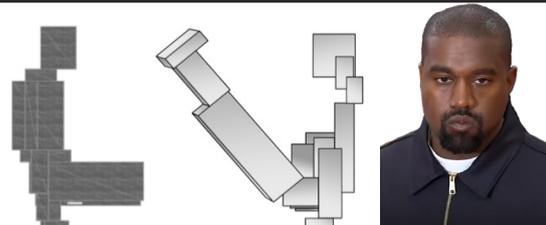


Felix



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I miss the old Kanye

ISSUE 1793

FRIDAY 18TH FEBRUARY 2022

Neo-imperialism

Imperial links to Chinese military laid bare

Sam Lovatt Editor-in-Chief

Imperial College London has received £55 million from Chinese funding sources since 2015, £5 million of which came from companies sanctioned by the US government, a *The Times* investigation has found.

The investigation into wider UK university relations with Chinese defence-linked companies found that Imperial had accepted the most money of any UK institution since 2015, the next most being the University of Cambridge at £46 million.

Imperial College alone has accepted 23% of the £240 million Chinese-sourced funding received by UK institutions since 2015.

The £5 million from US-sanctioned companies was received for research into aerospace materials, from a total of three Chinese military-linked bodies.

Imperial also topped the chart of 'top collaborators', with 945 Imperial academics having collaborated with Chinese military universities since 2015, more than any other UK institution.

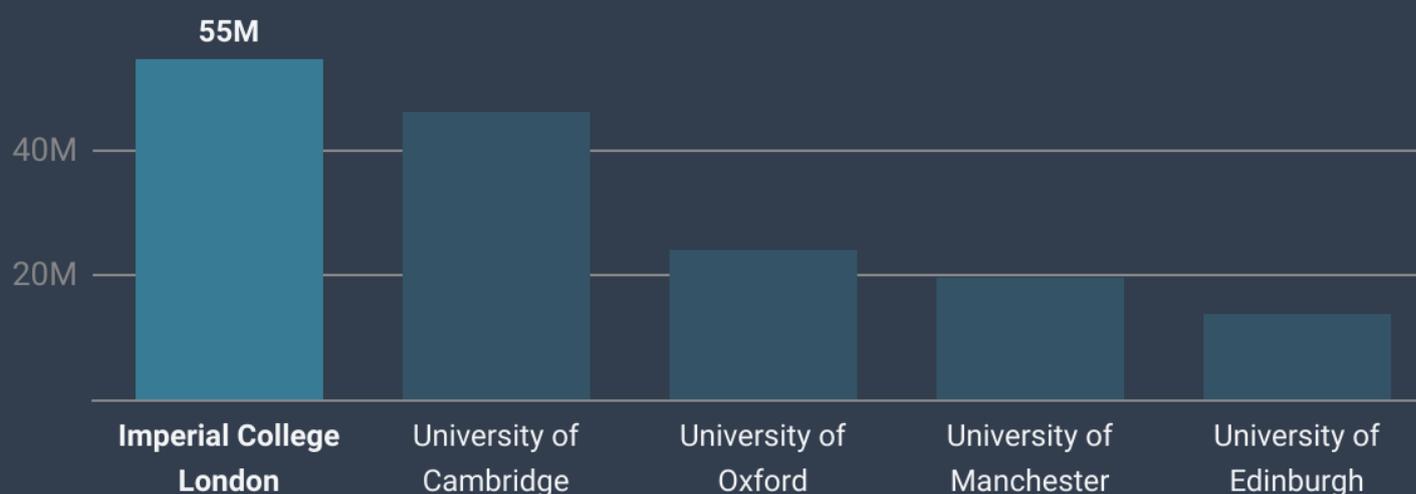
Chinese international policy specialist Martin Thorley said "The findings appear to demonstrate some sector-wide failings in terms of checks on donations and research partners". He added that collaboration on research with clear military applications demonstrated "outright recklessness by the British institutions involved".

Guidance around international research collaboration is just that, meaning no such work is illegal. Institutions are asked to determine whether their partners pose ethical

Continued on page 3...

Universities which have received the most Chinese funding since 2015

Imperial College received almost £55 million in funding. Cambridge received £46 million. Oxford received £24 million. Manchester received £20 million. Edinburgh received £14 million. Beating Oxford and Cambridge proves that we are at least the best at something.



Source: *The Times* • Created with Datawrapper

Taskforce to tackle drugs at universities established

Sam Lovatt Editor-in-Chief

A student drug-use task force has been set up by Universities UK (UUK), along with Unite Students, GuildHE and Independent HE.

The taskforce will have the goal of "set out a common approach to reduce harms from drug use and to better tackle supply". According to UUK, the task force comes "institutions are expressing concern about the impact of

student drug use with associated risks of learning and mental health problems, of damage to future job prospects, of addiction and avoidable deaths", though no evidence is given for this.

UUK adds that the work will "Produce evidence-led sector guidance", "Better understand supply of, demand for and use of drugs in the UK student population" and "Set out a clear description of the law and current policing for universities".

UUK says the work will "bring

together government departments, sector agencies, the NUS [National Union of Students], accommodation providers, public health, charities and police, with standalone research and student advisory panels".

"Later this year, UUK and Unite Students will publish a research report based on an upcoming wide-ranging student survey".

Continued on Page 4...

EDITORIAL

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Ulysses

There is a lot of chat about cancel culture at the moment, and whilst I do think it poses a problem in some circumstances, it does seem to be based on a rose-tinted perception of the past.

It was recently the 100-year anniversary of the publication of James Joyce's *Ulysses*, a book

which I've known the name of since I can remember but have never read. Looking at the odes to it over the past week was something of an eye-opener to our assumedly unrestricted past.

Following the majority of civilised history where religion ruled and blasphemy could have you beaten or thrown in jail, I think a lot of people who view cancel culture as an issue today see it as an assault on the verbal impunity of the 20th century.

Ulysses was banned in the UK for 14 years after its publication, as it included a chapter in which a character masturbates whilst looking at a girl on a beach. This doesn't even come close to what would need to be included in a film for it to be banned today, and indeed I can't think of anything horrific enough that would lead to a book being banned.

Joyce, a Dubliner, wrote the book whilst living in Paris for fear of persecution for obscenity from the Irish and English governments. The English Director of Public Prosecutions at the time described it as 'glaring obscenity and filth'. Poking fun at Catholic Mass and imperialism meant that even by Joyce's death in 1941, the Irish

government did not honour him at his funeral despite his now unequivocal contributions to Irish culture.

Whilst the above examples clearly come from a place of ingrained conservatism, today's cancel culture is often touted as being the work of a far-left mob causing people to lose their jobs or worse because the individual doesn't agree with them.

It is certainly not only a left-wing thing, in America at least. 30 US states are currently entertaining campaigns to get "objectionable" books removed from school

libraries to "protect the kids". Maybe you wouldn't want a school library to play host to the aforementioned beach wank scene, but reasoning including "objectionable language", nudity and "depictions of homosexuality" have been cited in the reasoning of some Republican legislators. The media at large have decried China within the last month for enforcing exactly the same stuff, how can legislators say this with a straight face?

Back in the UK and Nadine Dorries, perhaps the most overt culture warrior in the Cabinet, has taken a step back from complaining about woke snowflakes to say that the Online Harms bill may give the government new powers to compel streaming services to remove shows, or sections of them, which are deemed offensive. You could scarcely make the comparison between these ideas and the autocracies we're currently on the brink of war with more clear.

Military links

In the past, Felix has received a lot of flack for stories relating to the CCP and the infiltration of UK universities, and I expect much the same from this week's front page piece.

Felix stands firmly within the Imperial community and discriminates against no one. Chinese

students are an integral and valued part of this community and we hold no ill feelings towards them and condemn anyone who does. While it is easy to conflate the CCP and Chinese military with Chinese people, we stand ardently against this and hold no intention whatsoever to do so.

Statement of Intent

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

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

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

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

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

Signed by Sam Lovatt
Editor-in-Chief

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Brains for hire

or security concerns, however, the wording is relatively vague.

The guidance is dispensed by the Centre for the Protection of National Infrastructure (CPNI), a branch of MI5. The CPNI urges institutions to consider the reputational risks of such collaborations. These risks may include front page articles on the topic in said institution's student newspaper.

Research is approved on the basis of its use in civilian applications. CPNI guidance highlights the dangers of "dual use" technology, which can be developed under the guise of a civilian technology but then redeployed for military use.

An Imperial spokesperson said "These projects are fundamental scientific research, carried out with partners and collaborators around the world and research findings are shared openly. All partnerships and collaborations at Imperial undergo thorough scrutiny and are regularly reviewed, working closely and regularly with the appropriate Government departments, with our commitments to UK national security given the utmost importance".

Felix understands that Imperial College does not carry out classified research.

Some examples of sector-wide collaboration are fairly brazen. One University of Southampton professor has reportedly co-authored 18 papers with a Chinese scientist who designs warheads.

Chinese research institutions of concern usually fall within the group of Seven Sons universities, which have

Credit: Wikimedia Commons. Huanedan2060



The National University of Defence Technology, China

strong and indiscrete connections to the People's Liberation Army (PLA).

Other funding sources of concern include Huawei, the Chinese telecoms giant which Imperial has consistently received flack for in the media and from Imperial College Union. In January 2021, Imperial College Union's council voted to condemn the association of Imperial with Huawei on the grounds of human rights abuses committed against the Uyghur minority by the Chinese government, and Huawei's suspected involvement in this persecution through the development of AI technology to track Uyghurs.

Huawei remain the primary funding

body for Imperial College's Venture Catalyst challenge. The College also has £1.77 million invested in Tencent holdings, who Felix has found to have filed patents for facial recognition technology which touted improved accuracy on the identification of "minority groups, such as Uighurs... and black people". The patent also described Uighurs as "special".

Imperial received around 25% of the £20 million from companies sanctioned by the US.

On the donors of money received by Imperial from US-sanctioned Chinese companies, *The Times* said "This included the aerospace company AVIC, which supplies the Chinese air force with fighter jets, AECC, which provides military jet engines. It also included funding from the Beijing Institute for Aeronautical Materials, an AECC subsidiary from which it has received at least £2 million."

An Imperial spokesperson said that all partnerships and collaborations undergo "thorough scrutiny", were regularly reviewed, and that Imperial's commitment to UK national security was of the "utmost importance".

A 2019 Foreign Affairs Committee (FAC) report titled 'A cautious embrace: defending democracy in the age of autocracies' commented on the influence of international money on UK research. The committee stated that some UK institutions are "reluctant to respond to allegations of influence due

to their reliance on income from student recruitment and research grants".

Imperial College is particularly poorly placed to suffer from a withdrawal of Chinese student recruitment, with Chinese students accounting for 23.4% of the total in 2019/20. Imperial are far from the university most reliant on Chinese tuition fees, with UCL apparently on top with 11,200 Chinese students, compared to Imperial's roughly 4,660.

In 2019, the government published a white paper titled "International Education Strategy", in which the case for a whole government approach to boosting the UK higher education sector on the global stage is made. That being said, the FAC noted that the government's international education strategy involves the Department for Education and the Department for International Trade, but not the Foreign Office. It adds that China is explicitly mentioned over 20 times in the white paper, however none of these mentions are related to intellectual security.

According to *The Times*, "Researchers coming to study at UK universities on dual-use technology must be vetted if they are not from close allies. Research is subject to export controls, and the government can also intervene in intellectual property acquisitions under the National Security and Investment Act". Concerns have been raised by the stark increase in the number of collaborations between UK and Chinese

Credit: Imperial College London



NEWS

military scientists, which suggests to some that the government is not doing enough to protect against supporting the PLA.

The Times notes specific examples of collaboration between UK scientists and Chinese universities that have caused concern, one being consistent collaboration between a University of Birmingham optics specialist and academics at the National University of Defence Technology, described as China's "primary defence research academy". The optics specialist is not named but is said to have been part of the team who demonstrated the world's first 'invisibility cloak'. A 2011 paper published in *Nature* by Chen et al. makes such a claim and is likely co-authored by the academic in question. This paper is also co-authored by Imperial

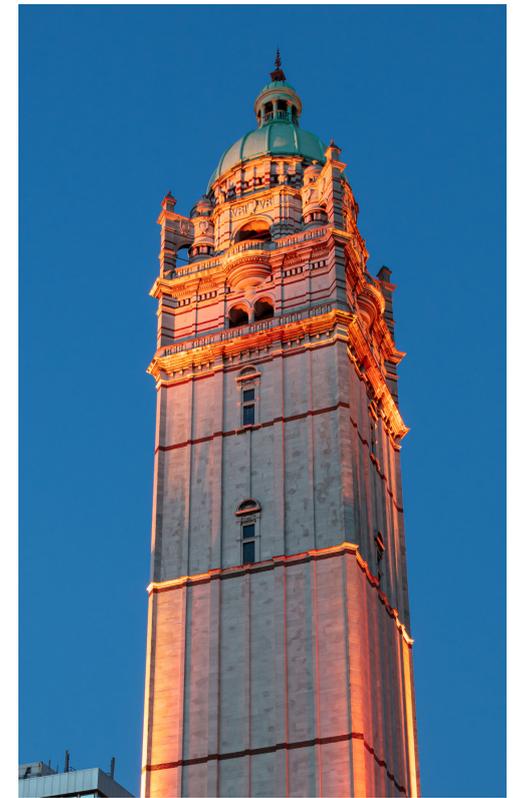
Professor Sir John Pendry, further highlighting Imperial's collaboration, be it intentional or otherwise, with bodies linked to the Chinese military.

Involvement of Chinese companies in international development has been a contentious issue for many Western countries since the announcement of the 'Military-civil fusion' (MCF) initiative. The US state department describes this as an 'aggressive' strategy that involves 'diverting the world's cutting-edge technologies – including through theft – in order to achieve military dominance', though no evidence of this is provided.

MCF constitutes the dissolution of the barrier between civilian and commercial research and the Chinese military. This means that research and data held by Chinese companies

can be accessed by the CCP and the PLA whenever it is deemed necessary. As such, dealings with China-based companies are only slightly removed from dealings with the CCP itself.

The UK government dropped Huawei as a partner in developing the UK's 5G network in 2020, with all Huawei equipment said to be removed from UK infrastructure by 2027.



Drug taskforce

...continued from page 1

Incidents of drug misuse at Imperial College have previously been dealt with as an internal matter, in some instances.

The taskforce will be chaired by Middlesex University London Vice Chancellor Nic Beech, and will receive special advice from experts including Professor Dame Carol Black.

Professor Black recently published a Review of Drugs, between February 2020 and July 2021 which outlined the realities of drug use in the UK. As many as 3 million people took drugs in the UK in 2019, with 300,000 taking opiates and crack cocaine. 27,000 children identify as gang members in the UK and saturated city markets have led to increasing activity from county lines gangs. The cost of drugs to society is estimated to be around £19 billion per year. This is similar to the costs associated with alcohol.

The report estimates that 86% of the cost of drugs to society comes from extremely problematic heroin and crack cocaine use. Only around 10% of UK drug users ever use these drugs.

That being said, recreational drug use by young people appears to be rising. A five-fold increase in deaths related to cocaine use has been observed since 2012, now making up 1 in 7 drug-related

deaths in the UK. This rise in cocaine use is "driven by white males aged under 30".

Drug deaths in the UK reached 4,561 in 2020, with men more than two times as likely to die from drug toxicity than women. 2,996 of these deaths were related to drug misuse.

The UK cannabis market is reported to include 2.5 million users, 10% of which use the drug daily. The report highlights the negative effects of cannabis, including "psychological and respiratory disorders, particularly given recent increases in potency". It also highlights involvement of human trafficking within international cannabis markets, where Vietnamese nationals are brought over and forced to work on UK cannabis farms.



The report heard anecdotal evidence of county lines gangs setting up at universities.

According to the Office for National Statistics (ONS), drug use among university students fell from 30% of students using in 2002 to 16% in 2013, with a rise back to 21% between 2013 and 2020. Drug use today remains reportedly 9 percentage points below 2002, however the ONS recognises that student drug use data is fairly unreliable due to respondents' propensity to respond dishonestly to questions on the topic.

In Autumn 2020, three university students and a man died in a drug-related incident near Newcastle University, reported the BBC. Police said ketamine and MDMA may have played a factor

in the deaths, but at the time said it was too early to comment on whether a "bad batch" of drugs had been involved. Felix could not find any updates to this story.

A UCL student died of an overdose after a long-standing battle with addiction in 2019. A Brunel university student died of a drug overdose in November 2020.

All the above incidents have occurred in private residences, rather than in a club where drugs are frequently taken. Professor Fiona Measham told the BBC she believed that lockdown restrictions leading to nightclubs being closed had removed a "safety net" for when young people take illicit drugs. "Nightclubs often have paramedics, they have harm-reduction services and they have security staff that help keep people safe".

In 2017 *The Tab* reported on the number of drug users at each university in the UK. Variation was large with large majorities of students having taken certain drugs at certain universities. 82% of University of the West of England students had taken laughing gas, compared with just 16% of University of Belfast students.

The *Tab* article did not mention use of more serious and costly drugs, such as heroin and crack cocaine.

Imperial College is not mentioned on any of the lists published by *The Tab*.

...in the world this week

Andrew settles out of court with Virginia Giuffre

Prince Andrew and Virginia Giuffre have agreed an out-of-court settlement over a civil case brought by Giuffre to an American court. Giuffre alleged that Andrew had sexually assaulted her on three occasions, at three different locations around the world, when she was 17 years old. Andrew denies all allegations. The Telegraph reports that the settlement is for over £12 million, and that the Queen will help finance some of it. Andrew was a known associate of the convicted pedophile Jeffrey Epstein, and a photo often accompanying articles on the Giuffre court case shows Andrew and Giuffre in the presence of Epstein's convicted associate Ghislaine Maxwell.

Russia and Ukraine remain dangerously close to war

At the time of writing, Russia has not yet invaded Ukraine, however tensions between the two countries are at their highest after weeks of build-up. Russia has stationed as many as 130,000 troops, along with ample military equipment, along its border with Ukraine. President Putin has claimed he has no intention of invading Ukraine and has withdrawn some Russian troops from the border. This move has been decried by Ukraine and its allies as a faux-retreat, as withdrawals consist only of personnel and redeployment would take only a matter of hours. British Foreign Secretary Liz Truss has voiced concern that Russia will conduct a 'false flag' event as an excuse to invade.



Severe mudslides leave at least 44 dead

Heavy rains have caused a spate of mudslides in Brazil's Rio de Janeiro state, leaving at least 44 people dead. There have been reports of search parties finding only items of clothing when looking for missing people. The same area experienced around 900 deaths due to heavy rainfall in 2011. The state's governor said that the military have already been mobilised and that heavy machinery will be used to excavate the areas buried by the mudslides.

Human rights lawyers attempt to bring war crimes cases against Syrian and Iranian officials

In a historic first, human rights lawyers are launching a bid to bring Iranian and Syrian officials to the International Criminal Court for alleged war crimes. Sunni Muslims who opposed the Assad regime and Iran-backed militia groups are among the victims of the alleged abuses, many of whom were forced to flee to neighbouring Jordan. The UN has been unable to make progress on the issue of crimes in Syria due to the possibility of a Russian veto hampering proceedings.

... in this issue's year (1793)

CHINA

The Macartney Mission occurs, marking the first British diplomatic mission to China

LIBYA

The Tripolitanian civil war begins

CANADA

The Act Against Slavery is passed

INDIA

The Cotiate war begins, fought between the Cotite (modern day Kerala) king and the British East India Company

FRANCE

The Reign of Terror begins. The First Republic is founded, followed by a series of bloody massacres and public executions

THE UNITED STATES

The cotton "gin" (engine) is invented by Eli Whitney, leading to a resurgence of slavery in the south of the USA

Could AI help rescue coastal dead zones?

► *Excess fertiliser is choking our waterways but help could be on its way through low-cost new developments.*

Cara Burke Science Editor

Half of the global population is supported by nitrogen fertiliser. Their development and use in the Green Revolution hugely increased crop yields, but now, across the globe, only 35% of those applied are used by harvested crops. The excess fertiliser amounts to 75 million tonnes annually and has devastating consequences on the environment. Nitrogen sensors could allow growers to fine-tune the application of nitrogen fertilisers to be applied at the optimum time and quantity.

Overfertilisation has rendered 12% of once-arable land unusable. Fertiliser runs off into waterways, where nitrogen, which is essential for plant growth and often in limited quantities, allows plants such as algae to grow exponentially. Bacteria can then feed on this algae and consume the water's oxygen, creating the dramatically named "dead zones", of which there are now over 500 identified in coastal areas. Furthermore, as the oxygen runs out, bacteria turn to nitrogen compounds instead, and consume their friends to release nitrous oxide - a greenhouse gas 300 times more potent than carbon dioxide.

Growers are caught in a dilemma: too

much fertiliser and the environment and their wallets suffer; too little and their crop yields may diminish. New sensors developed by researchers at Imperial

“

ACROSS THE GLOBE ONLY 35% OF (NITROGEN FERTILISERS) APPLIED ARE USED BY HARVESTED CROPS

College London monitor the soil for ammonium, pH, and conductivity. They combine this data with weather data and application time using machine learning to predict soil nitrogen levels over the following 12 days. The ammonium data can accurately predict nitrogen uptake by plants (microbes convert ammonia into nitrates, which plants can absorb). According to lead researcher Dr Max Grell, this technology should empower growers by allowing them to fine-tune

Photo credits: Nilfanion, CC-BY-SA-4.0



Photo credits: Wikimedia Commons, NASA Earth Observatory



The algal bloom in Lake Erie in 2011 could be viewed from above

fertilisation to the specific needs of the soil.

Techniques are advancing beyond soil nutrient measurement and even beyond this world, quite literally. A research team at the University of Illinois recently published their findings from a novel experiment. They flew a plane, equipped with powerful hyperspectral sensors, over a corn crop three times. The sensors were designed to pick up certain infrared and far-red light radiation, the type emitted by leaves under nutrient stress. Their sensors were consequently able to estimate the nitrogen content of the plants themselves, with an impressive 85% accuracy. This is a leap forward from the lower-resolution satellite techniques. However, satellites still have a role as they could be equipped with hyperspectral sensors, which would allow growers to determine the nutrient status of huge areas of crops at the start of the growing season.

Space missions and soaring profits?

Testing nitrogen content in soils and crops has the potential to significantly raise profits, but results have so far been inconsistent. Measuring soil nitrogen is often a lengthy and costly process that requires samples to be sent to a lab. By the time the information gets to the growers, the soil nitrogen content is more than likely to have changed. Measuring crop nutrient status has either required farmers to painstakingly "scan" crop leaves or rely on low-resolution satellite pictures. But better techniques will soon be on the market: low-cost soil sensors should be available for commercialisation within 3-5 years, and NASA is already planning to send hyperspectral sensors into space. The market size for agricultural sensors is estimated to grow from \$1.55 billion in 2021 to \$3.7 billion by 2028, and expand at a compound annual growth rate (CAGR - the mean annual growth rate of an investment over time) of 13.6%. With innovations such as these, there's hope we could soon see life return to our dead zones.

Two novel approaches to cancer may bring us closer to the cure

► *The cancer swamp theory uses ecology to study cancer, and cancer vaccines could prevent the disease entirely.*

Wang Guo Science Writer

Cancer killed close to 10 million people in 2020. Despite the treatments available such as chemotherapy and the massive investment in research on cancer, an all-encompassing cure has not been found yet. However, two novel approaches to understanding and fighting cancer could help light the path towards a cancer-free world.

Dr Kenneth J. Pienta is pioneer in the development of the cancer swamp theory. Pienta analyses cancer from an ecological perspective, characterising it as an invasive species that alters the surrounding environment. The different cells of the body would be the local plants and animals, while the space would be a specific part of tissue instead of biomes such as cabanas or jungles. Invasive species are species that have been introduced to a new environment, and are proliferating exponentially in a way that is detrimental to the ecosystem. They have two key characteristics: a very high reproductive rate and the ability to adapt to a changing environment. In all healthy ecosystems, there is a constant flow and cycling of nutrients. Small disturbances of the natural order of ecosystems make species

more resistant, like the immune system after facing an infection, provided that the disturbance is not too much to withstand results in permanent damage.

Eutrophication is the nutrient enrichment of an ecosystem. If done slowly, eutrophication can be positive for the ecosystem, guaranteeing its perpetuity and increasing biodiversity. On the other hand, rapid eutrophication in aquatic ecosystems is worse than a massive fire in a forest. A typical example of the negative effects of eutrophication is algae blooms. Fertilisers that are applied to crops can end up in rivers and oceans. They suffer abrupt increases in the concentrations of nitrogen and phosphorus, which are all limiting factors for algae growth. Consequently, algae start to duplicate massively, consuming massive amounts of oxygen and food in turn. The rest of the organisms such as fish and crustaceans die due to the lack of resources. Algae blooms do not end well even for the algae. As the algae have indirectly killed the other living organisms, the nutritional cycle is broken and there are no nutrient suppliers anymore. Thus, the algae eventually die and no living being is left. It is the same story in cancer development. In the case of can-

cer, as the abnormal growth is caused by the cancerous cells and not an external factor like the case of algae bloom, we call it autoeutrophication. Cancer cells are ecosystem engineers, capable of changing the cyclical flow of nutrients to a linear one, in which they receive all the resources. Due to the defective genetic material of cancer cells, these have uncontrollable cell growth, multiplying rapidly to huge numbers. They consume all available oxygen, creating a hypoxic environment. In response to the low levels of oxygen, cancer cells change their metabolism and begin anabolically (without need for oxygen) consuming glucose, releasing lactic acid that increases the acidity of the environment. Also, cancer cells take up all the glucose and other essential nutrients, not leaving anything to the rest of the cells, making them 'asphyxiate' and 'starve' to death. This ultra-toxic environment is deadly even for the cancer cells. These undergo a process of natural selection, in which only the fittest (and hence most lethal) cancer cells will survive, prepared to spread their kingdom of horror to other tissues of the body.

Prevention ecology focuses on solving the environmental damage caused by human activity. This includes taking active actions like cleaning the lake that caused the algae bloom. The oncological equivalent would be extracting the tumour. However, the best way to cure a malady is to prevent it. In ecology, this would be called conservation: protecting the ecosystems by creating rules and protected areas. In cancer, the "conservation" would be having a healthy lifestyle such as sleeping 8 hours or doing exercise. Another thing, more innovative, is cancer vaccines.

How do vaccines work? Vaccines contain weakened or dead pathogens that are inoculated to the person - this triggers a response of the immune system that destroys the weakened pathogen. The immune system will 'remember' the traits of this pathogen. In the future, when the real pathogen tries to invade the

Photo credits:
Felix Andrews, CC-BY-SA-3.0

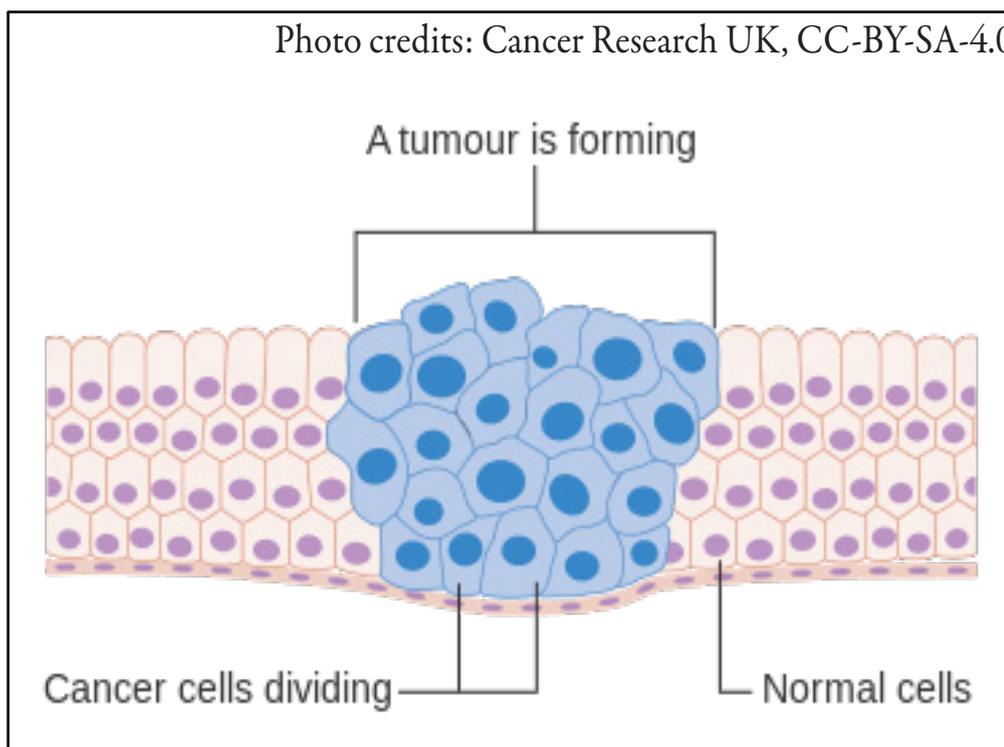


The algal bloom in this river covers it in green!

body, the immune system will be able to react more effectively. Vaccines are kind of 'training' the immune system – like doing a mock exam to be better prepared for the real one. Cancer vaccines should be able to prevent us from contracting cancer in the future. Although cancer vaccines are currently used to complement other therapies, a cancer vaccine for the whole population is still not developed yet because cancerous cells have multiple mechanisms to elude the immune system.

Conventional cancer treatments such as chemotherapy or radiotherapy are extreme and usually cause permanent damage to the patient. There is a growing interest in cancer vaccines and immunotherapy in general because they are less invasive, but are more complicated to develop.

Photo credits: Cancer Research UK, CC-BY-SA-4.0



Cancer cells dividing to form a tumour, in amongst normal cells

SCIENCE

This week in Science...

FROM IMPERIAL

Omicron infections plagued England in December 2021

Imperial and Ipsos MORI's ongoing REACT coronavirus monitoring program found a rapid increase in COVID-19 infections in the UK during December 2021, which was concurrent with the rapid spread of Omicron, both within the UK and internationally. Infection rates varied across the country, with the highest rates occurring in London, where the R-number was estimated to be 1.62 in December. The results came from analysis of swab tests taken at home by over 97,000 participants, between 23rd November and 14th December. Adults who had received a booster were three to four times less likely to be infected than adults who had had two doses.

Watch out! Robber flies on the hunt

Researchers have discovered how robber flies avoid obstacles as they hunt down prey. They wait in ambush for their prey and feed on other insects. The scientists investigated how the flies navigate while flying towards a target, by placing large objects in the insects' flight paths. Because of its small brain size, the robber fly relies on much simpler navigation systems than humans and other mammals. It uses two simple navigation systems. The first is called "pure proportional navigation", which allows them to track their prey, and the second is a simple obstacle avoidance algorithm. Combining the two has allowed the robber fly to successfully chase prey at high speeds. "The reaction speed of these flies is an order of magnitude faster than ours," said Dr Samuel Fabian, lead author of the study. The hope is that understanding how small organisms make such decisions can help inspire the design of simple, light aerial drones.

FROM AROUND THE WORLD...

Hmmm yummy! Deep-sea arctic sponges munch on fossils

A colony of deep-sea sponges, located between 700 and 1000 metres down in the central Arctic Ocean, have been found to be snacking on the fossilised bed on which they lie. Sponges are filter feeders, but at those depths there is very little current. The colony is placed on a bed of fossilised life between 2,000 and 3,000 years old. Carbon isotopes in the sponge tissue closely matched those of the dead matter, which suggests the animals are consuming it. Microbes that live within the sponges have been found to have enzymes capable of breaking down the fossils into consumable products. Sponges are not very mobile, but can slowly move using spiky spiracles to get around the sea bed to find more food.

Climate change causing increased plant growth in Antarctica

Plant growth in Antarctica is accelerating as a result of climate warming. There are only two native flowering plants in Antarctica, *Deschampsia antarctica* and *Colobanthus quitensis*. Over a period of ten years, from 2009 to 2019, the scientists recorded the growth of these plants on sites on Signy Island, a small island in the South Orkney Islands of Antarctica. They compared their observations with similar studies at the same sites over the past 50 years, and found that the growth rate and population density of the plants had both increased with time. Peter Convey, a member of the team and a scientist at the British Antarctic Survey, said, "The most novel feature of this is not the idea that something is growing faster. It's that we think we're starting to see what is almost like a step change or a tipping point." There are fears that the increase in temperature could allow invasive species to colonise the region, and outcompete native plants, fundamentally altering the ecosystem of Antarctica.

The Government vs Encryption

Shrey Bohra Science Writer

Over the last month, the Government has rolled out a marketing barrage under its #NoPlaceToHide campaign. Funded by £500,000 of public funds and managed by the Conservatives' favourite PR firm M&C Saatchi, the programme sees the Home Office partner with charities and law enforcement, targeting the roll-out of end-to-end encryption (E2EE) across social media.

In 2014, former defence contractor Edward Snowden leaked over 1.7 million classified intelligence files to investigative journalists. The documents revealed how intelligence agencies in the Five Eyes alliance – comprising of the USA, the UK, Canada, Australia, and New Zealand – gathered massive amounts of data indiscriminately, from people around the world. American tech companies, including Apple, Google, Microsoft and Facebook, had either been forced to support these activities, or had backdoors placed in their systems without their knowledge.

In order to regain users' trust, tech companies have spent billions improving the security of their services, and introducing end-to-end encryption. E2EE is where communication between users are secured throughout the message's journey through the Internet – nobody, not even the messaging service provider, can view the content being sent. Most major communication apps now support E2EE, with Facebook's announcement that it will roll out E2EE across its communications platforms finally sparking objections from the Government.

The stated aim of the campaign is, on the surface, understandable – the Government claims that encryption will allow sexual abuse of children to go undetected. The Government cites data from a USA-based child safety charity, whose research shows that 94% of reported cases of Child Sexual Abuse Material (CSAM) originates from Facebook services. An estimated 70% of reports – approximately 14 million – would not exist if the company had gone ahead earlier with its rollout of E2EE. Former Met Police Commissioner, Cressida

Photo credit: Robert Worrall under Unsplash licence



Dick, has also stated that E2EE makes it "impossible" for the police to do their jobs, specifically citing the fight against terrorism. The UK Government is not alone in their opposition – the FBI has repeatedly and publicly attacked the widespread use of encryption, and the Australian government has passed legislation forcing companies to hand over data or face fines.

It is difficult to argue against policy aimed at preventing terrorism and protecting children. The campaign, however, is little more than a propaganda drive, misrepresenting statistics to further the Government's interests. Terrorism is not prevented by a lack of encryption – as exposed by Snowden, security agencies have no lack of data, and the 2015 attacks in Paris were organised completely over unencrypted text messages. While the example of child abuse is emotive – helped by the M&C Saatchi's shrewd recruitment of charities such as Barnardo's – the reality is that very few surveillance applications are made for this crime, with child abuse offences comprising only 0.2% of surveillance requests in Germany.

The campaign has been denounced by digital rights groups around the world, including the UK's independent data watchdog, the Information Commissioner's Office (ICO), who have stated that any delay to the rollout of E2EE "leaves everyone at risk, including children". Encryption underpins the modern internet – online banking, private photos, and your location are all protected by the same mechanism the Government hopes to undermine.

This is but the latest move in a series of authoritarian moves by the Government. A move against encryption would not only show the technological illiteracy of our lawmakers, but also set a dangerous precedent for authoritarian regimes around the world to follow.



Bring the Beat Back: join us at Metric on
March 11th February for a revival of music at Imperial.
Expect a melting pot of sound - Disco, House and more.



ARTS

TWO BILLION BEATS
 REVIEWED BY LOUIS JABURI
 THE PERSONAL IS THE POLIT-
 ICAL IN THIS NEW PLAY

page

9

Edited by:
 ALEXANDER COHEN
 ALEX JACKSON
 BOXUAN ZHANG

Theatre

Dada on stage

The Chairs



Where? Almeida Theatre
When? Until 5th March 2022
How much? From £5 for Under-25s

Reviewed by **Alexander Cohen** Arts Editor

The problem with doing nothing is that you don't know when you have finished.

Kathryn Hunter delivered one of the most hypnotically uncanny performances of the year as the three witches in Joel Coen's film version of *The Tragedy of Macbeth*. She is a performer whose virtuoso talent can only be witnessed in person. Her immense physical presence, despite being just over five feet tall, is nothing short of utterly mesmerising to watch; each expression is precisely rendered but made to look effortless. Her jelly like face jolts with jubilation and scrunches with contemplative confusion at her husband's, played by Marcello Magni, lyrical and metaphysical musings - courtesy of Omar Elerian's new translation of Eugène Ionesco's *The Chairs*.

Magni and Hunter's shared emotional intelligence and physical prowess as clowns is so brilliant that they are able to imbue each of the titular chairs, inanimate objects, with a living presence of their own. Each block of wood is alive and breathing as if they were a char-



Kathryn Hunter, Marcello-Magni, and (of course) the chairs...

acter there in the room with them, with us, with me. With each added chair, a chorus of life emerges on stage, despite there only being three performers. The almost two hour runtime glided by.

Theatre of the Absurd can be dense and difficult to digest. Beckett's *Waiting for Godot* was famously described as a play where "Nothing happens twice." But Elerian's text is polished and light, fluttering like a little

Credits: Photo/ Helen Murray

bird from philosophical rants to witty one liners about Covid. The decision to not put Ionesco on a pedestal is crucial in keeping the production fresh. The 20th century French-Romanian playwright's words have been cleaved from the page and delicately reconstructed. The thought of slicing up Shakespeare is heretic for many British theatre makers. The result is a version inspired by the original more than anything else, but this is what makes the production so poignant and entertaining. The Speaker, a mysterious third character whose arrival has been eagerly awaited by Magni and Hunter played by a hilariously bemused Toby Sedgewick, delivers a deliberately anticlimactic and haphazard monologue that brings Ionesco kicking and screaming into the 21st century. Surveillance Capitalism? Society of the Spectacle? What does it all mean? But Elerian is not didactic. He does not want his audience to realise anything in particular, but rather invites them to find a meaning for themselves. At a time when a significant number of productions wear their political perspectives on their sleeves, the Almeida's production of *The Chairs* emerges as unique, not in that it is apolitical, but rather anti-political. It is dada on stage and it is gorgeous.

Are you an aspiring arts critic?

Visit our Facebook page for more details on free press tickets for London shows!



The Chairs plays at the Almeida Theatre until the 5th March 2022

Theatre

Two Billion Beats: The personal is political

Credits: Photo/ Alex Brenner

Two Billion Beats

**Where?** Orange Tree Theatre**When?** Until 5th March 2022**How much?** From £15Reviewed by **Louis Jaburi** Arts Writer

Political entities are deeply connected with the personal experience of individuals, this is a crucial point of Hanisch's 1970 essay *The Personal is Political*. We are not necessarily responsible for problems and dilemmas in our everyday life, and neither can we always be capable of solving these on our own – rather they must be seen an issue of the society as a whole and be approached as such. That is the premise of Sonali Bhattacharyya's *Two Billion Beats*, where we follow the ups and downs of Asha (Safiyya Ingar), who embodies the cliché of the almost edgy, witty, rebellious teenager. Confronted with all the trouble that entails the life of a poor young woman of colour, she clings onto her idealism and attempts to fight back... whatever that is supposed to mean exactly. In contrast, her younger sister Bettina (Anoushka Chadha) would much rather naively stroll through life—her biggest desire is ostensibly to get a hamster—but she must also realise that this is a privilege that her role does not allow her to attain. That is the dynamic that evolves throughout the play.

What immediately struck me, were the soliloquies of Asha. We, the audience, were part of a history les-



Safiyya Ingar and Anoushka Chadha feature as sisters Asha and Betina.

son — spread over the whole play. Every now and then we would learn about the conflict between Ghandi and Ambedkar or about the troublesome history of suffragettes in England. We learn that popular figures held controversial positions and that the truly repressed ones tend to be forgotten or actively ignored. I was reliving this internal turbulence within Asha, because it caused discomfort inside me as well.

At times these moments of soliloquy did feel a bit superficial, at other times a bit overwhelming. Sometimes

it felt raw, but overall, I think Bhattacharyya managed to keep a healthy balance and maintain smooth transitions.

At some points it felt as though the play was getting too one-sided, that this is just one huge rambling rant of Asha on the obstacles she is facing, then her sister comes in and pushes back, provokes, and gives the play its zest and its conflict. And this made Asha's struggle even more relatable and the play as a whole even more intimate.

This was amplified by the comfy atmosphere of the theatre, where the boundary between stage and audience is essentially non-existent. It felt like I was overhearing a conversation at a bus stop: this level of authenticity is proof of a thought-out play and a well-executed direction (Nimmo Ismail). And with all kinds of intermezzos it certainly doesn't get boring. Go into *Two Billion Beats* and find yourself in the epicentre of a social hotspot.

Credits: Photo/ Alex Brenner



Fulfilling her biggest desire, Anoushka Chadha stars at Betina — featuring 'Hampter'

Applications for the Blyth Arts Fellowship are open now — Deadline 10th March 2022!

The Blyth Arts Fellowship aims to develop a fine art practice at Imperial. The winner of the fellowship will receive four one-hour 1:1 mentoring sessions with a professional artist, a materials bursary of £500, and more.

Scan to find out more, and apply!



ENVIRONMENT

Edited by: MONAMI MIYAMOTO
MARIE MORI
MONIKA YORDANOVA
JACK CRIBB

UK gov't to offer contracts for renewable energy projects annually

View online here! 

Jack Cribb Environment Editor

The UK Government has increased the frequency of auctions for renewable energy projects in an attempt to both boost investment and jobs as well as further commit to its climate goals. Previously, the Contracts for Difference (CfD) auctions were held every two years, which allowed private energy and renewables companies to bid for public energy contracts. Since its inception, the CfD auction scheme has reduced the per-unit price of offshore wind by around 65%.

The hope is that renewable energy providers will be more incentivised to bid for contracts, which will contribute to the growth of the UK's renewable energy infrastructure. The use of auctions helps to drive down the cost of these technologies, cost reductions that can be transferred to the end-user.

It is predicted that offshore wind will supply the majority of the UK's power within the next 30 years, with 95 gigawatts (GW) being generated by 2050. Today, offshore wind generates around 10GW, which is enough to power seven million homes.

In terms of climate goals, the UK has many. The Government hopes to reach net-zero greenhouse gas (GHG) emissions by 2050. In its contributions to the Paris Agreement, the UK also committed to reducing its GHG emissions by 68% by 2030 compared to 1990 levels. This commitment was regarded by the Climate Change Committee (CCC) as 'a decisive commitment to a net-zero emissions trajectory, consistent with the Paris Agreement'.

Since 1990, the UK has reduced its carbon footprint from 809.1 million metric tonnes of CO₂ equivalent to



414.1 million metric tonnes in 2021, which equates to around 40% of 1990 levels. However, to reach the 68% reduction by 2030, the UK will have to cap its production at 358 million metric tonnes of CO₂ equivalent. With the increase in renewable energy project auctions, the hope is that offshore wind will play a big part in that reduction.

On the change, Business and Energy Secretary Kwasi Kwarteng remarked, "The more clean, cheap and secure power we generate at home, the less exposed we will be to expensive gas prices set by international markets."

This kind of remark has newfound significance since the news of the rise in the energy price cap earlier this year, which is estimated to leave six million households unable to pay their energy bills. An increase in offshore wind power can also be seen as part of the journey towards energy independence in post-Brexit Britain. Only last month was Kwarteng celebrating a £210 million investment in the Rolls-Royce small nuclear reactor (SMR) project.

"Through the SMR programme, not only could we ensure greater energy independence, but create new British intellectual property we can then export around the world so we're less dependent

on other countries for technology," Kwarteng said.

Discussion on the green credentials of nuclear reactors aside, we must approach any celebration of green energy projects with an air of measured scepticism. The UK government's track record on committing fully to climate targets has been historically lax. In a report published last year, analysts from the CCC discovered that the UK had only provided sufficient ambition within four out of a possible 21 key decarbonisation areas.

The report revealed a worrying 'policy gap' that, if not filled by effective and enforceable green policies, would result in the UK missing its climate targets. Another incredibly worrying revelation is that the GHG reductions reported are territorial in nature, meaning they intentionally omit GHG emissions that come through UK-purchased imports. A 2020 report by the WWF stated that 'nearly half of the UK's carbon footprint comes from emissions released overseas to satisfy UK-based consumption'.

This is a problem for ensuring that emissions reporting is done accurately and the UK can satisfy its climate targets. However, the UK Government sees no issue and views progress such

as the annual CfD contracts as an international advantage. "The UK is already leading the world in renewable energy," Energy Minister Greg Hands commented.

"Today's announcement will take us even further. This will help provide cheaper energy to consumers, guaranteeing more of our energy is produced at home and reducing our dependence on fossil fuels."

Furthermore, while the Government celebrates its apparent green-fingered approach to the UK's energy mix, it still provides an overwhelming amount of financial support to the fossil fuel industry. Since 2015, £13.6 billion has been handed to fossil fuel companies in the form of subsidies, £9.9 billion of which were solely made to provide tax relief. On average, that is around £1.9 billion per year. In comparison, only last year did the Government announce £265 million in subsidies for renewables—to be split between solar, wind, and tidal energy projects.

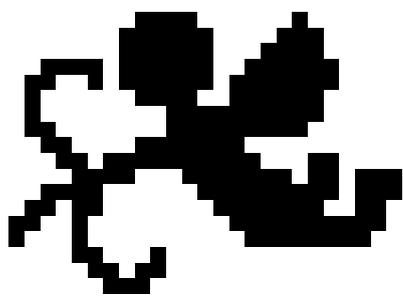
While more renewable energy projects are arguably a good thing for ending UK reliance on fossil fuels, the main issue is, ultimately, trust. Can we trust Government pledges to provide effective and equitable mitigation strategies to help limit global warming to 1.5 degrees? Can we see a future where fossil fuels are completely off the table when they're still so intimately tied to Government coffers? Are an extra seven million homes powered by renewable energy worthwhile while six million extra households can't afford to heat themselves through winter? The right approach to renewable energy infrastructure is not simply building more offshore wind projects, it also needs to include equity and fairness within every decision made.

Have an opinion on an environmental issue? Want to write but don't know what about?
Email us (the section editors above), at Environment.felix@imperial.ac.uk!

PUZZLES

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

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



1
2
3

A	G	R	E	E
M	U	S	I	C

Wordle

A wild new puzzle appeared!

For those of you who haven't played it yet, the aim of this game is to find the unique five-letter-word that complies with the following rules:

- = Letter is not in the word
- = Letter is in word but in wrong position
- = Letter is in word and in correct position

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

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

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

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

Wanted: Time Traveller's Assistant

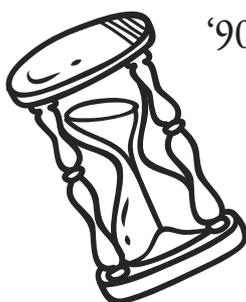
A new online escape room for our puzzle lovers

A group of people (two of which are Imperial alumni) have just launched an online escape room. Here's a bit more about it:

Do you think you have what it takes to be a Time Travel Agent?
Agent 14 is stuck in time and needs your help to return.

"Wanted: Time Travel Agent" is an online multi-part escape room.
But with time travel.

Navigate through 6th Century China, Egyptian zork-style tombs and the '90s to help Agent 14 complete their mission and return to safety.



Browser-based and completely free -
Sign up yesterday at itstravelti.me

Want to check it out? Scan the QR code to become a time traveller's assistant:



THERE'S NO *I* IN
TME TRAVEL

[HTTPS://ITSTRAVELTI.ME](https://itstravelti.me)

Scandal as Queen's tower revealed to be a knock off replacement

Questions have been asked in Parliament this week as renovations of Imperial's Queen's tower reveal a "Made in China" embossment on the bottom of the Queen's tower.

Ongoing renovations of the iconic Imperial structure have ground to a halt as senior members of the College struggle to come up with a response to the news that the Queen's tower that has for so long dominated the Imperial skyline is a cheap copy.

The College has refused to comment on how long it has been since the original tower was removed and replaced, but the last renovation was in early 2015 in preparation for the visit of President Xi Jinping, suggesting that the PVC replacement had taken place at some point since then.

The discovery clears up the original

reason for the need for renovation work on the tower that had suddenly developed a habit of swaying dramatically in light breezes.

One of the construction workers working on the tower, Feb Senton, told NegaFelix "I knew something was up from the moment I arrived. While the tower looked alright from a distance, you only had to get up close to it to realise that it wasn't made of stone. However, it was only when I was able to pick up the tower and look at what was written on the bottom that I knew there had been some funny business."

The official statement from the College said that enquiries were under way and a full QC-written report would be available next time a national newspaper went to court to gain access to it.

Students have reacted in an amused way

to the news and a new tradition of pushing over the tower has emerged. This comes much to the distress of College management who have employed security guards to prevent this happening and warned any student thinking of doing so that their academic credit score would suffer as a consequence.

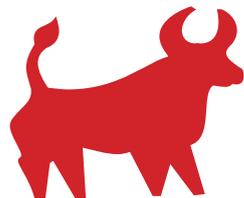
Solutions to the problem have not been forthcoming and College staff have had to remind President Alice Gast that shouting at the tower until it stops "being so fucking difficult" is not a viable solution.

NB. Just before this issue went to print, there was a shocking update to the story. Winds from Storm Eunice blew the fake tower away over the rooftops of London and it was last seen heading East in the company of two trampolines and a large umbrella.



ARIES

This week your physics professor organises a group trip to a spin class



TAURUS

This week your spindly little arms fail to close the taxi door properly, resulting in a ten car pile-up and 34 deaths



GEMINI

This week you treat yourself to a dry Spanish omlette on the rocks



CANCER

This week you toil at your market value. You get to Friday with three Mars bars and six peanuts



LEO

This week you sneeze into your mask and it gets all wet



VIRGO

This week you realise you haven't written anything by hand in so long you might have forgotten how to write



LIBRA

This week storm Eunice reminds you of lying in bed with your ex.



SCORPIO

This week you can't be bothered to boil the kettle and just suck on the dry teabag instead



SAGITTARIUS

This week you try to cook an exotic fish stew for your housemates and give everyone food poisoning



CAPRICORN

This week you're so startled by a beggar you accidentally post your wallet in a nearby post box



AQUARIUS

This week your vibrator runs out of battery but you notice your flatmate's massage gun is at full charge



PISCES

This week you disagree with your lecturer's harsh marking and challenge him to trial by combat

CATNIP

When science and art consummate - Felix's entry to the White City sculpture challenge

Something that may have flown under the radar of some of the Imperial community is that the College have launched the 'White City Sculpture Challenge'. Run by the 'Imperial Dreamteam', based in the DesEng School, and professed to 'deliver inspired, innovative, meaningful solutions that combine art, science, craft, technology and entrepreneurship', the Challenge is open to all students and asks for teams to design a sculpture to be permanently installed at the White City campus. The work will 'shape the artistic landscape of Imperial'.

It is rare that an opportunity for comedy presents itself this readily to you. It is unclear how familiar Professor Nick Munro, Imperial Dreamteam founder, is with the ALERT statue plans. But I digress; we present to you Felix's entry to the White City Sculpture Challenge!

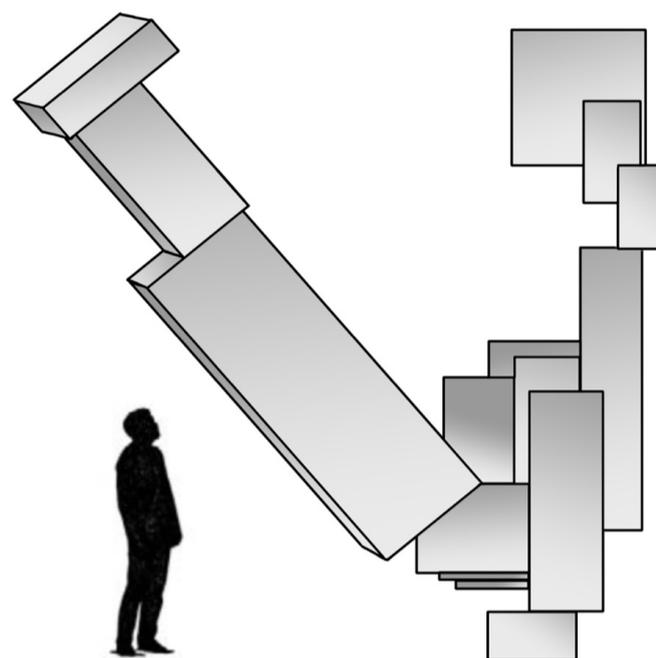
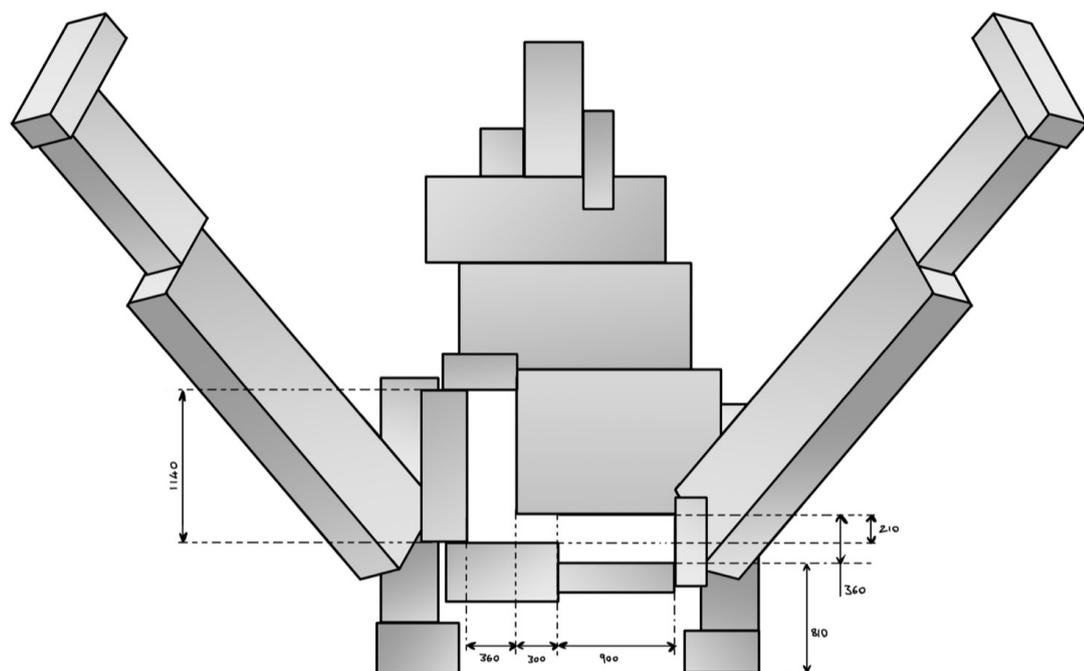
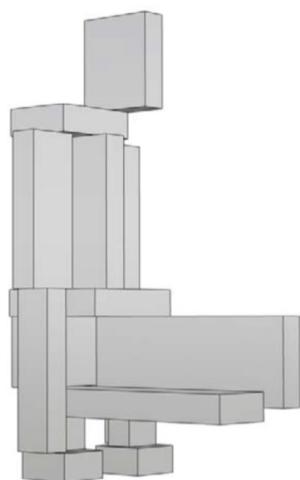


Illustration by Nicolas Geiseler Toran

Leadership Elections'22

**Nominations
OPEN**

**12:00
7 February**



**Campaigning
begins**

**14:00
9 March**



**Voting
CLOSES**

**14:00
17 March**



**Nominations
CLOSE**

**12:00
4 March**



**Voting
OPENS**

**12:00
14 March**



**RESULTS
PARTY**

**18:30
18 March**



Your Union



imperial college union | Leadership Elections 22

I CAN STAND

21 February, 11:00 - 11:30
International

I CAN STAND - International Students

21 February | 11:00 - 11:30



imperial college union | Leadership Elections 22

I CAN STAND

23 February, 13:00 - 13:30
Disability

I CAN STAND - Students with Disabilities

23 February | 13:00 - 13:30



imperial college union | Leadership Elections 22

I CAN STAND

23 February, 16:00 - 16:30
Postgrads

I CAN STAND - Postgrad Students

23 February | 16:00 - 16:30



imperial college union | Leadership Elections 22

I CAN STAND

28 February, 15:00 - 15:30
LGBTQ+

I CAN STAND - LGBTQ+ Students

28 February | 15:00 - 15:30

I CAN STAND EVENT SERIES

February | Online Teams - link will be emailed before each session

We particularly want to encourage disabled, LGBTQ+, BME, women, international, and postgraduate students to stand for a position. We've organised sessions for you to come and learn a bit more about the roles available and ask any questions you might have!

You can sign up for the sessions using the I Can Stand form which you can find on our website.



PORT TASTING

TUESDAY 22 February | 19:00 - 21:30 | Union Bar
imperialcollegeunion.org/whats-on/event/10490



GLITTERBOMB

FRIDAY 25 February | 19:00 - 01:00 | Metric
imperialcollegeunion.org/whats-on/event/10472

More events: imperialcollegeunion.org/whatson

MUSIC

Edited by: TARA PAL CHAUDHURI
JOE RIORDAN

DON'T MISS THE GIG - THE WORLD'S BIGGEST BIG BAND @ THE GREAT HALL, SATURDAY 19TH MARCH

IMPERIAL COLLEGE BIG BAND ARE TEAMING UP WITH THE SYD LAWRENCE ORCHESTRA TO FORM "THE WORLD'S BIGGEST BIG BAND" UNDER THE DIRECTION OF CHRIS DEAN. GET YOUR TICKETS ON THE UNION WEBSITE!



Single of the Week

'Sort Of Stranger' by The Greeting Committee & Briston Maroney

THE FIRST SINGLE FROM THE EXPANDED EDITION OF THE GREETING COMMITTEE'S SOPHOMORE ALBUM, DANDELION (DELUXE) LIVES UP



TO THE ORIGINAL CUT OF THE ALBUM. THE TRACK IS AN EVOCATIVE CONTINUATION OF THE SADNESS AND LONGING THAT HAVE ALREADY BEEN THOROUGHLY EXPLORED NOW ENHANCED WITH MARONEY'S SMOOTH-AS-HONEY DRAWL.

TODAY IN MUSIC HISTORY

TODAY WAS A BIG DAY FOR BIRTHS IN THE WORLD OF MUSIC. IN 1964, DR. DRE OF N.W.A. WAS BORN. HE WENT ON TO WIN 6 GRAMMY AWARDS AND LAUNCH HIS OWN HEADPHONE RANGE. AMERICAN FOOTBALL FANS MIGHT HAVE SEEN HIM PERFORMING AT THE SUPER BOWL HALFTIME SHOW LAST SUNDAY TOO.



Felix Recommends I Listened To Hyperpop So You Don't Have To



View online here!

Written by Joe Riordan Music Editor

Does it deserve all the slander?

I'm not sure how I got into hyperpop, but now I'm addicted. My deep dive began after seeing a tweet mentioning the genre and I'm easily manipulated, so I thought I'd give it a try. With only a little experience of 100 geecs, I had lots of new artists to explore. Luckily, Spotify had already made an 8-hour long playlist to collect the top tracks of the genre into one easy listening spot (linked at the bottom of this article). Let's begin.

I was introduced to hyperpop by Laura Les' viral TikTok track 'Haunted'. I'd heard the ten-second clip dozens of times on TikTok and the full song is just as infectious as the clip. Making up one half of hyperpop royalty 100 geecs, the band's influences can be heard in Les' solo work. The vocals could be described as anything from a chipmunk on acid to an EDM ghost trapped inside your phone. Far from a psychedelic remake of Alvin and the Chipmunks, Les' hit solo single surpasses any 100 geecs track released thus far.

Easing in gently, I found Glitch Gum's remixes of 'Kyoto' by Phoebe Bridgers and 'Just For Me' by PinkPantheress. It physically pains me to say it, but I prefer them to the originals. 'Kyoto' sounds like you've zoned out walking through an arcade in the 80s, think Stranger Things but it's one of those film sequences just focusing on someone's face as they walk around. A magnificent outro combines beautifully over-produced, pitch-shifted vocals accompanied by huge percussive synth stabs that remind me of the King Frog ride at the fair that comes to my hometown once a year. These stabs make the once-horn-now-synth riff seem soft and way in comparison.

With similarly morphed vocals, 'Just For Me' is also transformed into a new beast (although closer to its original than 'Kyoto'). Complete with fairground-ride-style crushing synths, Glitch Gum



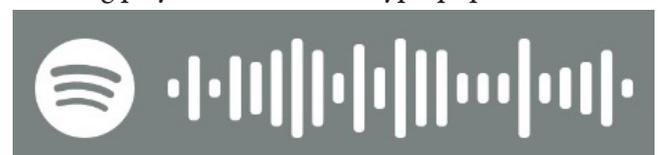
transitions between the verses and choruses with ease, making the track even more danceable than it was.

It would be blasphemous to write a hyperpop article and not mention SOPHIE.

Tragically, SOPHIE died in January 2021 but her influence on the music industry was immense. After receiving attention for 'BIPP', a single that blends electronic music and pop – revitalising both genres – SOPHIE went on to collaborate and produce with names from Madonna to Charlie XCX. "I can make you feel better", SOPHIE promises in 'BIPP', going on to fulfil that straight away. The snagging synths rise and fall sounding like a window is being polished and simultaneously I have a new song on my I-want-to-hear-this-in-a-club-one-day wish list.

I listened to so many more good songs and a few shit ones too so here's a quick tour through some of my other favourites. 'It gets lonely' by kmoe sounds like a glitching LCD Soundsystem. 'NEVER FUCKIN KNOW' by poutyface is a hazy stream of consciousness memory of a house party, which is one of the catchiest tracks in my new favourite genre. 'They were deleted you say?' by dashie is the sound if you cover and uncover your ears quickly at a club and can only hear intermittent beats. 'Big Boy' by Payday takes on haters at breakneck speed, rushing from insult to insult – think the 'Money Machine' intro by 100 geecs times 100.

Hyperpop is an overarching term covering possibly hundreds of niche subgenres someone, somewhere on the internet could (and would) immediately describe for you. I am not that person. Some songs I've listened to deserve the slander the genre receives but there are some gems hidden away that I am desperate to hear at a club. Watch me bribe the guy who presses play on the Slug playlist to add some hyperpop.



MUSIC **Gig Reviews****The Valla Are Not Water Rats**Written by **Rosie Millns** Music Writer*Indie pop band The Valla take to Islington for a show that they should have been headlining.*

I have promised friends to go and see The Valla live with them for longer than I dare admit. I am unsure why I delayed for so long – admittedly, I have gotten lazy at attending gigs recently. After seeing The Valla at Islington's The Water Rats on Friday 28th January, I finally understood why those who have caught them live are so vocal in their praise of this band, and desperate to share this live experience with others.

The Valla has been around for about three years at



The Valla (photo: Rosie Millns)

this point, and has an EP and a handful of singles under their belt. The time they have spent together as a band is evident in their sets: the frontman addresses the crowd in an easy-going way that suggests years of experience, and the band performs with an infectious high energy. One of the most enjoyable parts of their show is the chemistry between the band. Their friendship shines through their performance, and you can see just how much fun they are having on stage.

The Valla is still making a name for themselves, but that doesn't mean that they do not have a loyal and enthusiastic fanbase. As soon as the band come on, the crowd surges forward, and are dancing and bouncing for the entirety of the set. Attendees are wearing t-shirts with the band's name on them, and are singing every word of every song. I didn't realise it was a support act until the end of their set – the band is definitely headline material.

Perhaps the band is following a tried-and-tested formula for success with their crowd-pleasing and

catchy feel-good bops. You can imagine the band playing a packed-out tent in July of 2016 at Truck or Y–Not festival with the summery indie pop. If they keep releasing songs as catchy as 'Ice Cream', they are

guaranteed to be played on Jack Saunders' BBC *Radio One Indie Show* at some point soon.

If you are a fan of bands such as COIN, SPINN, Sea Girls, Ten Tonnes, Marsicians, Vistas, or just love some feel-good indie bangers, you should give The Valla a listen, and maybe catch one of their live sets in a small venue whilst you still can.

**Opinion****Look On His Works, "Ye" Mighty, and Despair**Written by **Tara Pal Chaudhuri** Music Editor*...and at the hilarious (yet concerning) state of Kanye West's Instagram.*

This is what I know about Kanye West: he raps. His name is not Kanye West. It's Ye. Ye is separated from his wife, Kim Kardashian, who is now dating Pete Davidson. Kim Kardashian and Ye have a daughter named North. Ye hates a lot of people including Taylor Swift, Drake, and recently, Billie Eilish. Ye ran for president of the United States of America in 2020 and intends on running again in 2024. I didn't know, however, that Ye has been a walking meme on social media, and this has recently been upscaled by Pete Davidson's entrance into his life.

Ye's obsession with Pete Davidson (and friends, like Kid Cudi who Ye has previously collaborated with) and his unwelcome intrusion into his nonexistent familial life has since become an incredible source of entertainment for me. His posts about Pete Davidson refer to him as "Skete", as evidenced by the fact that the word has reached its peak Google Search Trends popularity since February 13 2022, having never really seen the light of day on the search engine before. In fact, when a Redditor messaged Ye on Instagram claiming "I HEARD DEE HAD SOME INFO ON SKETE!", Ye asked who "Dee" was and to "please give me his @". Of course, the Redditor replied with "DEEZ NUTZ" and Ye told him to "find god [sic]".

As much as I wanted to discuss his long spam of Instagram posts on this article, I'm sorry to say they're long gone. If you're looking for any of the posts I

kanyewest I've learned that using all caps makes people feel like I'm screaming at them. I'm working on my communication. I can benefit from a team of creative professionals, organizers, mobilizers and community leaders. Thank everybody for supporting me. I know sharing screen shots was jarring and came off as harassing Kim. I take accountability. I'm still learning in real time. I don't have all the answers. To be good leader is to be a good listener.

The end of Kanye Kapitalism? (photo: kanyewest/Instagram)

reference in this article, please know you're likely not going to find them. Ye spams his Instagram and almost immediately deletes the posts. While I write this article, Ye's new post is telling people to "stop telling fathers they should have fought harder to see their children & start asking mothers why he had to fight at all." Of course, I can't prove this because it's gone.

Needless to say, it's (y)easy to forget that although you could spend hours on r/Kanye laughing at his antics, his constant rants on social media are indicative of a nearly pathological need to shame Kim Kardashian as a wife and a mother while harassing anyone who so much as lays eyes on poor Skete. This is not helped by the fact that a significant fraction of his fans genuinely consider him a genius and encourage him to continue making mistakes and learning about the world. An interesting defence of his actions involves him having bipolar disorder, which doesn't quite excuse his statements and, to some degree, encourages



An elusive Ye post (photo: kanyewest/Instagram)

thinking of bipolarity as completely debilitating an individual's sense of logic, empathy, and ability to be a decent human being.

FRIDAY 18TH FEBRUARY 2022

FOOD

Edited by: BENCAN YALCIN

Restaurant Review

Selale - bringing Turkey's waterfall to North London



Price range: ££££

★★★

Signature dishes: Kebab

Style: Casual

Reviewed by **Bencan Yalcin** Food Editor

Greetings and salutations to my readers for this week's column. Today we'll be looking at a Turkish restaurant called "Selale" - which means waterfall. The restaurant is located in Haringey, North London and the area is known to be the food hub for everything Turkish, be it your Turkish delight, baklavas, kebabs or even a place to buy Turkish style curtains and gold. The restaurant is an hour away from Imperial via bus and train but if you're ever in north london, it's typically roughly no more than a 30 min bus ride to the restaurant.

The restaurant's interior is very chic and colourful with a modern and clean look to it, with a subtle Turkish accent. The inside was well lit, making it ideal for taking photos and the exterior is well designed with massively wide windows showing you the outside when you eat. Hospitality was also quick and efficient given how busy it was on the day which was very much appreciated. In Turkish restaurants, they always provide salad, bread and typically a yoghurt-y sauce for "free of charge". I write free of charge in quotation marks because it's not entirely free, as it is something actually included in the service charge, however in most restaurants nothing comes along with the service charge and in Turkish restaurants they do, which is better than nothing.

Photo credits: Melis Efecan



Manti - Turkish style dumplings

To start us off we ordered a combination of hot and cold Mezes (£16.90), Meze meaning side dishes in Turkish. This included: Hummus, Kisir (couscous), Sarma (stuffed grape leaves), Shakshuka, Calamari, Halloumi, Sigara Böreği (stuffed and fried filo pastry) and Sucuk (Turkish style spicy and fermented sausage).

All the Mezes we ordered were tasty and unique in flavour and texture. Our favourite out of the bunch was the Sigara Borek which was served fresh with stuffed feta cheese with finely chopped parsley. It was very tasty and soft on the inside and the outer pastry was crispy enough to want to order more. The crispy-ness gives you a good crunch when you bite into it without falling apart. Despite the strange combination, the sigara borek surprisingly worked really well with the tatar sauce which was served with the Mezes. Although not bad, we found our least favourite Meze to be the Shakshuka; for this dish the flavours just did not hit the right spot on our taste buds, and we didn't like the

Photo credits: Bencan Yalcin



Iskender - Thinly sliced lamb, topped with a rich tomato sauce

fact that it was served cold.

For the mains, let's start off with the Manti (£14.90) which is Turkish style mini dumplings. Manti is typically stuffed with minced lamb or beef and served hot, with a generous drizzle of garlic yoghurt and spicy butter sauce to give the overall look of the dish a wonderful shine. From the get go, the dish looked promising but I did expect it to taste more exciting. The butter sauce felt like it was just there to provide colour with not much spice. However, the manti tasted pretty good with no specific complaints. The garlic yoghurt went well with the manti and I was satisfied with my meal. Along with the manti, I ordered Ayran (£2.90), which is a Turkish yoghurt drink. Unfortunately, the Ayran was just not doing it for me. Ayran is made to be salty, however Selale's wasn't salty at all. I presume it's to cater towards different customers, but unfortunately it was unsatisfactory.

Moving on to our second main we ordered Iskender (£18.90), which is a combination sliced lamb doner kebab and pita bread (sometimes croutons)

topped with a hot tomato sauce and sizzling sheep buttermilk on top. Along with this extravaganza you get a side of yogurt, bringing the meal together. The meat in the Iskender was well cooked and juicy, and the umami provided by the tomato sauce was delicious. My only qualm is that I typically like my bread a bit crispier and not very soggy. Overall the dish was very filling, but nothing stood out to me, just like the manti.

Finally for the dessert, we got complimentary Turkish tea and baklava. We also ordered a Ferrero Rocher cheesecake (£5.90). One thing I can appreciate is that the teas and baklavas are given for free. The baklava served wasn't the 'typical' baklava you might know of, but it does come in various shapes and sizes. To add to this point, our baklava had walnuts instead of the traditional pistachio filling. The Ferrero Rocher cheesecake was the most anticipated, but without any sugar-coating, it wasn't good at all. The cheesecake tasted way too dense and significantly lacked the flavour of Ferrero Rocher. Due to the denseness, the aftertaste wasn't very good as well. Ultimately, we believe they failed to make the dessert airy which is what a good cheesecake should be.

In conclusion, the food was solid and there's not

Photo credits: Bencan Yalcin



Ferrero Rocher Cheesecake, Ice Cream and Baklava

much to complain about, but there was also nothing special behind it. Given that the price tag was comparable to more high-end restaurants, I expected something more than just standard. It could be that the dishes we got weren't their specialty, as there are many dishes to choose from. Regardless, if it isn't anything special they shouldn't charge so much for it.

SPORT

Edited by: AMANDA BARDEN
KONRAD HOHENDORF

Talking to Yasmin - sports aficionado

This week we sat down with a close friend of ours, Yasmin. She has to be one of the craziest people at Imperial who has the most packed timetable we've ever seen. We felt tired just listening to what she does in an average week, I hope you enjoy reading this interview.

Konrad Hohendorf Sport Editor
Amanda Barden Sport Editor

Who are you?

I was born and raised in London and I went to a state school where I was on the basketball, athletics, and football teams. I have been rowing, skating, ice skating, and playing football during my time at university. Apart from sports, I am quite creative – I draw and sculpt and I'm also into entertainment and comedy, so I am creating my own radio show and podcast.

What is your university academic background?

I study chemistry at Imperial College. I really enjoyed the subject at school and I liked how Imperial is a STEM-related university where science is the main focus. Because Imperial has so many societies and clubs, it sounded great to have the ability to take a science degree and play sports and therefore have the best of both worlds.

What is your sports background?

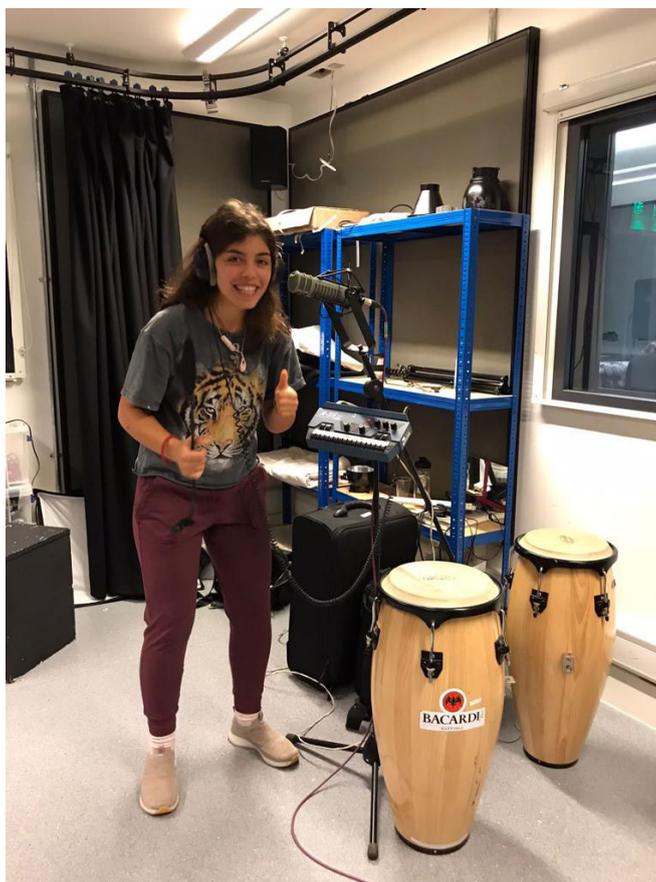
I started skating when I was three on quad skates. I used to skate around Hyde park every day, and I started inline skating when I was five. I have been skating ever since. I joined the London speed skating team last year, because the coach saw me skating through Hyde park and asked me to trial for their team. I am now working towards competitions this year, and looking to progress professionally within skating.

A coach at Aldwych Speed Club, an ice skating team, saw potential in me training in ice skating during one of my skating training sessions.

I also occasionally play for Hammersmith Women's football club, where I play right back. I was the captain of my school's football team. There was a big gender gap between the guys and girls teams, and I wanted to change that and try to make football more accessible, regardless of gender so everyone could enjoy the sport.

Do you do any sport at Imperial?

I am also a senior rower at Imperial. I started rowing as a novice in my first year at Imperial, and I now train full time as a senior. I am looking to compete in BUCS head, BUCS regatta, and hopefully Henley in the coming weeks and months. I am proud of my improvement in the sport and I recently won the 'Golden Flipper' for most improved rower.



What other activities do you do at Imperial?

I'm in the process of creating a radio show/podcast with ICRadio, where Imperial students, and any one really, can write in to us with any issues they are having, and we'll light-heartedly discuss it with friends and guests to try and solve the issue. It's more like a chat show than a serious project, but I think it'll do really well and I'm excited to see how it goes.

So what does an average week look like?

I wake up at 4:45am on a Monday morning, leave the house at 5:15am on my skates, where I skate to Imperial Boat Club in Putney which takes about 45 minutes for a 6 am water session. We usually row about 14-16km from Putney to Chiswick, so the session finishes at around 8am. I do an erg session at the boat house before leaving, rather than doing it later on in the evening because of my busy schedule. I then skate from there to South Kensington, where I get breakfast and get on with my degree.

I leave campus at 5pm, as I get the train to Guildford, which usually takes about 2 hours for a 7pm training session. The training session finished by 8:30, and I make my way home back to Paddington where I usually arrive by 11pm to sleep.

On Tuesday, I wake up at a late time of 6:45am and skate to rowing for a strength and conditioning session by 8 am. University finishes again around 5:30 pm, then I skate to rowing for a 6:15pm water session which takes 2 hours, similar to the Monday session. I leave the boat house at 8pm, and skate home around 9.

Wednesday I just have to do an erg session in my own time in the gym, and I do university work in my own time. I've got ice skating again at 7:15pm, so I make my way to Guildford.

Thursday is a repeat of Tuesday, normally.

Friday is again an erg in my own time, and that is it for the day! No skating training! But I do university work in my own time.

Saturday is a big day. We have a 6:45am start at the boat house, which I skate to, where it's a longer rower outing, usually about 18-20km, followed by circuits at the boat house, which if you don't know, is absolute pain! Sunday is an off day from rowing, but I do have skating training with the speed skating team. It is from 10-12 at Tatem park, which is quite a trek, where they have the only outdoor track in London.