire and with duchies, kingdoms, and petty lords vying for power during the Dark Ages, the Umayyad Islamic Caliphate had expanded its borders all the way to Sicily and Iberia. When the Umayyad Empire was replaced by the Abbasid Empire, a group of Umayyads retained power in Spain by setting up various emirates, the most notable being the Emirate of Cordoba. The emirates were renowned across Europe for their wealth, outstanding architecture, scientific and medical advancements, and their philosophy, and this officially lasted from the 8th to the 15th century (however, even after the Spanish and French conquests, the style remained fashionable).

Having entered Spain through vast territories of what was the Roman Empire and Berber settlements, the emirates had developed an architectural style which was founded in mathematics. Their architects had perfected the use of arches by developing the

horseshoe arch, a feature so emblematic of

Western Islamic architecture. Not only that, but extensive use of tiling and

tessellating patterns created mesmerising architectural buildings awash with colour. The emirates

also continued to employ traditional Romanesque features such

as alternately coloured stonework and many domes,

which were principally used in the design of mosques; since the

mosque was a focal point in many

Moorish cities, the emirates also

developed ways of us-

Credit: Ilsen Orsel/Unsplash

ing as much space as possible by designing wide floor plans which have survived to this day. Buildings were not the only feature to have survived; the Moors also developed advancements in outdoor planning. They pioneered gardens with Riad design; divided into four with straight paths, and with numerous water features. Prominent examples of Moorish architecture include the Cathedral-Mosque of Cordoba, the Alhambra in Granada, and Mechouar Palace in Tlemcen, Algeria.

As a great architectural style, it also saw a revival in the 'Neo-Moorish' style, which is prominent around the world. In Delhi, the Jama Masjid, designed by Edward Blore in the 19th century, is one of the largest mosques in India. In the UK, many bath houses were designed in this style, as well as numerous gardens, such as the gardens of Sheringham Hall in Norfolk. The Hispanic World continues to develop buildings with Moorish influence, especially in the early work of Gaudi and the Palace of Manguinhos in Rio de Janeiro.

The Baroque, Rococo, and Palladian Period

The Renaissance birthed the idea of revitalising architecture when it conjured up the 'Neo-Classical' School, however, the Renaissance architects could not have predicted the extremes to which this would be taken. Baroque architecture is the 'marmite' of architectural styles; you either love it or you hate it. Why people love it might be down to its incorporation of not just elegantly decorated columns, pediments, and statues but also large archways and domes from the Romanesque period in a match-made-in-heaven moment. Why people might hate it could be down to it being washed in sickly-sweet frescos, paintings, gold-leaf, and blindingly white polished marble that emulates pure decadence.

In fact, decadence is the primary reason for Baroque's existence; originally used to highlight the sheer wealth accumulated by Florentine and Venetian bankers and merchants, which then eventually spread to France (where it became the Rococo style, which took it to even more decadent extremes), Spain, Germany, and even as far as Russia: examples include The Palace of Versailles, the Winter Palace in St Petersburg, and Salzburg Cathedral.

The UK, which had just been through a period of civil war and realised that visual representations of aristocratic decadence were no longer the way to go, adopted the Baroque in a more puritanical sense, by taking inspiration from Italian architect Palladio. The Palladian style continued to use columns, pediments, and domes, but was characterised by exposed marbework rather than being overly decorated and using unstained glass or alabaster. The champion of this style was Christopher Wren who, after the Great Fire of London, rebuilt the



An archway in the Alhambra, Granada, Spain

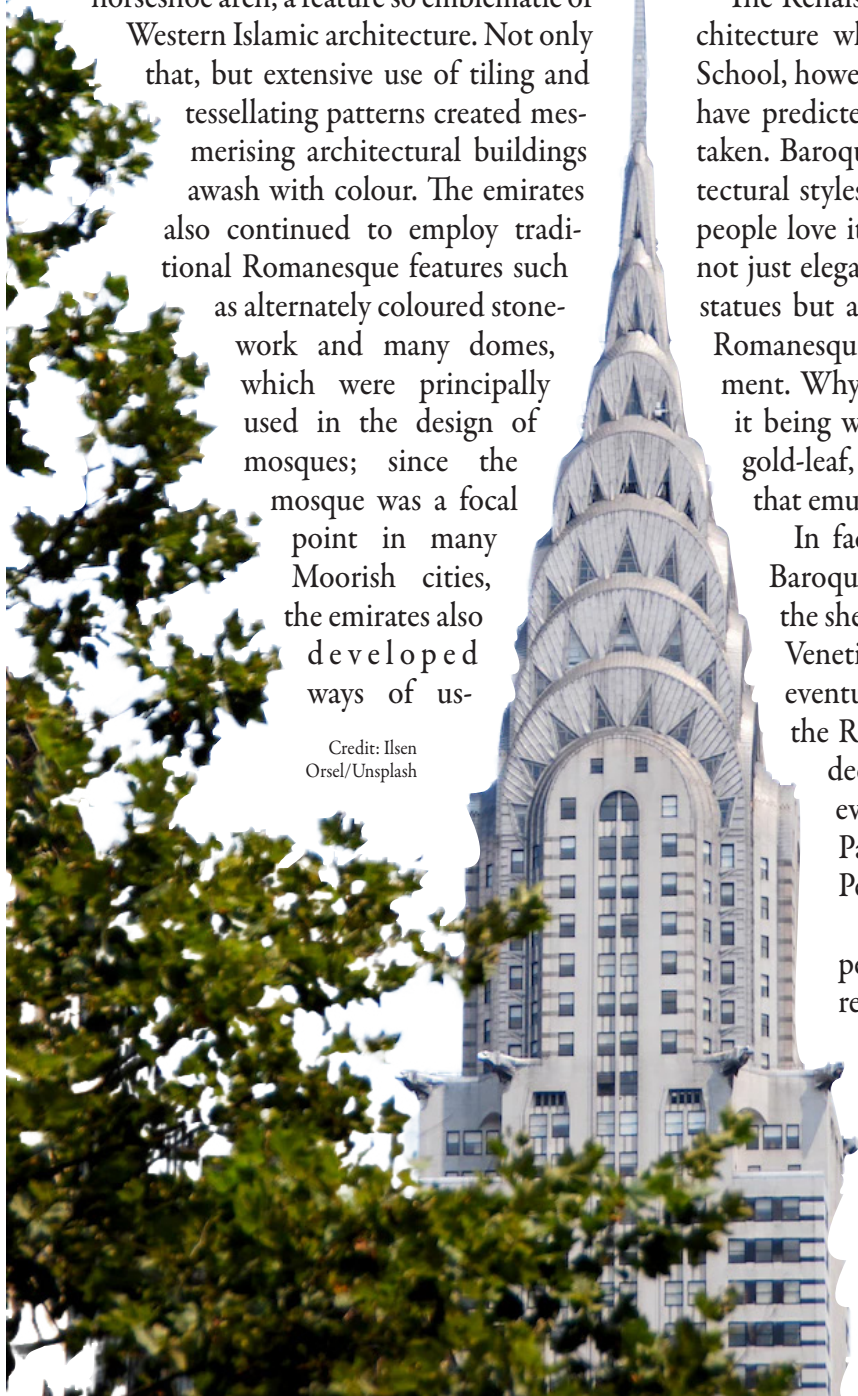
majority of London's churches and civic buildings, including arguably the most majestic of all the baroque buildings, St Paul's Cathedral.

The Nouveau and Deco Period

During the age of imperial collapse, the architectural style turned away from the religiously-infused Classi-

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**BAROQUE
 ARCHITECTURE
 IS THE 'MARMITE'
 ARCHITECTURAL STYLE;
 YOU EITHER LOVE IT OR
 YOU HATE IT.**

cal, Romanesque, and Gothic styles to usher in an age of modernity and secularism, tempered in the flames of liberalisation and art. The Nouveau period was short-lived compared to previous styles of architecture but left its mark nonetheless. Inspired by the elegant and post-impressionist art movement, it sought to turn architecture into something more emotional and evocative using colour and unique stonework to define its buildings. The city of Riga in Latvia is considered the Nouveau capital of the world with colour-splashed buildings and use of anatomy in its architecture. The king of the Nouveau style is Gaudi, whose Sagrada Familia is the pinnacle of achievement in this style, blend-



Chrysler Building, New York City, USA

ARTS

ing natural forms, mathematical structures, and colour in a veritable smorgasbord of Nouveau.

Following on from Nouveau is Deco, which is characterised by contrasting black and white stone and window work (white stone, black window frames), as well as the liberal use of gold-leaf, fan-patterns, and the more abstract features of Classical architecture. The true pioneers of this style were the Americans, who built some of their most famous landmarks in this style, including the Chrysler Building and the Empire State Building. The UK has also built its fair share of Deco-style architecture, including the Barker Building on High Street Kensington, as well as Eltham Palace.

Brutalism

Brutalism, like Baroque, is another marmite style; you love or you hate it. Although it is nothing like Baroque, or any other style for that matter. The Bauhaus school focused on the concept of 'simplicity' for its buildings,



Credit: Andreas Karamalikis/Unsplash

The Barbican, City of London

however, a new construction material had emerged which allowed Brutalism to take flight; concrete. Like the Romans had discovered with brick, concrete was an incredibly cheap, easy to make, and portable building material. As such, in the 1950s-1980s, with the post-war economic slump in full effect and with increased immigration due to decolonisation, many countries needed buildings for the lowest possible cost and in the quickest possible time.

Brutalism is characterised by its liberal use of concrete and its very simplistic look, with no arches or decorative stonework at all. For many, Brutalism is an apt name; it does have a rather brutal, pessimistic, and at times, ugly and depressing look. But perhaps this is the wrong way to look at it. At the time, Brutalism was the summation of economic hardship and, in some places,

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BRUTALISM WAS ART AND MODERNITY ITSELF AND IN SOME CASES WE SHOULD TREAT IT AS SUCH

oppression; this view has perverted our view of Brutalism ever since. However, for the likes of Le Corbusier, Brutalism was art and modernity itself and in some cases we should treat it as such. Stunning examples of Brutalism include Liverpool Metropolitan Cathedral, the Barbican Centre, Robarts Library in Toronto, and the City of Chandigarh purpose – built by Le Corbusier.

International, Post-Modernism, and Futurism

Developing on from the ideas of Brutalism; of 'simplicity, minimalism, and functionality', came the International style. The International style was all the rage from the 1950s to the 1990s, as the style for all functional buildings. It is highlighted by its use of reinforced concrete, metal, and sheet glass, which was a recent innovation. Most buildings you find in the financial districts of developed or developing cities are built in this style, the champion of which was Mies van der Rohe.

Post-modernism developed in the 1980s as a contrast to the international style. Many architects were frustrated by the lack of imagination and ingenuity expressed in the International style, and sought to rid the world of it. Post-modernism features eclectic mixes of architectural styles and structures that can often be hard to define, but visual examples include the Radisson Blu Astrid Hotel in Antwerp and PPG Place in Pittsburgh.

Futurism is a broad term used to describe a series of

architectural movements. Like the International style, the Futurist movement makes liberal use of exposed metalwork and sheet glass, but instead of building rigid and blocky structures, developed unique spiralling and contorted metalwork. Examples include the Pompidou Centre in Paris and the Lloyd's Building in London.

Where does architecture go from here? That is an unknowable answer as in the last decade, architectural styles have developed at such a fast pace that it is impossible to predict when and how it will evolve next. But this is, in essence, its downfall, as the fast-paced nature of today's society as well as the focus on economics has restricted the styles that can emerge today and has led to the International and Modernist styles taking a firm hold. The Post-Modernist movement gave us a glimpse, however, at what revivalist architecture looks like in a modern society, incorporating elements from many different periods. However, these revivalist elements are only fleeting in their incorporation. Are we perhaps overdue a more permanent revivalist school of architecture, or will simplicity and functionality remain the main-stays of the modern world?



Credit: Rumman Amin/Unsplash

The Lloyd's Building, the City of London

BOOKS

Book Review

A Crime in the Land of 7,000 Islands

► *Zephaniah Sole's debut novel is hard-hitting, but 7000% worth the read.*

Zanna Buckland Co-Editor-in-Chief

A Crime in the Land of 7,000 Islands follows 'Warrior' Ikigai Johnson – an FBI agent – tasked with finding the victims of a child sexual predator in order to seek justice for a local girl who has suffered at the hands of the same offender. The only obstacle to Ikigai's success: the victims live halfway around the world, on one of the islands in the Philippines.

What real-life FBI agent Zephaniah Sole offers in his debut thriller is indeed a gripping tale of perseverance, trauma, and the challenges of balancing a thirst for justice with the protection of one's own loved ones.

Sole crafts most of the novel as Ikigai's recount of

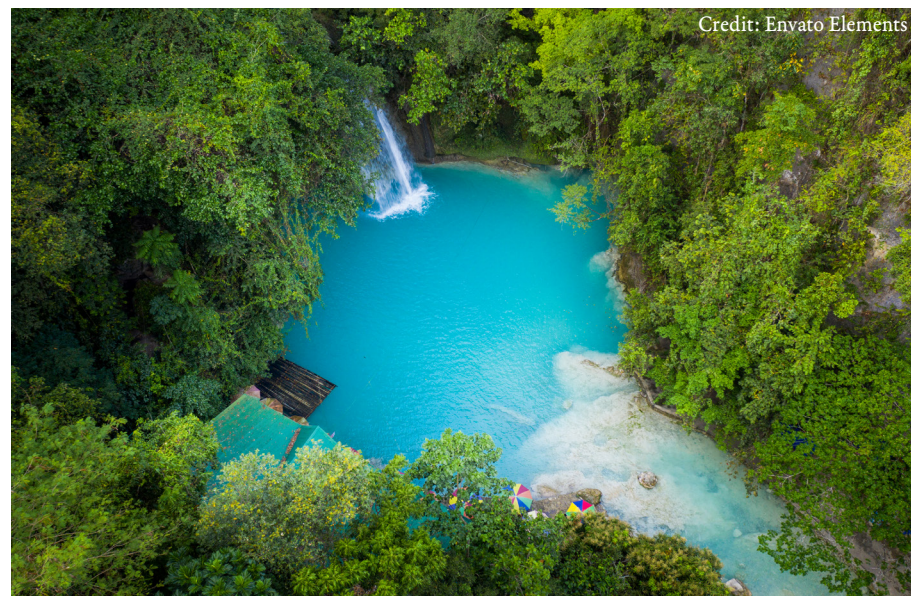
intact. A blend of mythology, magical realism, and crime drama makes for an intriguing reading experience, amplified by its frame narrative. Whereas this narrative choice might make other books confusing or messy, this one manages to stay on track. There is a wonderful seamlessness between the different branches of the novel; a change in location always occurs just when it feels like some extra intel or a change of pace is needed.

The beauty of Sole's tale lies in the interconnectedness of his characters and the layers of misinterpretation and misremembering that surrounds their recollection of events. These layers are gradually peeled away for the reader, and each revelation is well placed in the novel, feeling more like a natural gain in knowledge than a dramatic twist. Although shocking, none of these pieces of knowledge seem forced or unrealistic. That's not to say it isn't suspenseful; there are enough clues and foreshadowing to see a little of where the story is headed – just never the full picture.

There is a refreshing lack of long descriptions in the book; world-building and character illustration is done primarily through dialogue and the characters' reactions. This allows Sole to spend more time on the plot itself, and on its implications, without rushing through the action. While Ikigai's retelling of her adventure in the

Philippines is flowery in the use of such metaphorical elements as 'Crane' and 'Turtle' in place of plane and boat, 'language of the Land of the Rising Sun' meaning Japanese, and police forces in cars as 'warriors on horseback', it by no means diminishes the gravitas of the matter. Instead it encourages the reader to form their own connections and conclusions.

By the close of the novel, Sole manages to flesh out the majority of the cast, exploring their individual purpose, past experiences, and the intricacies of their relationships. It's no easy feat for an author who has decided to tackle what is arguably the most difficult topic to



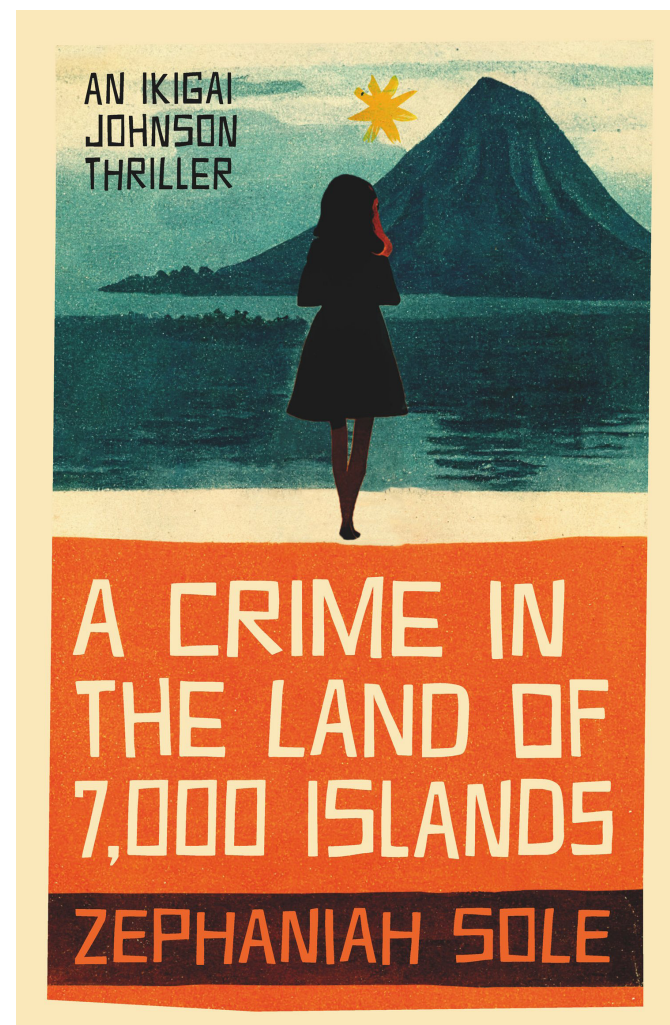
Credit: Envato Elements

A waterfall on the island of Cebu, which features prominently in the book as the home of the victims that Ikigai is sent to find.

her adventures to her 11-year-old daughter, also called Ikigai but nicknamed 'Junior'. In doing so, Sole creates a fantasy out of a serious mission, which allows him to avoid graphic detail and technical jargon. This would seem like a cop out, if not for being interspersed with 21-year-old Junior's personal mission – in the 'present day' – to find out the full truth of her mother's journey. The crimes committed are laid out plainly from the outset, with little embellishment or symbolism.

As many novels do, *A Crime in the Land of 7,000 Islands* dots around between locations and characters, but unlike most, it does a good job at keeping the flow

Edited by: ZANNA BUCKLAND



Some other titles to get stuck into over the summer:

***The Summer Book* by Tove Jansson**

***Before Your Memory Fades* by Toshikazu Kawaguchi**

***The Wind Knows My Name* by Isabel Allende**

***Yellowface* by R. F. Kuang**

***Banyan Moon* by Thao Thai**

***Vesper Flights* by Helen MacDonal**

***How To Kidnap the Rich* by Rahul Raina**

***Convenience Store Woman* by Sayaka Murata**

***Weasels in the Attic* by Hiroko Oyamada**

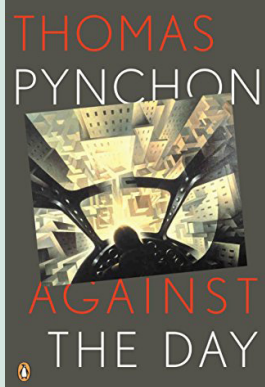
***The Cat and the City* by Nick Bradley**

See you next year!

stomach, and by no means does he tiptoe around the heavier aspects of the case. But out of all the terrible things that could have become the focal point of the tale, he has chosen to highlight that out of darkness can come the purest forms of hope and courage, and that's where the book holds its value.



Books in Brief..



Against the Day by Thomas Pynchon

Even among the range of door-stopper maximalist books that everyone knows of but doesn't read, *Against the Day* stood out to me as being particularly indulgent and infinite in its reach. It is Pynchon's reimagining of the world from 1893 to the 1920s, as he hops all over the map, reliving historical events such as the Chicago World's Fair, the collapse of the Campanile in Venice, and the Tunguska explosion, but as lived through the personalities of his comic-book characters pulled from the pulp genres of the time (westerns, cyberpunk, science fiction, and so on). The book starts off charmingly enough, introducing an airship captained by a few young boys and their talking dog, with their endearing optimism and youth, before barreling straight into a world of conspiracy and secrecy, making some none-too-subtle brushes with cosmic horror and detective noir along the way. Reading this book can be a dizzying experience – it is a never-ending well of new characters, locations, descriptions, ideas, ideologies, genres – but one that is utterly engrossing and endlessly rewarding.

The Paris Review Interviews Vol. I-IV by The Paris Review

The Paris Review is a quarterly literary magazine that has been in publication since 1953. Its 'The Art of ____' series are interviews with notable figures in literature, many of which have been transcribed and collated into these volumes. Each interview begins with a page or so of exposition, written by the interviewer, which efficiently sketches out the slight eccentricities and personalities of each interviewee. It is remarkable how much personality and individuality is apparent in each interview. The questions chosen by the interviewer are never boilerplate, and the interviewees show a strong affinity towards rambling, for which I'm grateful. You're able to get a feeling of how much deliberation and craft each writer puts into their work, and, owing to the nature of their profession, they are incredibly articulate in describing it to the reader.

Sátántangó by László Krasznahorkai (translation by George Szirtes)

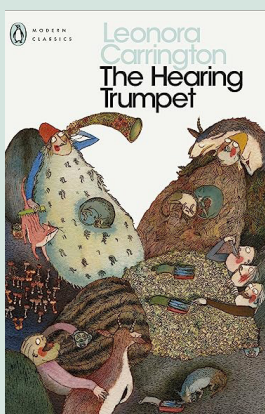
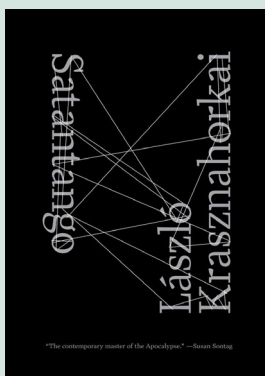
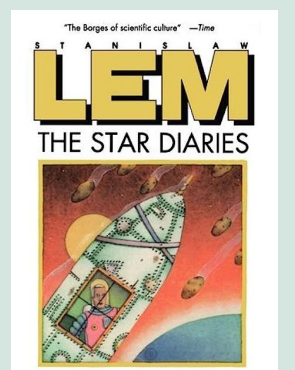
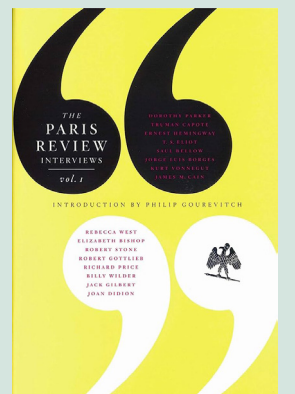
Reading *Sátántangó* is watching a foreign, black-and-white arthouse film without sound or subtitles in a pitch-black room. Set in a deteriorated Hungarian village, its inhabitants slowly become infected by a religious fervour and fanaticism at the news of a pseudo-messianic figure arriving. There is a cyclical element to this novel: time seems to be suspended, or at least pass at an unnervingly slow rate, with no particular sense of direction or momentum present, partly attributable to its clinical, hypnotic prose. Krasznahorkai's sentences are methodical and slow, often lasting up to half a page. They aren't satisfying to finish in the way, say, Proust's are, but they compliment the apocalyptic, claustrophobic, swirling narrative excellently, making for a cohesive and immersive reading experience that carries a majesty quite unique unto itself.

The Star Diaries by Stanislaw Lem

In this short-story collection of interplanetary adventures, captained by the amiable Ijon Tichy, Stanislaw Lem runs the range of what science fiction can offer, including trippy time-travel stories filled with clones of past selves, political and religious satires, and trips to galactic governments. Lem is one of the most imaginative and inventive authors in the genre, and always matches his out-there ideas with a sharp wit, love of wordplay, and a tightly wound plot. This book is a great introduction to his work, with other instalments in the series, like the psychedelic *Futurological Congress*, or the robot mayhem of *The Cyberiad*, being a good follow-up. But these books hide the more thoughtful, philosophical side of his bibliography, which pops up every so often in *The Star Diaries*, and is found more in *His Master's Voice*, *Fiasco*, or even his treatise *Summa Technologiae*. All in all, Lem is the most complete sci-fi writer I've read, in his ability to take advantage of the huge canvas that the genre offers him and wringing it for all its wonder and excitement.

The Hearing Trumpet by Leonara Carrington

Very few 92 year olds have the buoyancy or life that carries Marian Leatherby through the barmy meanderings and conspiratorial journeys in *The Hearing Trumpet*. Leonara Carrington's 224-page surrealist escapade doesn't fall prey to the common pitfalls of many of its contemporaries, maintaining a coherent and fantastically enjoyable plot that still manages to capture the off-kilter disorientation that gives the genre its character. The world Carrington creates is a fever dream, filled with cults, witches, magic, and mysticism. In many ways, it is a story of wish fulfilment for Leatherby; one that the reader vicariously lives through. She escapes the mundanity of regular elderly life into a fairy tale, one that we all wish we could inhabit, at least a little bit.











GAMES

The longevity of chess, with its origins dating back either centuries or millennia ago depending on who you ask, is a testament to the game's depth and balance. Despite the small evaluative advantage white has from move 1, there are many openings which allow black to equalise, setting up a level middlegame of pure calculation and tactics. There is something endlessly satisfying and rewarding about sitting at a board, staring at these wooden characters, imagining them moving about in your head, back and forth, back and forth, always with a new wrinkle to consider. In its adherence to its own internal rules, chess makes its players think in complete abstract strategy, which, in addition to the practically infinite possible paths each game can go down, makes for a consistently fresh yet enclosed experience – it isn't a game of constant novelty, but one of recombinations and permutations, rewarding quick pattern recognition and intuitive understanding of structure.

Watching two professional chess players play – as they shoot out 20 moves of memorised opening theory then

Credit: Wikimedia Commons



sit at their boards for hours on end – is a good summation of chess as a whole: a quiet, patient sport that accentuates the purely abstract and intellectual sides of humans, and is either utterly fascinating or soul-deestroyingly boring.



ARIES

This week your plans to lay-chest-'air go very wrong.



TAURUS

This week you floss your teeth using your flatmate's skinny little forearms.



GEMINI

This week the cucumber shortage coincides with a sharp drop in sales of lube.



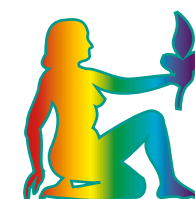
CANCER

This week you wonder "maybe Xi's born with it, maybe Xi's seized power for an unprecedented third term".



LEO

This week your boyfriend is so warm in bed that he qualifies as a heat pump. You sell him to a family of four in Bradford.



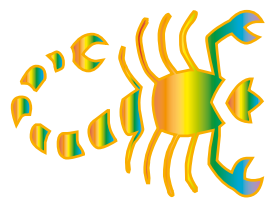
VIRGO

This week you become an under-the-covers detective to find out who farted.



LIBRA

This week you bring the woke back into your course by differentiating your equation with respect to women.



SCORPIO

This week you make a faux pas when a grieving widow describes the time after her husband's death as "intense" and you reply "like Glastonbury".



SAGITTARIUS

This week you forget to set an alarm and jog through your morning sleep.



CAPRICORN

This week you join a reggae band playing the triangle but promptly quit as is just one ting after the other.



AQUARIUS

This week you propose a sequel to ratatouille where a shrimp fries rice.



PISCES

This week a worm turns into your girlfriend.

MUSIC

Edited by: JOE RIORDAN
TARA PALCHAUDHURI

Apple Music's Creatively Named Classical Music Off-Shoot: Apple Music Classical

Our resident Arts Editor, Gilbert Jackson, and the only person with knowledge of classical music gives his honest review of Apple Music Classical.

Gilbert Jackson Music Writer

Those who are uninitiated in the realm of classical music may think of it being this one 'super-genre' of epic proportions where all music from Bach to John Williams is stored. However, the genre known as 'classical music' has many more nuances: the category can be further subdivided into time period, there is no one mood or tone, and many different performers will have different interpretations of well know pieces of music.

Suddenly classical music becomes a bureaucratic nightmare trying to find the right composer, the right performer, and the right movement.

Apple Music has recently decided to travail the tangled web of classical music by releasing a brand new shiny app, 'Apple Music Classical', where they hope novices and aficionados alike will flock to appreciate the world of classical music.

Upon opening the app, we are greeted by a 'Listen

Now' playlist selection. Unlike other music apps, this panel showcases only classical music releases and albums allowing people to stay updated with new and exciting interpretations to classical music, as well as see music by up and coming composers who have recently been published. For the classical novice, one need only scroll down to find playlists dedicated to highlighting the 'essentials' of many popular composers and also directs you to-

wards a helpful podcast to introduce you to the world of classical music.

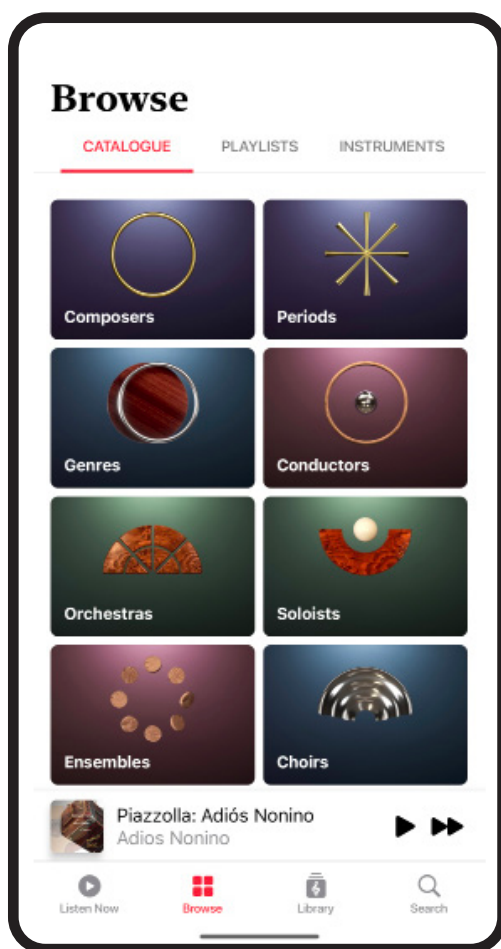
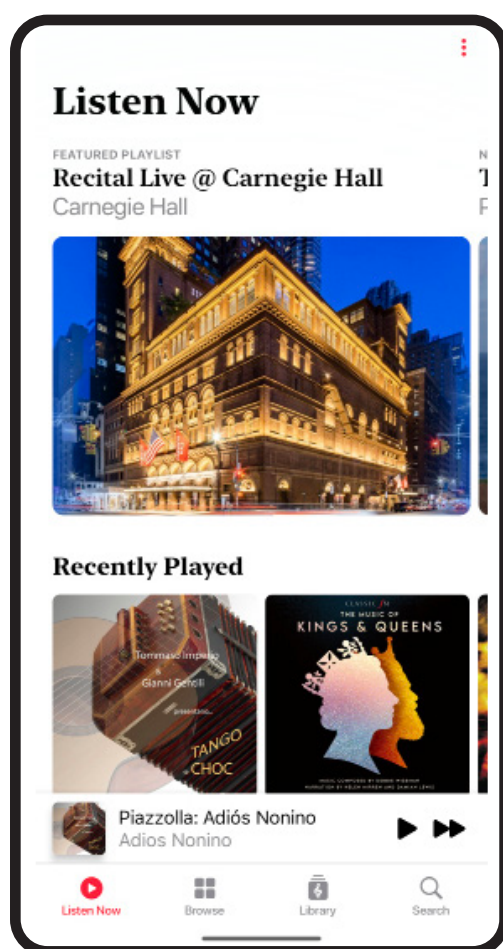
The 'Listen Now' section certainly gives the attention to detail that classical music needed but unfortunately remains a little confusing. The layout needs tidying up and organising, it might be that things like 'composer essentials' could easily be put into an entire section of their own.

Perhaps the best section is the 'Browse' section. Trying to navigate classical music, especially if one is not an expert, is a daunting task. But now Apple has devised a clear and easy to use system. The 'Browse' tab one has a user-friendly interface showing sub-headings like as 'Composers', 'Periods', 'Genres' etc. One need only look through these sections to find any of the multitudes of recordings Apple possesses, particularly since Apple has allowed one to click on a heading such as 'Film Music' and a search bar at the top allows a user to filter by composer, film title, orchestra etc. It's a wonderful idea and I think the interface is incredibly easy to use and understand.

One thing I think Apple can improve on is the addition of a heading titled

'Mood'.

A lot of new classical music listeners won't know any orchestras, composers or even names of instruments, but many new listeners will embrace new music based on the mood they feel at the time and will appreciate



music more when they can emotionally bond to a piece. Having a section which allows users to filter by mood could be a welcome addition to Apple's interface.

While Apple has attempted to simplify the search process for classical music, for the experienced listener, this is a very time consuming process. For one who knows what specific piece of music they want to listen to, using Apple's search bar results in one seeing around 50 results for the same piece based on different performers, years of release, albums and other subheadings. After clicking on a recording, one gets directed again to the album itself and only then can one finally listen to the music. It's a long drawn out process that seems unnecessary for adept listeners.

Another big issue which Apple has grossly neglected is that one cannot download any music on the app; if you had dreams of listening to Mahler on the tube you can forget it, Apple said 'no way, José'.

So the important question for many new and old classical music listeners is: is it worth moving to Apple Classical? If you're a new classical music listener, the answer is a resounding yes. While you cannot download any songs to binge listen on your way to work, Classical does allow you to navigate the messy network of classical music and appreciate and understand the vastness of it. Although inconvenient, you can only add it to your library and download it when you head to the actual Apple Music app. The interface with which Apple has laid out its music is in itself an education in classical music.

If you're an old listener the answer is a quiet no. While Apple has done a good job in finding every recording for every piece of classical music under the sun, the time it takes to just listen to the recording you want is

unnecessary. What's more, the sheer quantity presented to you actually almost dissuades you from listening to the music. An experienced listener already knows what they want and so doesn't need to go through the rigmarole of "which composer is it? Which Orchestra again? Who's the soloist?".

However the decline to move to Apple Classical is 'quiet' since there are many levels of 'experience'. A music listener who is more 'c'est la vie' with regards to the intricacies of orchestral, conductor and soloist interpretation may not be impressed with the app at all. But those who are very pedantic in regards to these specifics may find sanctuary here. After all, having Marie Callas' rendition of 'Casta Diva' be the only top option is enough to make anyone switch over to Apple Classical just to hear a recording of Renée Fleming perform it more tastefully.

Apple Classical is free for current subscribers of Apple Music.

1930-2023

Ahmad Jamal

On 16 April, at the age of 92, jazz pianist, Ahmad Jamal, passed away. He leaves behind one of the most individual and creative uses of the piano trio in jazz history, with a unique playing style that influenced the likes of Miles Davis, and found itself sampled numerous times since.

Jamal began playing the piano at 3, playing professionally at 14. He signed with jazz and blues record label, Okeh, in 1951, almost always playing in the trio format, though it was only in the latter half of the decade where the Ahmad Jamal Trio as we know it formed, with Israel Crosby on bass and Vernel Fournier on drums.

His performance in *At the Pershing: But Not For Me* from 1958 is

probably the best introduction to the trio's sound, with the first track *'But Not For Me'* highlighting much of its greatest features: Jamal's block-chord playing, his melodic lines and thematic solos, the call-and-response interplay between all three instruments, particularly with the piano and bass in this instance, the drum's off-beat accenting and assertive time keeping, all kept together by a creative arrangement of the Gershwin tune.

On the surface, the trio's music sounds like twinkly cocktail-bar jazz, and this isn't entirely wrong. Many of their hits were from live recordings at jazz clubs, with the ambient sounds of glasses clinking and polite applause. Jamal is rarely an aggressive player, smashing keys in the way Thelonious Monk or Oscar Peterson might. However, in spite of his light touch and sparse solos, Jamal is an incredibly intentional and assertive player. From the *Pershing* recording alone, listen to the voicings he uses on *'Poinciana'*, the dynamic accents that match the drums in *'Music, Music, Music'*, or the unison inventions over latin rhythms in *'Wood'yn You'*. The more you listen to his music, the more you see how well he understands the tunes he

plays and how precise his note choice is.

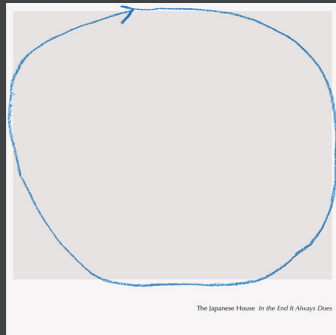
Jamal's incredible understanding of song structure shines most in his arrangements. 1959's *Jamal at the Penthouse* puts the trio next to a 15-piece orchestra. The decisions he makes for when the trio should cut out for the strings, or when the orchestra pauses for a drum break or piano glissando are all so perfect; no solo goes on for too long, giving each track a tightness and cohesion that isn't too common in jazz. In the original trio setting, his arrangements are less visible, and often almost feel spontaneous, especially with how effortlessly Jamal transitions from the head to soloing. This is at least partially attributable to his melodic and thematic approach to soloing - listen to Like *'Someone in Love'* from his *At the Blackhawk* recording - one that is distinct from, say, Coltrane's sheets of sound. Though Jamal's work can be said to be homogeneous or even boring by some, his combination of touch, precision and understanding make his arrangements a joy to listen to. While many call *The Awakening* his best, albeit for good reason, his run of live records in the late 1950s to early 1960s remain unparalleled to many an ear.



Summer Releases to Look Out For

3006

The Japanese House
In the End It Always Does



With her first EPs released in 2015 at just nineteen years old, and her debut *Good at Falling* in 2019, Amber Bain's sophomore album is highly anticipated following her four-year hiatus. With four singles currently released, she describes the shift in her music towards "mostly live/acoustic instrumentation", a noticeable change from her earlier more electronic sound that was heavy in auto-tune and thick-textured harmonies. This shift can especially be heard in the somber but delightful closing track, 'One for sorrow, two for Joni Jones'. Her dreamy pop lead single 'Boyhood' explores gender identity, and the album as a whole follows themes of falling in and out of love, with a lot of it written post breakdown of her throuple. The album features numerous collaborators such as George Daniel from The 1975, Bon Iver and Katie Gavin of MUNA, so if you are a fan of any of them, or enjoy the music of Phoebe Bridgers or boygenius, you are likely to love her work just as much as I do. Bain tweeted: "Some would say it's homophobic not to pre order the album of someone who is literally gay during pride month... I'm not saying that but some would say that", and with this release coming at the end of pride month, you should 100% give it a listen.

2306

Portugal. the Man
Chris Black Changed My Life



Portugal. the Man is a lot more than their catchy, funk-infused 2017 hit 'Feel it Still', although the more I think about it, the more I realise how unique this milestone in their discography is. But then so is their distinctly percussive collaboration with "Weird Al" Yankovic, honouring Indigenous Peoples Day. And so is their '90s hip-hop inspired single, 'Dummy', from their upcoming album, *Chris Black Changed My Life*. The thing about Portugal. the Man is that each song, known for their succinct, yet rhythmic, lyricism, always comes with a new flavour – an amalgamation of sounds spanning genres. Yes, it is alternative/indie. But it's this attention to detail that makes you subconsciously look forward to a minor (but probably entirely intentional) nuance in the second pre-chorus of a song. It's this attention to detail that makes you play it again. And again. And again.

3006

Nothing But Thieves
Dead Club City



Nothing But Thieves describes themselves as playing guitar rock with a pop sensibility; an understandably reductionist description of the music they make. Led by a soprano-trained singer, Conor Mason, the band's music influences – from the emotional depth of Jeff Buckley to Radiohead's psychedelic instrumentals – are palpable in their discography. Yet we've heard sorrow, regret, adoration, rage and disillusionment from this alternative band from Essex. And you know what the best part of it is? I can't think of a single song by these blokes that's not an absolute work of art. Giving their first concept album a listen might be the best thing you do all summer.

0707

Various Artists
The Endless Coloured Ways: The Songs of Nick Drake



Nick Drake will forever be one of my favourite artists. Passing away tragically young, before receiving any major recognition, he has since been cited as an influence to a number of greats. This collaborative and commemorative album consists of 23 covers, featuring 30 artists spanning a vast range of genres; Guy Garvey of Elbow, Bombay Bicycle Club, AURORA, Skullcrusher, Gia Margaret, Fontaines D.C. and Aldous Harding being only a handful of the artists that you'll hear on the album. With eight tracks released so far and I'd say I definitely enjoyed over half: could not stand the unbelievably cheesy cover of 'Northern Sky', but loved Let's Eat Grandma's take on 'From The Morning'. Regardless, it's really interesting to hear all the artists putting their stylistic spin on his acoustic folk classics, and I think it's a great positive that his work might reach a wider audience.

0707

Alice Phoebe Lou
Shelter



Disappearing after the tour of her fourth album in early 2022, Alice Phoebe Lou has resurfaced in releasing 'Shelter' this July. Each album is an intimate journey into her thoughts constructed into a narrative, and layered through what I can only describe as a vintage summer night filter, reading you a story that leaves you wanting more. The singles she has released so far take us on a new journey through what sounds like people pleasing. I wonder what kind of journey the final product will be.

After releasing *SCARING THE HOES* (my personal AOTY so far), I'm honestly starving for more material by these two wizards of experimental hip hop. Having both announced another two projects this year, we have much more to look forward to by the looks of it. Moreover, in the recording sessions Peggy posted on YouTube, there are many filthy samples that seem too good to have not made the cut in some future project. Fingers crossed for *SCARING THE HOES: Vol 2* maybe? Please? I've also really missed Danny Brown on his own, with the incredible feature on the new Billy Woods project, 'Year Zero', reminding me of his *Atrocity Exhibition* era – an album I've kept returning to recently. Would be amazing to see him in the driver's seat again soon.

JPEGMAFIA x Danny Brown

TBD

2807

Post Malone
Austin



Although I do like some of his stuff, Postie has never really been a go to of mine and I've been largely indifferent towards his music. From what we know so far, his new project *Austin*, however, seems to be more of a personal one. And, although I wasn't blown away by the new teaser, 'Mourning', I did think it had many likeable qualities and its vibe struck me as a lane Post could really thrive in creatively. Being the lovely and kind character that he is, I am genuinely curious to see if *Austin* can infuse his music with a bit more personality this time around.

Madlib is apparently finishing up his album with Mac Miller.
AAAAAAAAAAAAAAAAAAAA.

Madlib & Mac Miller

TBD

2807

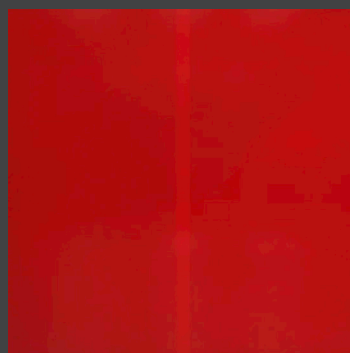
George Clanton
Ooh Rap I Ya



As one of the biggest faces of the vapourwave genre, electronic singer-songwriter George Clanton has a big cult following, with music released under a number of pseudonyms. He released the anthemic single 'Fucking Up My Life' back in 2021, a collaborative work with electronic pop artist (and wife) Neggy Gemmy, which is the epitome of his unique sound. He seems to be focused on inducing a feeling of nostalgia, which I think he executes brilliantly. His vocals are great, production is always spot on and the two other releases 'Justify Your Life' and 'I Been Young' live up to the high expectations I have for his music. With vapourwave always having been so heavily reliant on samples, Clanton has really pushed the genre forward with releases consisting of solely his own material, and I'm excited to see what more he has to offer.

1808

Genesis Owusu
Struggler



The sophomore album from the brilliant Genesis Owusu titled *Struggler* is set to come out in October 2023 and I could not be more excited to hear it. His 2021 debut record was one of my favourite releases that year, showcasing lots of style, character and poignantly crafted lyricism on topics like mental health and racism. The new teaser, 'Leaving The Light', hints at a slightly different direction from the indie guitar beats on 'Smiling With No Teeth', incorporating these super groovy synth lines coloured by Owusu's intensely charismatic delivery. From what he has shown us so far, Genesis seems to be a jack of all trades and I'm confident he will not disappoint with this creative detour. Definitely somebody you want to be keeping an eye on.

2508

Buck Meek
Haunted Mountain



Buck Meek, guitarist and backing vocalist of indie-folk-rock band Big Thief, returns with his third solo album, adding to his already expansive discography. In the press release the album is stated to be about "something bigger than love, something that doesn't challenge love exactly but stands in contrast to it. A soulfulness, or a soul-seeking fullness." The songs were written in several mountains, with released title track, co-written alongside Jolie Holland, being a love song to Mount Shasta in northern California. It's beautifully folky and joyful, and his country roots especially shine through in this track. If you've listened to and loved the projects of Big Thief and frontman of the band Adrianne Lenker, but not listened to any of Meek's solo work, then you definitely should.

Kieran Hebden has recently announced his first album release in three years. It's been a lot of fun watching him vibe out with Skrillex and Fred again.. at various stages this year, but I'm honestly craving more textured and hypnotic beats from him. The teaser for the record, 'Three Drums', is a captivatingly beautiful, ambient tune and really Four Tet at his best. Another release he dropped under his actual name, 'Darkness, Darkness', hasn't left my rotation in the past weeks either, getting me in a massive Four Tet mood right now. Can't wait.

Four Tet

TBD

2508

Charlotte Cardin
99 Nights



The Quebecer singer and songwriter has come a long way since reaching the final of *La Voix* in 2013. Having released two EPs and her debut album, as well as several singles and features since 2016, she has been very busy. Whilst her lyrics can feel cliché and her production is nothing spectacular, her powerful vocals and jazz sound are her main appeal. Hopefully, her strengths aren't offered beforehand like her previous album. However, I am still looking forward to this album, if only to hear what kind of direction she will head in with her vocal.

MUSIC

Album Review

Danny Brown and JPEGMAFIA are perhaps the two most eclectic and creative artists in experimental hip-hop today, with unique sounds that are otherwise absent in the genre. For one, Danny is as vocally distinct as it comes, unapologetically sticking to his signature yelpy tone and unusual inflections. When it comes to production and lyricism, his 2016 record, *Atrocity Exhibition*, is easily an all time favourite and arguably one of the darkest, most soul-crushing depictions of drug abuse and self-destructive spiralling. JPEGMAFIA came into the scene a bit later with his 2018 break out debut, *Veteran*, which I consider on par in terms of abrasiveness, aggression and weirdo flair. It brings a bit more of a choppy and glitchy energy to the table compared to Danny, with JPEG curating his own, instantly recognisable style over the years to come, that makes me repeatedly awestruck by his music. I, therefore, greatly anticipated their collaborative effort, *SCARING THE HOES*, especially the utter insanity which will result from Danny and Peggy coalescing over the same beats. And, in many ways, *SCARING THE HOES* is an album that embraces all the weirdest aesthetics from both artists, celebrating their often unappealing characteristics to wider audiences in a very self-aware, but nonetheless unconcerned fashion.

The title track perfectly exhibits this self-awareness (“*Stop scaring the hoers/Play that shit that’ll have them touch they toes/We don’t wanna hear that weird shit no more/What the fuck is that? Give me back my aux chord*”) and is the weirdest blend of a head-bopping banger and a wildly harsh display of inaccessibility. JPEGMAFIA chose the worst, wettest clapping sample he could possibly find and re-finessed it so fantastically, layering these great ad libs and a squealing, ear-piercing saxophone over it that, once again, you would assume is bound to ruin any track it is on. The vocals are amazingly edited too, with Peggy’s verses attacking you from different corners of the mix during the refrain, creating this sensation of being encircled and ambushed into

listening to the track. Interestingly, in the process of crafting these beats, Peggy’s decision to exclusively rely on the SP-404 sampler, a more analogue device used by previous generations of hip-hop artists, rather than your usual digital software, making the sonically detailed result all the more impressive.

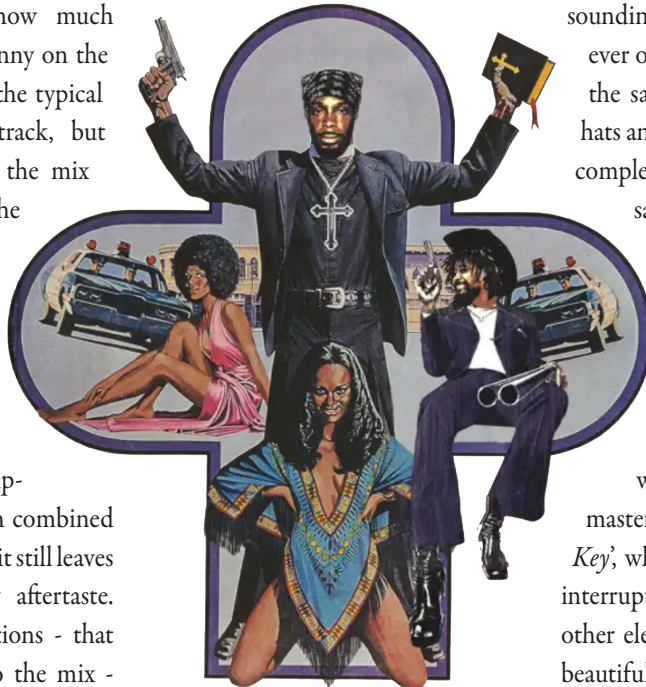
‘*Lean Beef Patty*’ left me and other fans concerned about how much space there will be for Danny on the album. The song radiates the typical glitchiness of a JPEG track, but drowns Danny’s verse in the mix near the end. Still, I love the chipmunk-esque sample, whose pitch and speed completely morphs the vocals, almost giving them a percussive quality - an interesting technique rarely seen in hip-hop production. Although combined with the entrancing horns, it still leaves behind an unsatisfactory aftertaste. The erratic beat interruptions - that Peggy usually throws into the mix - normally catch me off guard

in a great way, but the one here felt rather redundant. I do, however, very much appreciate that the track opens with a Twitter Blue diss straight out the gates (“*First off, fuck Elon Musk, eight dollars, bitch, that’s expensive*”). The track was nonetheless a solid showing, and crazy enough to maintain my excitement for the deep cuts.

In fact, the mere knowledge of the track titles was sufficient to maintain my excitement, as I’ve never in my life read such an insane assortment of names. ‘*Steppa Pig*’ is a journey that only Peggy knows how to take you on, picking you up at Leicester Square station and dropping you off at fucking Jupiter by the end of it. The excessive, disorienting synthesisers are occasionally interrupted by these bare, understated guitar and drum sections that feel like the beat stripping naked, providing you with a much needed

breather, given how maddeningly chaotic the hook is. Danny’s verse is much stronger compared to ‘*Lean Beef Patty*’ and broke any doubts I had when it comes to how well he is accommodated on the project.

‘*Burfict!*’ introduces one of the catchiest



A Very Detailed Album Review

JPEGMAFIA x Danny Brown's Alternative Rap Album, SCARING THE HOES

Matija Conic Music Writer

melodies on the project and is perhaps the shiniest example of Danny’s and Peggy’s mutual chemistry. The horns on the song are triumphant as hell, and annihilated by the drums that come in. From any other artist, such production would normally strike me as too much, but Peggy’s employment of sidechaining on the entire record is so engaging and self-aware in its excessiveness that I cannot help but love it. Danny and Peggy feel like they’re in a vicious sword fight, with Peggy’s ad libs giving a lot of life to Danny’s verses. My one complaint would be that the hook is fairly repetitive, which may impact its replay value for me in the long run, but given how remarkably well-produced it is, it really doesn’t detract from the

enjoyment too much.

The two artists then seem to part ways to an extent on ‘*Shut Yo Bitch Ass Up/Muddy Waters*’, each performing a track of their own, but nonetheless achieving impressive cohesion while they’re at it. The way that Danny’s verse lazily decays into JPEG’s portion of the track is fantastic, with Peggy sounding more cold-blooded than ever over a slowed-down version of the same beat. The sprinting high hats and piano keys on JPEG’s verse, complemented by minion vocal samples in the background, make me feel like I’m stealing the moon in a pirated copy of *Despicable Me*.

The same experimentation with singing samples was executed much more masterfully on ‘*Kingdom Hearts Key*’, where the sample is adequately interrupted and layered better with other elements to make for an oddly beautiful listening experience. The song almost feels like JPEG’s

and Danny’s take on a demented Christmas track, a vibe brought by the pretty bells in the background that run in

spite of the two going hard as ever over them. Moreover, the one feature on the album, ‘*redveil*’, does great at the back end to match their respective energies. The decision to keep the verses quieter in the mix really brings emphasis to the immersive instrumentation, doing so without necessarily taking away from is a similarly hard-hitting highlight, with many similarities to ‘*Orange Juice Jones*’ in terms of the selected sample, but once again coming through a lot cleaner and more enjoyable. Both of these tracks are absolute treats for people who fell in love with moments like ‘*HAZARD DUTY PAY!*’ from Peggy’s last album, being somewhat of a refreshing change due to these juxtapositions between lovely, melodic elements and harsh, abrasive

production.

‘*Heaven on Earth (HOE)*’ is another example of heavy and fantastically inelegant sidechaining that gives a lot of tension and life to the captivating chorus in the background. The instrumentation almost seems like its rushing to get to the end of the verse, leaving some notes behind in the process, which imparts a nervous and hypnotic quality to the track. Finally, the closer, ‘*Where Ya Get Your Coke From?*’ is a brilliantly hectic piece with arguably the most chaotic song structure, shifting between these pace-building perc sections and huge, distorted break downs that feel larger than life. Initially, the restlessness and the lack of progression did not feel too great for a closer, as the mix is injected with further madness in a rather haphazard fashion rather than reconfiguring the soundscape in an appropriate manner to wrap the album up. Still, on further listens, the outro started striking me as an utterly deranged end credits scene to a camp movie from the 70s. When viewed in this light, the aesthetics of the cut comes across as a very fitting and clever way to close an album as cinematic in its insanity as *SCARING THE HOES*. What better way to say goodbye to the listener on a project that refuses to calm down or adhere to any norms in the genre so stubbornly?

And this is really the selling point of the project to me - this disorderly collision between two wildly creative artists that are aggressively trying to stay away from any top 40 chart (although ironically, they’re literally charting right now!). Danny Brown famously spent 70k on samples for *Atrocity Exhibition*, going into debt, while JPEGMAFIA has consistently ignored any demand for pop appeal too, pursuing sound palettes few in his line of work ever dare to. To me, the album reads as a celebration of all the unconventional forms the two have cultivated over their careers and a big fuck you to any semblance of predictability hip-hop fans are used to. All I can say is - what a fucking dope listen. Hope the hoers are doing alright.

FILM & TV

Edited by: JONAH HEWETT
MIKE BUZADJI

Film Review

SPIDER-MAN: ACROSS THE SPIDER-VERSE — a much-needed revival of the superhero genre

► Film Writer Justin Macharia reviews the recently-released animated film *Spider-Man: Across the Spider-verse*.

Justin Macharia Film Writer

So far in the 2020s, the superhero genre has been suffering on the silver screen. The slew of bad superhero films released over the past few years — *Doctor Strange in the Multiverse of Madness*, a film with great potential let down by a messy plot; *Spider-Man: No Way Home*, a film that survives only on the glory of previous Spider-Man movies; and *Ant-Man and the Wasp: Quantumania*, a movie that introduces the MCU's next Big Bad by allowing him to be beaten by an army of ants — has all but killed any interest I had in the superhero genre. However, after watching *Spider-Man: Across the Spider-Verse*, my interest in the superhero genre has been revived.

Across the Spider-Verse is an action-packed, visually stunning emotional rollercoaster. The score is spectacular — each scene in the movie is perfectly equipped with excellent music that induces specific feelings in the audience. The animations and artwork are superb and exceed those of the first film. A variety of themes are presented in the movie. The protagonist, Miles Morales, is forced to grapple with questions that everyone watching the movie, at some point in their lives, has had to

grapple with as well. Will I live up to the expectations of me? How do I tackle new challenges that seem impossible to overcome? And does it make sense to follow nonsensical rules?

Some characters who starred in the prequel movie, *Spider-Man: Into the Spider-Verse*, make a return in *Across the Spider-Verse*. An interesting range of new characters is also introduced, adding life to an exciting cast. The most interesting addition to the team of

spider-people is Miguel O'Hara. Miguel is interesting primarily because he deviates from the happy-go-lucky, joke-cracking personality of most of the other spider-people. A stickler for obedience, he often clashes with the protagonist. Miguel is bent on doing whatever it takes to save as many human lives as possible, even if that means sacrificing those close to him. This puts him at odds with Miles and adds to the host of problems Miles must face, including the new supervillain, the Spot.

The Spot is a powerful villain, possessing powers far exceeding those of the protagonist's previous rival. The stakes are much higher in *Across the Spider-Verse*, and a sense of dread fills the air whenever the Spot appears on screen, saying, "I'm going to take everything from you like you took everything from me." The injection of humour into pivotal moments of the story was ill-conceived, and the relationship between the protagonist and Spider-Woman felt forced. Despite this, the movie was brilliant. Replete with twists and turns, breathtaking sequences, and gorgeous animations, *Spider-Man: Across the Spider-Verse* is a must-watch film for any fans of the superhero genre.



Film Review

LAWRENCE OF ARABIA

► Excellent acting, world-class cinematography, remarkable scope, but an underwhelming overall package nonetheless.

D'Arabian AEsert Film Writer

Hot off the heels of watching *Ant-Man and the Wasp: Quantumania*, I decided to continue my streak of experiencing film excellence by plunging myself into the expansive, sandy, phrygian world of David Lean's *Lawrence of Arabia*, released in 1962. The film adapts TE Lawrence's autobiography *Seven Pillars of Wisdom* into a 210-minute, panoramic depiction of Lawrence's journey in the Middle East during the Arab Revolt, with all its gruelling battles and tactical brilliancies. However, though I can't say I disliked *Lawrence of Arabia*, I certainly was not enamoured by it.

This puts this review in an odd spot: it's a positive review in the sense that I enjoyed watching the movie, but a negative one in the sense that, to my uncultured eyes, it wasn't, say, one of the greatest British films of all time, as the British Film Institute would claim. I left the cinema feeling somewhat underwhelmed, but having a hard time articulating why: the acting was excellent, the cinematography was world-class, the scope was remarkable, but something wasn't clicking. Having sat on it, I think my main contention is that each component of the movie — the score, the directing, the cinematography — did not adapt to the emotional arc of the story.

Without spoiling too much, the film is split into half — each side of the intermission presents a different narrative of Lawrence's life. The first half shows a charismatic, force-of-nature 'great man', the type that we love to deify and mythologise, whereas the latter crumbles that image, re-



FILM & TV

vealing a disturbed, neurotic character, unable to fill his own boots. I thought this contrast was brilliant – I did not expect a Hollywood epic from the 60s to show this level of moral ambiguity, especially because of its tendency to glorify wars and the heroes that fight in them. But my problem was that, smart as this screenwriting decision was, I could not see Lawrence's decline reflected in the film's 'text' in any meaningful way. I wanted something more along the lines of *Come and See* or *Apocalypse Now*: think about how nuts the ending to the latter is, with its silhouetted lighting and frenetic cuts, with music from The Doors to match. *Lawrence of Arabia* instead maintained a professional consistency across its runtime (in its camerawork, score, and so on), as if unaware of the plot it was depicting, which I

found to be emotionally not as persuasive. I constantly felt like I had to convince myself that a scene was effective, when I should have subconsciously felt that already.

It's a shame that *Lawrence of Arabia* didn't live up to my expectations – I really wanted to love it. But I guess we can't all be winners: not everyone can be an *Ant-Man* and the *Wasp: Quantumania*. Oh well, onwards and upwards, can't wait to see *Barbie* next, coming to a theatre near you, 124 years after Ernest Hemingway's birthday.



Film Review

THE JOYS OF THE SUMMER FLICK

► A selection of movies to watch with your gal pals, maybe a Barbie sleepover marathon?

Jynnah Ebert Film Writer

As we slowly crawl out of another dismal English winter, I urge you to look towards the rising Sun, feel its radiating warmth, bask in the gusts of wind as they glide across the golden sky, with its subtle ochre hues and soft gradients. Nothing quite like it, eh? It is the time for the ever-present summer flick, that movie you and the squad race to the cinemas to watch, unsalted-nut snack packs and Red Bull in hand, with your more unconventional delicacies hidden deep in your pockets. But the biggest quandary of all, which do you pick? Do you see *Fast and Furious 16* or *Suicide Squad 5*? *Avengers: Middlegame* or *Under the Skin*? *Mean Girls* or *Mulholland Drive 3*? No need to worry, here are some picks, hand-selected for your summer-viewing pleasure

A SEPARATION DIR. A. FARHADI

This 2011 Iranian film begins with a husband and wife in proceedings for a divorce. The wife wants the family to leave Iran for a better life, whereas the husband wants to stay to look after his father, who is suffering from Alzheimer's disease. There is no clear answer, nor is there any malice between them. The plot unwinds like a tightly wound clock, the collapse of the family slowly looming greater with a feeling of grave inevitability. The characters and their intentions are complex and

faulty, trying to navigate their way through the immense web of wants and needs, ultimately failing in a tragic but utterly human way.

ANDREI RUBLEV DIR. A. TARKOVSKY

Tarkovsky's loose biopic of the 15th-century Russian icon painter wanders around medieval Russia, at times brutal, at times allegorical, depicting the artist grappling with questions of his art and faith as he tries to search for the divine during

one of the most tumultuous times in the history. Its engagement with these omnipres-

ent themes give the

MOTHLIGHT DIR. S. BRAKHAGE & OUTER SPACE DIR. P. TSCHERKASSKY

Fracturing and reassembly lie at the heart of *Mothlight* and *Outer Space*. Brakhage's four-minute short movie runs its film tape with collected moth wings, blades of grass and flower petals attached to it, with a pace that does not allow the viewer to piece together any coherence. *Outer Space* splices and resplices footage from 1981's *The Entity*, into an arrhythmic implosion of celluloid. Both are disorientating watches, as your brain scrambles to impose some structure to it, but isn't that part of the fun.

A CHARLIE BROWN CHRISTMAS DIR. B. MELENDE

This brings back memories. Vince Guaraldi's wistful soundtrack, the light, softly coloured characters, the charmingly aged jokes. This Christmas special doesn't lose any of its flavour with age – a little entertaining escape into this perfect little bubble of a world where snow falls quietly, adults mumble like seals and Charlie Brown fights off the demons of consumerism.





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FILM & TV

SUMMER! CINEMA ALL-NIGHTER!

Jonathan Yap Imperial Cinema Vice Chair (Events)

The sun's out. Summer has arrived, and so has another important season in the film cycle: blockbuster season! With exams over and projects on its way out, Imperial Cinema invites you to join us for the best summer film event of 2023, the Imperial Cinema Summer All-Nighter! So grab your cocktails, snacks and friends, and spend a night chilling with big screen spectacle. Our team has once again curated a pristine selection of films, from the big blockbusters to the finest of British indie filmmaking, to ensure that you will have the finest experience. Oh and did I mention our 33ft silver screen, 35mm Kintona cinema projector, and Dolby Digital EX surround sound? Yes, you would be getting all that, similar to cinemas at the West End. So if you missed the Spring All-Nighter in March, this would be the perfect opportunity to experience this fundamental Imperial experience. If you had asked me to describe the theme of the film line-up this time around, I would probably struggle, considering the diversity in scope and themes displayed in these six films. With that said, a strong sense of identity and culture seems to be the central linkage between all these films. From the familiar gaze into the London streetscape to the familial bonding with a group of alien misfits, these films showcase the societal diversity that exists in this ever-globalising world. And yet the universality of the human condition transcends all boundaries and borders, and these films can speak to us even on the most personal level. So let's talk about each of them.

AT 18:30, *GUARDIANS OF THE GALAXY VOL. 3* (12A)



If *Avengers: Endgame* was the finale, *Guardians of the Galaxy Vol. 3* is the epilogue. Over the course of these three volumes, James Gunn transformed a relatively unknown band of misfits into one of the most beloved teams in the MCU. This volume sees the Guardians looking inwards, as the past comes back to haunt one of their members. The team, which has always been a bastion of friendship, trust and hope, sets out on an adventure to save them as they traverse through the ever-so-crazy parts of the universe. Deeply affecting and unexpectedly funny, this film is a must-watch for both hardcore and casual fans of the MCU.

AT 21:30, *SUZUME* (PG)



Makoto Shinkai returns to form with *Suzume*, a tale about a disaster-affected Japan and a teenager who must set out on a journey to save it using her ability to see supernatural forces. Gorgeously animated and intricately-plotted, the film continues the director's thread of nostalgic filmmaking, excelling with scenes of everyday life under the backdrop of impending chaos.

AT 00:00, *RYE LANE* (15)



A promising young voice in the British independent filmmaking scene, Raine Allen Miller made one of the finest romantic-comedies of the year so far. *Rye Lane* follows the lives of two young adults as they find themselves connecting at an exhibition of 'mouths' – I'm not kidding – after particularly bad breakups. Very witty and stylishly charming, my theatre howled into laughter every few minutes when I caught it at the BFI earlier this year.

AT 01:30, *PEARL* (15)



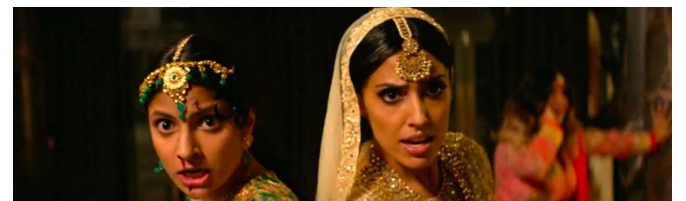
"Naurrr, Emma Stonee". Don't get it? Then check out this X-traordinary horror film in an un-X-pected franchise stemming from the A24-hit *X*. Okay, I've got to stop with the "X" puns. Mia Goth stuns in the role of an unhinged wannabe actor as temptations, repressions and ambitions collide while made to take care of her stricken father under the eyes of her overbearing mother. Undoubtedly one of the most prominent new faces in horror today, Mia Goth will return for *MaXXXine* later this year.

AT 03:40, *THE THREE MUSKETEERS: D'ARTAGNAN* (15)



Francois Civil, Eva Green, Vincent Cassel, and Vicky Krieps lead a star-studded cast of European actors in this French epic based on the classic tale of the *Three Musketeers*. A war brews in France as D'Artagnan arrives in Paris to find the attackers that left him for dead. In this lavish historical production, which is becoming increasingly rare in modern filmmaking, D'Artagnan finds himself aligning with the three musketeers of the King as they navigate the violent political conflicts.

AT 06:00, *POLITE SOCIETY* (12A)



There is no better way to end the all-nighter with a fun, action-packed film about a wedding heist. *Polite Society* follows Ria as she assembles a team to save her sister from her impending marriage. Incorporating Bollywood splendour into British wryness, the film offers a tremendous bolt of energy to viewers, with amazing choreographers and some insane martial arts sequences. Also a definite recommendation from the Chair of Imperial Cinema!

So don't forget to buy your tickets today and come along for what could be the best night of the term. Also the Summer All-Nighter is open to everyone regardless of connection to the university, so yes, your grandma could come too. Trust me, she would like *Pearl*.

DETAILS

Date: 16th June 2023

Time: 6:30pm, entry from 6:00pm

Location: Imperial Cinema,
2nd floor of the Union building

Prices: £12 for 6 films, £4 for 1 film,
£17 for 6 films and food

Buy online at <https://www.imperialcollegeunion.org/activities/a-to-z/cinema>

FOOD & TRAVEL

Edited by: CHARLOTTE PROBSTEL

Planning an Imperial expedition

► Follow Isabel Jones and her self-planned exploration to Alaska with members from Imperial.



Report

Isabel Jones Travel Writer

Imperial has an exploration board that provides funding and guidance on planning an expedition. Expeditions can range from cycling through France, or sport climbing in China to big wall climbing in Madagascar or kayaking in Georgia. They can be as crazy and ambitious as you like or stay relatively on the beaten track, just so long as the trip will push you out of your comfort limit in some way and won't put you in unmitigated danger. In this article, I will explain my experience planning an expedition to go alpine and rock climbing in Alaska. I will also talk about the expedition itself.

Part 1: The Planning

I had always been more of a follower. Friends of mine would think of some adventurous weekends or sometimes longer excursions. I would tag along, get a lift there, borrow their equipment, and laugh at all their jokes as a thank you. But as I had graduated from Imperial, I wanted to plan an adventure of my own – it was my last year of eligibility for funding from the Exploration Board (you are eligible up to one year after you graduate). So, partly inspired by the movie and book *Into the Wild*, I set my sights on heading to Alaska.

Deciding on the location and what you want to do can be relatively tricky. It can require a lot of creativity and research if you don't already have something in mind. The leader of the expedition to Bolivia, Charlotte, wanted to go bouldering somewhere in Asia, but the upcoming monsoon season could not support her wish. Therefore, someone suggested she should look into South America. She trolled through the Google search results of 'bouldering in South America' until coming across an obscure article suggesting there was a vastly unexplored bouldering location in Bolivia. She checked it out on Google Earth – it looked cool – and thus an expedition was born. In my case, I knew I wanted somewhere green and leafy



The Pika Glacier.

with big mountains. I thought about Patagonia and New Zealand until ruling them out because they would've been in the wrong season. Alaska was the next choice.

Once you have chosen the location and activity, you can go to the first step (and first anxiety) of planning the adventure: finding a team that will join you. (Solo expeditions are possible too, so you can skip this step if doing one.) For Alaska, I put out a message on the Imperial Mountaineering social media pages, outlining what I wanted to do, and the prerequisites for anyone who wanted to come. Silence followed for what probably wasn't that long, but felt like an eternity, until I eventually got some responses! I even had to turn down a few people in the end! It was mad. The initial anxiety was over and replaced with unbridled excitement.

Then came the challenging part for someone who is usually a follower: I was the one being followed! "What do I do now!?" I thought. I had done so much research by this point, carried by the wave of excitement of having my own adventure, and by the time the team had its first meeting I could answer most questions, and give good groundwork

Credit: Isabel Jones

information as to how the expedition might go. And as everyone discussed how to apply, when to apply, what you need to apply, and examples of successful applications. Luckily, it could all be found on the Exploration Board website! Just google Imperial Exploration Board. The board members are also very helpful in answering questions; their contact details can (you guessed it) be found on their website.

To draw an analogy most Imperial students could get behind, I saw planning an expedition kind of like coding. You have an end goal and a method of getting there, but as you start coding, you are met with bug after bug after bug, none of which you foresaw. It's kind of like that – problem after problem after problem. "Grrr why hadn't I thought of these things at the start?" you will think to yourself. It's a frustrating process, especially when you are balancing all the various desires of your team members. Although, then again, maybe I'm just

Credit: Isabel Jones



The team in the six-passenger plane, heading to the Pika Glacier.

what they would like to get from the trip and their expectations, we began to get more of a sense of how to proceed. They were happy. I was happy. Big excitement.

There were lots of boring logistical aspects we had to consider next, such as

bad at coding.

I won't go into the nitty gritty of the problems we faced when planning Alaska, as they are all pretty unique to what we were trying (equipment, finding routes, approaches, BEARS). If you plan

Credit: Isabel Jones



All six members ready for the mountains!

driver that would drive him from a small village in France back to the campsite, to frantically pack his belongings, and then drive him an hour or so on to Geneva airport. I made it to the airport at around 11pm wearing the same clothes I climbed in and the same sweat. Sleep became impossible, as I stressed about the other members, and tried to figure out a backup plan, as Ben had the tent! Alas he arrived just in time at around 4:30am.

an expedition you will likely have your own unique challenges when organising it. This is just a note to say you should expect them, especially if you are trying something ambitious.

What started for me as a three-week challenge – that I'd save up my holidays from work to undertake – turned into, "I'm going to quit my job and go climbing for five months and spend all my free time planning it". If you have a small two-week trip to somewhere accessible, it might consume you, so be prepared.

Part 2: The Expedition

The time spent in Alaska itself was roughly five weeks. The team's arrival was staggered, as everyone spent a stint in the Alps beforehand on the Jonathan Conville alpine preparation course.

The first day was rather delirious, and set a precedent for how the trip would ensue. Ben and I were the first to

Credit: Isabel Jones



Cozy cabin in Hatcher Pass.

arrive, and wanting to make the most of the weather in the Alps, decided to walk some routes the day before our 7am flight to Anchorage. He and his teammate had an epic time and did not get off their route until 2am. At the last minute they managed to find a taxi

After we miraculously arrived in Alaska, we travelled straight from Anchorage to a small village called Talkeetna. We ended up having dinner in that small hippy town that looked like it was straight from a great western movie – it felt like a fever dream. Jake arrived a day or two later after choosing a cheap flight that took two days with numerous layovers. The week was spent completing the planning for the expedition (by going to the rangers office, talking to mountain guides, and liaising with the air taxi), eating lots, and drinking with the locals. When the rest of the team arrived, it was a day or two of frantic preparations as we got everything ready to spend two weeks camping on the Pika glacier.

During the flight on the little plane that had only six passenger seats, my mouth hung wide open. I had never seen so many sharp and rugged granite pillars condensed in such a small place, all poking out of soft snow. It looked like a play ground for rock climbers. It was a beautifully clear day. We stepped off the plane, put our belongings on sledges, and dragged them over to where we would set up base camp a few metres from the glacier air landing strip.

It would take me much too long to write everything we did on the glacier in this article (we were there for 16 days!), but check out our trip report if you want to see what routes we climbed – and a day-by-day breakdown of what we got up to – by scanning the QR Code on the previous page. The key things that stick out for me from that time were: each peak took roughly 20 hours (time didn't matter so much in the land of the midnight sun), when we weren't

climbing we were either asleep or stuck in the tent because it was raining, and our base camp was incredibly beautiful.

And of course, how could I forget the time on the glacier when we were stuck in the tents for an extra four days, with the weather having turned so bad that the pilot couldn't come and collect us. When he did finally get us, he only had a one-hour window, otherwise we would've been stuck for another five days or so. At this point we also ran out of all the nice food, and nobody wanted to cook as it would mean getting drenched. So it was nuts for breakfast, nuts for lunch, and if we were lucky, rice and beans for dinner.

This part of the expedition will stick in my mind for a long time. The sheer beauty of the glacier meant I was in an almost constant state of awe. Also, there was the mental strain of living on it - not really from boredom or isolation - but rather the risks that constantly

Credit: Isabel Jones



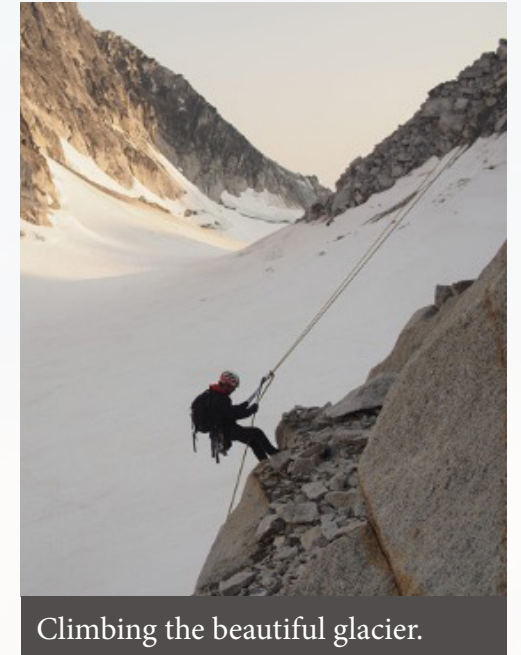
Jake finally getting to do some bouldering!

surrounded us. After completing a route, I always felt lucky when we returned to base camp. I would cherish my life a little bit more and it was always my brain, more than my body, that needed a few days of rest before venturing back out from the safety of our tents again. The glacier deteriorated more and more as we were there and by the end rock fall noises were almost constant. These noises served as reminders of the risks around us.

But we survived! And when we finally made it back to non-cravassed land, lots of rest was in order. We then wanted to go rock climbing without being surrounded by risks so set out to climb in Alaska's finest crags!

Unfortunately, the glacier wasn't the only place where the weather was bad. It was raining almost everywhere in Alaska. Fairbanks was the only dry place so we decided to brave the six-hour

Credit: Isabel Jones



Climbing the beautiful glacier.

drive and check it out. Bad idea. Worst decision I made as expedition leader. If I could describe the climbing in Fairbanks with one word it would be: Mosquito. Swarms of them! My deepest apologies to Ben, who had to spend his last few days of Alaska in Fairbanks. Still, there was a nice museum.

Things perked up after a few days in Fairbanks, as the weather was looking good in *Hatcher Pass* for a week! Really good actually. I had messaged the author of the guide book for Alaska climbing, (Kelsey Grey) for advice on whether it would be good to go when it was raining. There wasn't really anywhere to go (evidenced by the fact we went to Fairbanks), but it did mean we were now in contact with the legendary Kelsey Gray!

He was insanely friendly and we ended up climbing with him for that week. He let us stay in his cabin, taught us how to clean and bolt routes, and how to fish and smoke salmon – a fun experience. We bolted a route and did a team first ascent, naming it 'A Nightmare of Black Bears'. We actually even saw a black bear (it was terrifying).

And that was that! I am so grateful that we got to do something like this, and so proud of the team for how much we learnt and what we pulled off! Thank you to the Imperial Exploration Board for encouraging and supporting these adventures.

FOOD & TRAVEL

WAOW: it's Warsaw!

► *A place for culture-seeking historians and a place for fun in the evenings, all at the cost of a few zlotys.*

Charlotte Probstel Travel Editor

Have you noticed how most countries and cultures have some form of dumplings? In Germany, we call them Knödel, in China they have Jiaozi and Turkish people have Manti. I noticed this first when I was introduced to Poland's dumplings: pierogis. They are, as you may have guessed, small dough dumplings stuffed with potatoes, meat,

cheese, or sauerkraut. Incredibly filling and delicious, they are not too difficult to make and were the staple of our lunches for the week.

Polish food isn't designed for vegans, but change happens.

Warsaw is modern, in terms of the variety of food available. For vegans, my friend Marci recommended the following non-Polish establishments: Uki Green (Ramen), Vegan Ramen, Mango Vegan,

Maria Skłodowska Curie

My friends know that my idol is Maria Skłodowska, otherwise known as Marie Curie. She was born in Warsaw and her home is open for visitations. Her fascinating story can be explored in the center of the Old Town, where her museum is open Tuesdays to Saturdays from 12:00 to 18:00. Tickets cost between 6-11 PLN (1.15 - 2.11 GBP), but entrance is free on Tuesdays. I

standard ticket is 20 PLN (3,83 GBP). It opens at 10 am and closes at 8 pm.

Sundays are for Jesus

Most European readers will relate when I say: Sundays are closed. Poland is a Catholic country and Sundays are reserved for the family and for church. Stores are closed by law; hence opening times can be different on Sundays. Restaurants are mostly open, but not always.

Credit: Charlotte



Old town plaza.

Credit: Charlotte



Vegan sushi at Cudo.

K-Bar (Korean), Veganda (Korean fried cauliflower), MOD Donuts, Tel Aviv Urban Food, Izumi Sushi Bialy Kamien and Maka I Woda (Italian). For vegan Polish food, she recommended Zapiecek with excellent pierogi and Specjaly Regionalne for traditional food. We went to a Vietnamese restaurant - of which there are many to be found due to the prominent Vietnamese community in Warsaw. Funnily, I was given the Polish menu - probably because I am semi-blonde and ethnically white - while my boyfriend - who is Polish-Vietnamese - got the English menu. We switched our cards with laughter.

squealed like a little girl when we arrived and we spend a good two hours in the three-room exhibition.

View the city like a bird

On my to-do list of traveling, the zeroth event is always going to a viewpoint. In Warsaw, it would not take you long to guess where to go: The Palace of Science and Culture. When I visited Warsaw as a teenager, it was the most majestic building I had ever seen. It is 237m tall and is the sixth tallest building in the EU. It is open for visitors to travel to the top and to enjoy a refreshing view at a height of 114m. A single reduced ticket is 15 PLN (2,90 GBP) for students and a

Wódka means 'little water'

If I could party anywhere, I would pick Warsaw. Shot bars are adorable and the prices are very budget-friendly. The 'little water' comes in citrus or fruity flavours, milky and chocolatey flavors or are named after movies. Three little glasses of 'water' for 10 PLN (1.90 GBP) was such a bargain, that the only thing better was the conversation with Filip's friends. Of course, driving-friendly drinks are also available. After the bars, plenty of dance clubs are open to enjoy a fun night with friends. I am





Arkadia Park – busts of famous Polish scientists, politicians etc.

no expert, so best to do some research beforehand. My advice for this summer? Stay hydrated and drink lots of ‘water’. (I am absolutely joking. See the article on hydration in the Food and Travel section of this issue)

Texas coffee in the Park

One sunny day, Filip and I went to Park Arkadia (named after “Arcadia” from Greek mythology) a park filled with beautiful sculptures made of glass, stone, and ceramic. There we spotted a petite coffee cart operated by a retired couple. I couldn’t recognise the words on the menu that said, ‘soy milk’, so I whispered to Filip and asked him to translate. From experience, I learned that most Polish people, at least the older generation, do not speak

English, and this couple gave that vibe. Upon hearing my English, the woman, in a perfect American accent, the woman responded, “We have oat milk”, and I immediately struck up a conversation with them. The couple left Texas to go live in Warsaw, not only because it’s cheaper, but also because it gives them easy access to neighboring countries, where they spend their free time traveling. The cost of living in Poland is much lower than what we endure in London. The coffee was flavourful and warmed my hands on this rather cool, yet bright April morning. Their understanding of how safe and beneficial it was to retire in Poland, will forever stay in my memory.

Lastly, some useful traveling information for my dear readers.

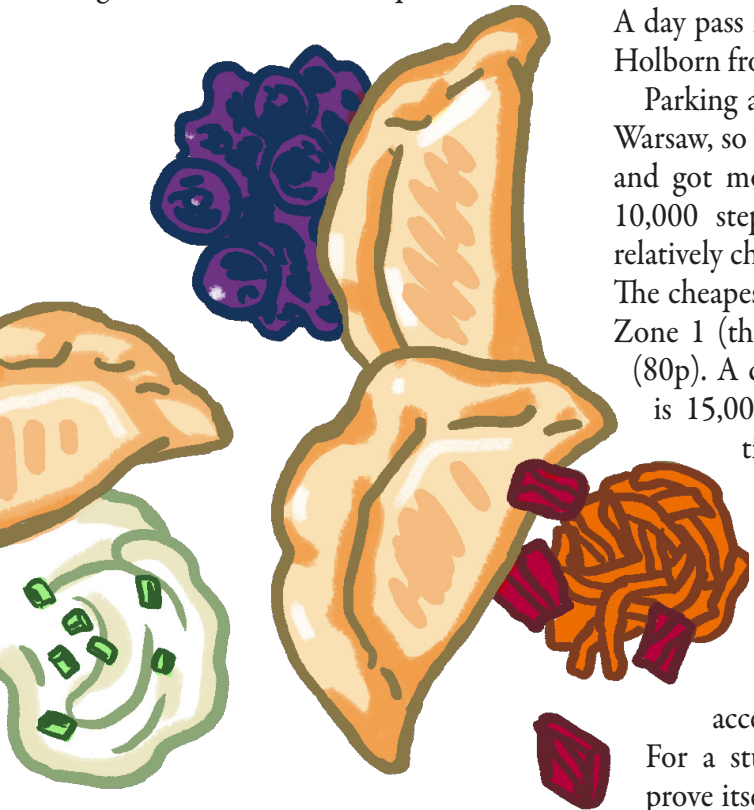
A day pass in Warsaw = a single fare to Holborn from South Kensington.

Parking and taxis are a nightmare in Warsaw, so we opted for walking all day and got more than the recommended 10,000 steps in. The tram system is relatively cheap, and it works with time. The cheapest ticket is for 75 minutes in Zone 1 (the city) and costs 4,40 PLN (80p). A day ticket for the entire city is 15,00 PLN (2.90 GBP). Its one

ticketing system for the entire bus and tram. According to Wikipedia, the network is 125km long, connects one-third of the city, and is used by half of the people.

More information is easily accessible online and is clear.

For a student budget, Warsaw will prove itself to be ideal. Remember: 1



Me in the Maria Sklodowska Museum – behind me is a picture of Pierre and Marie Curie.

Polish Zloty (PLN) is equal to 20 pence.

How do I get there?

There are no direct trains and training will not suggest any trains, however you can travel from London to Warsaw with two FLIXBUS buses, or if you manage to get to Berlin, there is a direct train from Berlin-Lichtenberg to Warsaw Central Station that takes approximately 5h 50m and is operated by Deutsche Bahn.

Are you planning a **super-duper** trip this summer and do you want to share it with Imperial?

E-mail us your story and any pictures and see your article show up in the next issues

travel.felix@imperial.ac.uk

FOOD & TRAVEL

Rosemary: the foodie, not the herb

► Meet Rosemary Sun, a graduating Imperial Business student with a love for sharing restaurants that would make your jaw drop.

Charlotte Probstel Food Editor

Business student, Aussie, mother of two adorable dogs, and most importantly, someone who appreciates fine dining, Rosemary Sun launched her TikTok account @rlyrosemary earlier in 2023 to share her amusing life as a restaurant connoisseur. She loves to try out different cuisines, posting her lunches and dinners, discussing her take-outs and in-dining experience, and sometimes gives us an insight into what life is like for a Business student – spoiler alert, it is pretty sweet. Her videos, short and efficient, not only comment on the food but also on the interior design and the kindness of the staff. She additionally vlogs her travels, her runs through Hyde Park, Paris or Barcelona, her childhood as a 1D fan and some fun party events that Imperial throws. With most videos reaching above 1,000 to 2,000 views and some above 30,000, she keeps her followers happy, posting roughly every week, sometimes twice.

Felix: Why did you start this TikTok?

Rosemary: Since I've lived in London for three years – and in these three years I've had some incredible experiences – I've never documented my experiences and it hit me earlier this year that I only have five to six months left in London. I was like, "I really need to start documenting," and so that was one reason.

Felix: How long did it take you to make your first video versus now?

Rosemary: Ummm. My first video was a 12-course classic-style restaurant in Mayfair, and I had a photo of each course and I typed out exactly what that course was. That took me about 45 minutes because it was Japanese. I don't speak Japanese and I was fact-checking letter by letter how to write each word. It took forever but now I don't make those photo posts anymore. Now I make videos with the voiceover, but I remember when I first did a voiceover video; that video took so long. I would re-record my voice about five times for each segment. Now it's a lot faster. I just say whatever is on my mind. I want to be as honest as I can because I notice that

with a lot of food related TikTok videos, people say things such as, "Save this for your next day out!" or, "You have to try this place!" that are purely used for clickbait to get more interaction even if the place is not that good. If I find a food place that is not worth the heart, I just won't post about it.

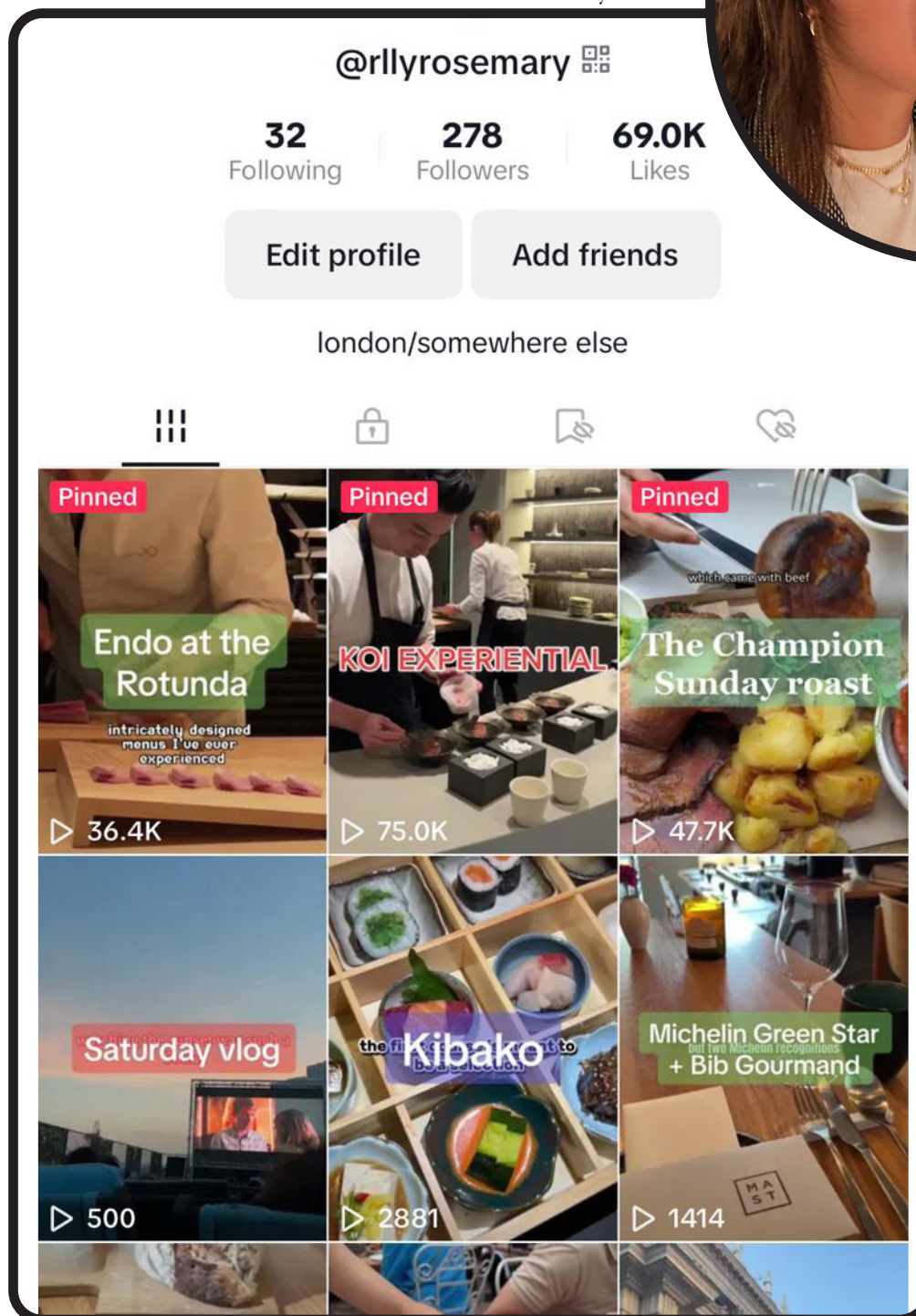
Felix: You don't want to post negative things, but then isn't it good to tell people that it's over-hyped?

Rosemary: For sure. But I also

hyped, that everyone told me to go to. Both were mediocre and I didn't feel very good after posting the videos about these two establishments, because I thought in retrospect, "It might have just been like the chef's off day". For me to make a whole video for two, three thousand people to view, telling them not to go, did not make me feel good.

Granted that my

Credit: Rosemary Sun



consider that I could have had one bad interaction and I do not want to post a bad review because of that. For example, when I was in Sydney, Australia I went to a couple of restaurants that were really

viewers actually listened to what I say but subconsciously I thought that if the place is not good, better not mention it.

Felix: What kind of cuisines do you normally post about?

Rosemary: I do enjoy fine dining, but I think that's because coming from Australia, we don't have much of the Michelin Guide-style restaurant. That just doesn't exist in Australia. Fine dining is something that was quite special to me and my family when we first moved to London and we would go quite often just for family time or something similar. Now that my parents aren't in London anymore, going there reminds me of the times I spent with

them which is quite special. Otherwise, the highlight of my day is lunch. For example, during exams the day would be very grim because my friends and I would be studying the whole day and ordering delivery for lunch was a great break from the moment and then I would make sure we would eat something great like from *The sacred sandwich shop*. I don't think I have a style yet. I think I'm still exploring.

Felix: You film many videos for lunch and dinners, but what about breakfast?

Rosemary: I'm very big on eating the same breakfast every single day and it's not changed since I've moved into my flat. If you watch my daily vlogs, you would notice it's the same things: eggs and turkey sausage.

Felix: Do you think you're going to continue this project back in Australia? (Rosemary will start her job at the Bain Office in Sydney, Australia early in 2024)

Rosemary: For sure. At least until I start working. I have until next February or March until I start working and between then I just want to explore and live my life. I think the show will be continuing. I may do a few travel vlogs.

Felix: Like when you went to Singapore?

Rosemary: Yeah.

Felix: Could you do this and work



your full-time job?

Rosemary: It doesn't take up too much time. Editing the videos probably takes half an hour to 45 minutes every night. I just need remember to film that day but otherwise it doesn't take any time.

Felix: Which post was your favourite so far?

Rosemary: Oh my God, that's hard. Let me let me look. I like the ones where I'm with friends. I can rewatched them every now and then and think "Oh my God that was such a fun day". *Rosemary scrolling through her phone.* Oh, this was really cool. There are photos my mum took of Morocco and these are from when we went to Antarctica and she took these photos and I think it's cool sharing these memories. It is not like anything I've ever had before. I'm pretty sure they use the juice from the duck when they roast it and I'm pretty sure they put that into the sauce because you can taste the strong duck umami from it, but there's

Credit: Rosemary Sun



Some special tapas from *Rincon Di Diego* in Barcelona.

also a hint of sweetness, and it's almost perfect. Then they serve it with rice and some salad.

Felix: Where is your favorite sushi place that you've been to?

Credit: Rosemary Sun



Rincon Di Diego in Barcelona, Spain.

Rosemary: I do love sushi. Here's the thing with sushi. There is a skill requirement. You have to be able to cut the sashimi right in order for the fibers to align properly so it melts properly in your mouth. But then for me, I think the more important part is how the rice is cooked, what type of rice they use, and also the actual quality of the sashimi.

The best I've had is at *The Araki*. It's incredible; they make it in front of you. Their rice is insane and I think it's the chef's wife or someone's family and they grow the rice and they give it directly to the restaurant. It's not the normal white rice because there's a bit of color to it and they serve it lukewarm, not cold or hot.

Felix: Do you like any African cuisine?

Rosemary: Yes but so far I have only eaten Moroccan food. However, since I met Hannah I've been doing a lot of Middle Eastern cuisine which I really like. There is this really good plant-based Middle Eastern restaurant called *Bubala* in Soho. The hummus and the Baba ghanoush are so good there. There are a couple of good places in Notting Hill for Middle Eastern food.

Felix: Where are some of the nicest places in London to eat well? You've mentioned Notting Hill and a lot in Mayfield.

Rosemary: Hmm, I think it depends on what type of food you want. If you just want like a quick meal then Soho is amazing because obviously, you have Chinatown for all the good Asian restaurants. If you want a bougie sit-down vibe or if you want an actual experience then you should go to Knightsbridge or Mayfair. I find the centre the worst.

Felix: Do you ever go for Chinese, Korean, or Malaysian food?

Rosemary: Yeah of course. Korean is one of my favorite cuisines but there is not much around. Also, with Korean and Chinese food it's the more people the better because with those two cuisines you want to be able to order a lot of stuff. However, when my parents were here, we would go invite a couple of friends and get a big table. At Imperial it's hard to get a massive group – I'm talking like eight to 10 people - to go eat.

Felix: What's your favorite health food place?

Rosemary: Honestly my house.

Felix: Is there anything that you've noticed about restaurants that were overhyped or can you give our readers**some advice about which things to look out for before going to a restaurant?**

Rosemary: TikTok plays a big role in this because a lot of content creators create videos that will pop off and then everyone jumps on the bandwagon. Left and right you will see people go, "Oh my God you have to go to this place". One that especially stands out for me is *Jacuzzi*, this Italian restaurant. It is owned by the Big Mama group, which is known to have over-the-top decorations, and to me, it's almost superfluous and unnecessary, but TikTok loves that because it looks so good on camera. The twist is that I find the pizza okay. Don't trust anything that you repeatedly saw on TikTok.

Credit: Rosemary Sun



Majide in Barcelona.

BUSINESS & INVESTMENT

Edited by: HARRY SCHLOTE

Faith and finance: examining the compatibility of Christianity and investment banking

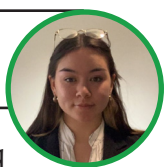


“Expulsion de los mercaderes del templo” by Cecco del Caravaggio, 1610. Jesus Cleansing the Temple. In John 2, we read about Jesus expelling the merchants from the temple, accusing them of turning it into a ‘den of thieves’ and ‘a house of trade’; a place of worship should not be used for personal gain and greed.

Many companies pride themselves on the wellbeing of employees, but an often-overlooked topic is how compatible work is with religion. In one of the most demanding sectors, investment banking, the tension between Christianity and job demands is rife.

Beatrice De Goede

Investment Society Writer



Numerous studies have confirmed that one of the challenges in major investment banks is the harsh working conditions. 80 hour working weeks are a norm in the banking community. One banker confessed that “there are days I [he] don’t get to step outside; when I don’t get to see loved ones” and according to the WSO 2022 Investment Banking Work Conditions survey, 75% of people in the industry believe long working hours negatively impact personal relationships. The challenges and struggles of working in the City, in high-flying, high-reward careers, are evident.

An article from *The Guardian* also informed the public of the tragic death of Moritz Erhardt. Having worked for 72 hours without sleeping, Moritz sadly passed away from an epileptic seizure. It is thought that the lack of sleep and inexhaustive work heightened his risk of seizure. Questions have been raised around whether the high-pressure internship culture in the city’s financial institutions makes it difficult for bank-

ers to take breaks from ‘the magic roundabout’ during the early years of their careers.

The Diocese of London has suggested that church-going in the city has risen by 25% since the financial crisis, with St Mary Lothbury church, opposite the Bank of England, having many regular attendees on a given Wednesday lunchtime. The Bible teaches that ‘everyone is equal before God’, giving people identity outside of their profession, and value as part of God’s creation. This sense of love and community can be a great distinguisher from feeling like just a ‘cog in a larger machine’.

As a Christian investment banker, it can be difficult not to be swept along by the ruthless culture and to instead ensure you live according to Biblical morals. For this it is essential to set aside time to focus on one’s faith. In a discussion with Michelle Barlow, a Christian working at the hedge fund Nephila, she highlights that “there is nothing wrong with ambition in itself”, but finds that going to lunchtime talks at St Helens and not surrounding herself just with high-flyers ensures she remains grounded in her career.

Ken Costa, a former banker at UBS and Lazard, is a prominent Christian figure on Wall Street. In his book *God at Work*, he admits to feeling a calling to banking, but also considers his workstation to be his ‘worship station’. Costa dedicates time every day to read both the *Financial Times* and the Bible, believing that the God who created and sustains the world is also present in the workplace.

During a recent finance panel held by the Imperial College Christian Union, featuring Christians working in the City, Theodora Lee McAlea shared her career journey and her own approach as a Christian. Theodora grew up in a Christian family in Singapore and moved to London to complete her Masters. She started her career as a private equity research analyst at Goldman Sachs and enjoyed the early years of her career receiving a high standard of training and embarking on various business trips. However, she later felt the “futility of work” and realized that clinging onto worldly things prevents one from seeing God at work.

The banking environment teaches bankers to strive for success and compete with others. This can be a true test for Christians working in the City, but they remember that they serve a King who saved his people in the humblest way; crucifixion. As Christians, we are here to model Christ, by being loving and kind to our neighbours, and we are reminded to put our trust in God rather than just in worldly pursuits.

Matthew 6:24 says that: ‘No one can serve two masters. People try to serve God and money, but you can’t.’ It may seem challenging to be both a Christian and an investment banker, but the Bible teaches us that it is possible to navigate the financial world so long as we put Christ at the centre of our work. We are urged by Theodora to remember that we should be living for Christ and according to his teachings in the Bible, regardless of maintaining a busy life in the City.

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SPORT & SOCIETIES

Edited by: CHARLOTTE PROBSTEL



Building a company in 120 days

► Learn how the Climate Entrepreneurs Club (CEC) created a pre-accelerator program to help students fight the climate crisis in the most supported fashion.

Credit: CEC

Charlotte Probstel Societies Editor

Day 1: 102 strangers. Day 7: 20 teams. Day 14: 20 ideas. Day 120: 13 pitches. That's how quickly and efficiently the CEC's pre-accelerator program works at Imperial.

A newborn society, built three years ago, CEC is flowering with ideas to tackle the climate crisis by empowering students to take action. Over a timeline of four months in early 2023, it supported inexperienced student teams with a small network to build their climate idea while forming robust connections with mentors and influential climate companies such as Carbon13 and Entrepreneur First (EF). With 300 members in the society, 102 applications to the program, and members from the Royal College of Art (RCA), MIT, the University of Cambridge, and other universities in the UK, it is a dynamic and diverse ecosystem. The pre-accelerator program has not only birthed incredible start-ups this season but has proven to become an initiative you will want to follow, support, or join, strengthening the CEC mission.

Meet Lina, Elliot, and Filippo

In front of me was sat Lina Tlemceni, a 2nd year Bioengineering student, current Manager and next year's Co-Chair of the CEC. She was a vital organ in the CEC's first entrepreneurship program. Climate-conscious Lina knew she wanted to help the climate ever since she was a young child. She thought the only way to help was to become a protesting activist, but was amazed to learn that she could also create change as an engineer, by creating sustainable products to be consumed by millions of people.

At CEC, she felt there was a mission-focus on fighting climate change from an entrepreneurial point of view. She loves that the CEC is at the forefront of the climate scene.

Next to her were Filippo Varini and Elliot Queisser de Stockalper, this year's Co-Chairs. Filippo felt that in his Com-



Pitch Day! (Left to right: Lina Tlemceni, Filippo Varini, Nicholas Lau, Sophia Chau, Elliot Queisser de Stockalper, Katya Foong, Abby Lam).

puting course, there was a lack of enthusiasm to join climate tech, despite it being a subject that brought him a lot of joy. Feeling that something was missing at Imperial, he co-founded the pre-accelerator program to inspire more people to join this career path of environmental tech. Elliot said he was "very very interested in the values and ethos of the society. At Imperial, we have all the tools to form societies, but we lack the ecosystem."

The ultimate program

January 17th. The day the program launched by opening applications. From that day, up until Pitch Day (31st May), the CEC organised two types of events; a bi-weekly 'Demo-Café', and workshops. The Demo-Café sessions were very casual meetings between teams and their mentors. Teams would present their work from the last two weeks and get feedback from mentors and their peers. Prizes are given for milestones (draft prototype, working prototype) and for the team which made the most

progress in those two weeks. Workshops included talks from Climate VC, Carbon13, Entrepreneur First, Imperial Enterprise Lab, Undaunted, Chicago Booth Business School, and other key partners. They would teach essential entrepreneurship skills such as 'how to build a strong pitch' or 'how to test an idea'. Retrospectively, half of the teams successfully continued to work on their start-ups. Some teams connected further with potential investors. One team connected with the CEC's partner UNICEF, and is aiming to collaborate on their product – sustainable DIY toy kits – for UNICEF's schools.

The first cohort

2023 was the first cohort to take part in the program. With a 1:1 ratio of undergraduates to postgraduates, the group was 'outstanding'. One team consisted purely of first-year students, and I applauded them for getting involved.

CyanoSkin

The winners of this year were three female postgraduate students from Im-

perial and the RCA. Their company CyanoSkin produces an algae-based paint – which is technically alive – and can be painted onto the roofs of buildings in London (and this detail made my eyes grow large) to capture carbon. Hypothetically, if every roof in London were painted, then it would "capture a



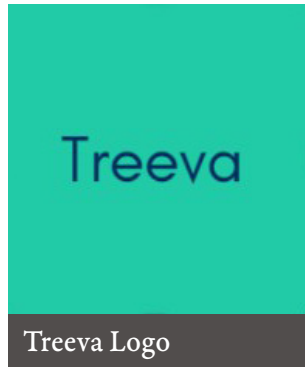
CyanoSkin's logo.

significant amount of the CO₂ that we produce". Their "creative minds" and "complementary energy" allowed them to "quickly build a prototype" and win the competition. The next step for this team is the Carbon13 Venture Launchpad.

SOCIETIES

Silver and Bronze go to Treeva and InX Tech

Treeva is an aerodynamic company with the aim “to decrease greenhouse emissions and mitigate climate change”.



Treeva Logo

They “build net-zero transport systems. Synergy provides efficient wind turbines to generate renewable energy from the turbulent airflow of passing transport.” Those who follow the Venture Catalyst Challenge (VCC) will know that Treeva also took part in that competition. As a promising team formed before the accelerator, they received some funding and added the prize to the range of prizes they had previously won. InX Tech



InX Tech Logo

on the other hand is a new company with the ambitious mission to map out the entire ocean. The argument “We have 100% maps of Mars and the Moon, but not of the planet we live on”, inspired their idea to discover the sea and the unknown below us. You can read more about their company at <https://www.inxtech.org/>.

Inspiring, Empowering, Enabling

At the start of the program, a founder of Greenfields Energy came to the CEC x Imperial Enterprise Lab Idea Challenge event. Unsure of what to do or where to go, he just joined in the conversation. Upon discovering an idea he believed in, he joined the pre-accelerator program. He was inspired by the Idea Challenge, empowered to move forward by the pre-accelerator managing team (incl. Lina), and was enabled to pitch at the end. 14 start-ups came out of the program,” Lina stated. “If only they had more support, funding, or resources. They all have massive potential in the future.”

Hop over the barriers, no need to jump

There are no barriers to entering the

program. The funding and support is there. The only problem that money cannot solve is time management. Since the pitch day was 3 days before exam season started, juggling studies and the CEC Pitch Day was stressful for many students and it “hit them really hard”. Lina would receive “so many emails asking for support.” and the support was given. The Grantham Institute and the Chicago Booth Business School were very open to organizing one-to-one calls with experts on climate tech to accelerate the learning processes.

As Lina wishes to share with you, my dear reader, “If we could do this during exam season and still survive, that means anyone can do it. Anyone can have the founder mindset. If you really really really believe in your idea, exams don’t become too important. With the right support, finding a team and idea becomes doable. Seeing Cohort 1 inspired me so much. Ever since I discovered a lot of this I have wanted to become a founder because of how much they inspire me. This program is targeting people with a lot of energy. If someone is sensitive to the climate crisis and they want to make an impact, then this program is open to them. It is beginner friendly but makes high-quality founders. You discover all this power inside you to fight the climate crisis. It is a form of activism. You can reach many more people with a company. If Facebook was a climate company,

it would make such a big change to the world. It is the impact that makes you feel proud.”

What could be improved in the future?

Filippo found that having two types of founder (new and established) in the same cohort was not ideal, as the newer founders required more time to brainstorm their ideas. Elliot found it helpful to differentiate more between the five different tracks, while Lina believed it would be useful for the cohort to be more connected with the mentors in a casual manner. Many teams were shy, and hence reluctant to reach out to mentors without a perfect and formal presentation.

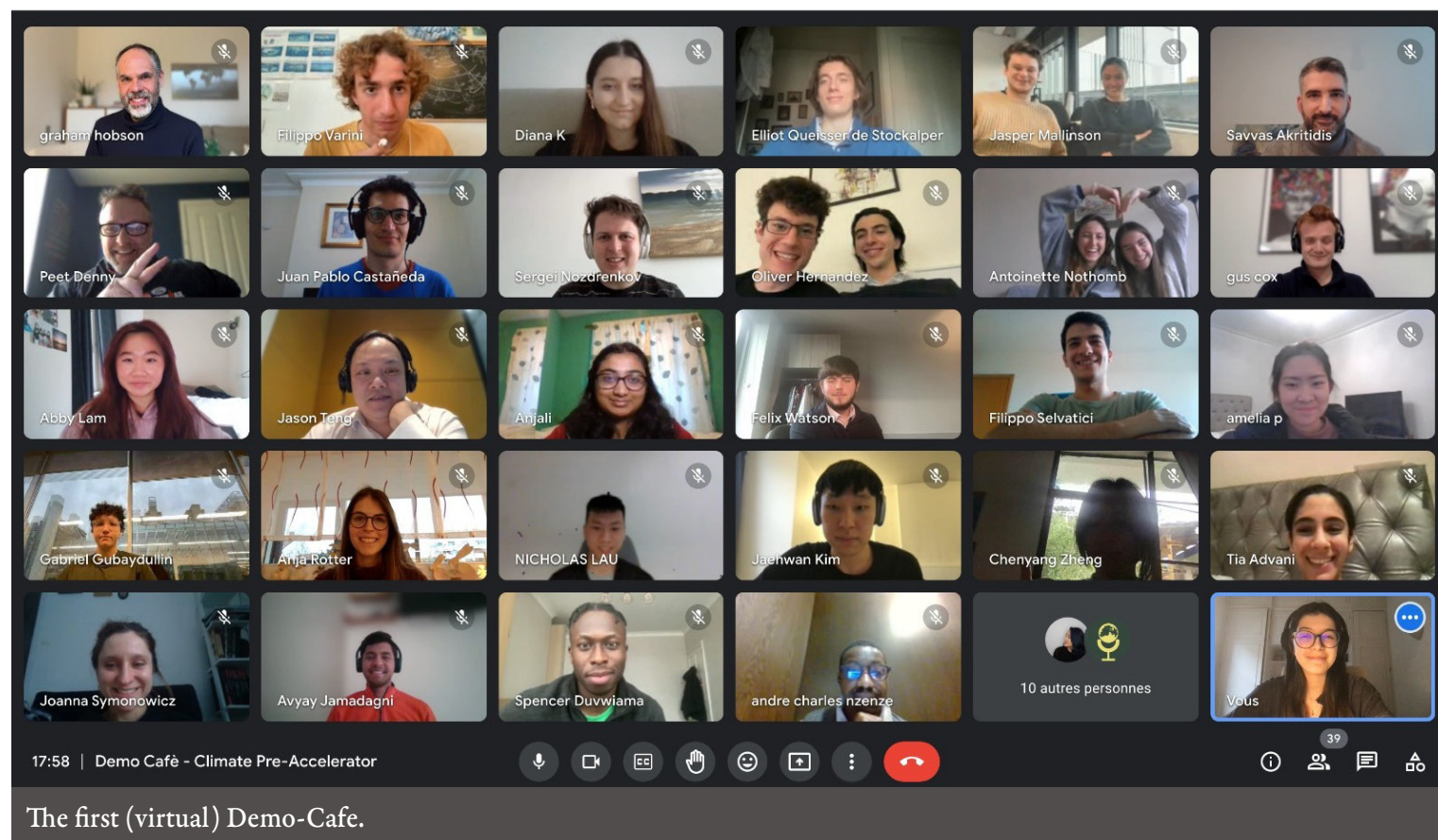
What is the future of the CEC?

Next year Lina will be the co-chair with Naman Sharma. Together they wish to reach three main goals:

1 To reach more students. To increase the number of universities taking part in the program (UCL, Oxford, Kings, etc.) and to create a larger community of founders.

2 To create a strong alumni community using the first cohort. They are convinced the alumni will make it really far, hence staying connected is important for future cohorts.

3 Maintaining a strong connection between partners, mentors, and teams. Some mentors are from EF, and people from intellectual property. Two ex-em-



The first (virtual) Demo-Café.

Credit: CEC

ployees from Google became mentors. Most mentors are just one email away.

How do I join the club?

Reach out. Join on the Union website. All the info is on their Instagram. For the pre-accelerator program, applications open a month before it starts. The website will soon have a form for you to register your email to get the latest news. If you want to support more students to build their own climate tech, please reach out, by scanning the QR code.

Remember: We are at the age to be able to take risks. You can build something. Imperial is here to support you.

Until next term,
Charlotte

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