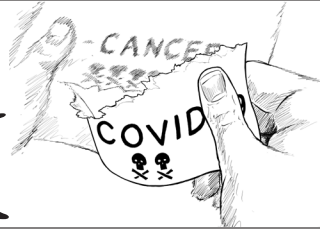


Felix



INSIDE

Escobar's hippos

Cancer during COVID-19

ISSUE 1790

FRIDAY 28TH JANUARY 2022

Bullying inquiry to be published as College loses privacy battle

Page 3

Credit: Imperial College London



25

Days until the College have to give Felix the report



EDITORIAL

This issue was produced thanks to the work of

Ameena Hassan	Deputy Editor
Alex Jackson	Arts Editor
Alex Cohen	Arts Editor
Boxuan Zhang	Arts Editor
Jamie John	Science Editor
Marek Cottingham	Science Editor
Cara Burke	Science Editor
Isabelle Zhang	Science Editor
Monami Miyamoto	Environment Editor
Monika Yordanova	Environment Editor
Marie Mori	Environment Editor
Jack Cribb	Environment Editor
Lito Chatzidavari	Puzzles Editor
Rosie Millns	Music Editor
Tara Pal Chaudhuri	Music Editor
Eva Borrás Paredes	Film Editor
Khama Gunde	Comment Editor
Konrad Hohendorf	Sport Editor
Amanda Barden	Sport Editor

And our numerous contributors



Noble Lies

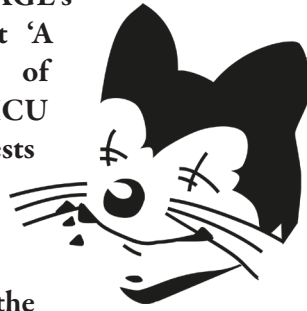
Many models predicting the impact of Omicron on the UK were wrong. This is an inalienable fact at this point, with daily cases at almost a third of the peak in early January and hospitalisations broadly not coming close to overwhelming the NHS (though there was and is significant variation by geography). Even SAGE's own minutes state that 'A decreasing proportion of those in hospital require ICU admission, which suggests that the reduction in severity if measured by ICU admission risk is even greater than the reduction when measured by hospital admission risk' and that 'An increasing proportion of [hospital] admissions are positive tests amongst people admitted primarily for reasons other than COVID-19'.

"Omicron is in retreat" said Saj. Professor of Public Health at Newcastle University Allyson Pollock called the plans "very sensible". "The situation provides a case for lifting restrictions" said Prof Francois Balloux of UCL. But this is only one side of the story. On Saturday, *The Times* published an article titled 'Warring scientists fight on as Omicron retreats'. Within this piece there were conflicting opinions from scientists and politicians alike over the lifting of Plan B. Dr Stephen Griffin of the University of Leeds was apparently "aghast" at the lifting of restrictions at this point. *The Times'* article also included an Omicron spread model, developed by University of Warwick. The least severe outcome of Omicron's spread suggested by the model was still more severe than what was actually experienced.

Government adviser Adam Finn said 'I often find myself trying to communicate uncertainty and end up being attacked from both sides by "the convinced"'. MP and former science teacher Miriam Cates said "I can see the appeal of the term 'following the science' to politicians, but it has wrongly led people to believe that the science of the pandemic is black or white".

Come this Monday, and the

Independent's Samuel Lovett (not me) has written an article titled 'Attacks against Covid modellers undermine future pandemic response'. Having been accused of creating a 'climate of manipulated fear', some SAGE scientists said they 'fear such attacks will weaken trust in the modelling and



hinder decision-making in the face of dangerous new Covid variants or future pandemics', according to the *Independent*. The kicker came from one Professor Graham, who said he

was concerned that such attacks on Covid models would lead to an "erosion of trust" in them, adding "you already have that in terms of vaccinations". And thus, noticing that a model is wrong is equated with being anti-vax.

These models were largely wrong. That doesn't mean that they aren't a great help or that they'll never be better in the future. But there are costs to increased restrictions, which are so often not considered (or at least not spoken about) by public health scientists. The NHS was not stretched this winter by a huge wave of Covid patients, but because it was so understaffed when 120,000 staff were off in a single week, after contracting the disease or having been a close contact. Calls to reduce isolation periods aim to reduce this pressure, which is something that doesn't seem to cross the mind of many who are pro-restriction.

I also want to add that Dr Simon Clarke of the University of Reading bizzarely finished his statement on the removal of Plan B restrictions, quoted on the Science Media Centre website, by saying "it's impossible not to suspect that the nation's health is not the only factor ministers are taking into consideration". I think everyone who's remotely followed the government's responses knows that health has never been "the only factor ministers are taking into consideration", as aspects such as economic stagnation and education have always been factors.

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

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

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

felixonline.co.uk
@feliximperial

Printed by Iliffe Medial
Winship Road,
Milton, Cambridge
CB24 6PP

Registered Newspaper ISSN 1040-0711

Copyright (c) Felix 2020

Imperial College ordered to release redacted version of bullying report

Sam Lovatt Editor-in-Chief

Imperial College's Council, including President Alice Gast and CFO Muir Sanderson, have lost a bid to keep a report into bullying at Imperial College unpublished.

The motion, brought against Imperial College Council by the Daily Mail, sought to force the publication of the report via a Freedom of Information request.

Imperial College is a public body, and as such must comply with such requests.

Imperial College's Council sought to block this publication under the Freedom of Information Act, citing that information contained in the document would 'prejudice... the effective conduct of public affairs' and that the document contained third party personal data that should not be published. They also claimed that release of the information would "contravene... the data protection principles [of the Data Protection Act 2018]".

The information commissioner found that "the public interest favours" disclosure of the information and therefore that the claim its release would 'prejudice... the effective conduct of public affairs' was untenable. The commissioner accepted that the release of some of the information contained in the report would contravene data protection principles, but ordered the

College to release the majority of the report, with those specific parts redacted.

The report from the Information Commissioner also stated that the College had failed to issue a refusal notice within the allocated time frame of 20 working days when the request was initially received, and had therefore further breached the Freedom of Information Act.

Against disclosure, the College argued that the report contained information about Gast's and Sanderson's personal lives, though the Commissioner did not agree with this argument.

The College also argued that the report contained many details about the personal lives of those who were interviewed and the original whistleblower(s). The College argued on top of this that during the investigation there had been multiple assurances from the investigating QC and the College's internal policy that the proceedings in the investigation would be kept confidential. The Commissioner agreed with the first statement, highlighting that in some cases 'special category data' relating to the witnesses had been included. Special category data includes that pertaining to someone's race, sexual orientation and health, as well as other data. However, having reviewed the report, the commissioner concluded that aspects of discourse during the investigation suggested that the findings

Credit: Imperial College London



Funny Old Law

The College opposed the publication of the report based on two clauses of the Freedom of Information Act. One of these, section 36, requires a 'qualified person' to deem that publication of the information in question is likely to 'prejudice the effective conduct of public affairs'. Though it sounds fairly vague, the definition of a qualified person is very strictly laid out in the Act, and changes depending on the public body in question. In the case of Imperial College, the qualified person, by law, has to be Alice Gast

This has led to, on two occasions, Gast confirming via email that she is happy for an exemption to be exercised that blocks the dispersal of information surrounding her own, bullying, conduct.

And, get this, the reasoning of this "qualified person" is given in the decision report by the ICO. This reasoning is as follows: "Disclosure would inhibit employees of public authorities from fully co-operating and contributing to whistleblowing

investigations. If interviewees felt that what they said was liable to be published, even on a non-attributable basis, they would be far less likely to be forthright. This would make such inquiries more difficult to carry out and would undermine their effectiveness".

So, Alice Gast's reasoning against the publication of the investigation report is that doing so would undermine the confidence of whistleblowers in making allegations, and of witnesses when giving testimony. Defending the integrity of the very process that has found her guilty of bullying subordinates, in order to prevent the further dissemination of details of how she bullied her subordinates. You cannot make this up.

It is worth noting that Gast was advised by independent individuals in making this reasoning, however, according to the Commissioner, these individuals had not seen the report.

may be shared "in certain circumstances" and that the witnesses' fears were more surrounding internal backlash, as opposed to a reveal to the public. In fact, the commissioner considered that a public disclosure would provide more protection to witnesses rather than less, as any internal backlash would be more intensely scrutinised.

Despite this, the commissioner decided that prior expectation of such an investigation to remain confidential outweighed any legitimate interest for disclosure, and therefore decided that no information that could lead to the identification of any witnesses could be published.

During the investigation, Gast wrote a letter containing "strong objections to the disclosure of her personal data" to the Commissioner. In this letter, she

reiterated that further disclosure would "not add any insight" into proceedings. She also added that "female leaders accused of bullying were treated less generously than male leaders" and drew parallels between her case and that of Kathleen Stock, an ex-professor of Philosophy at the University of Sussex who resigned near the end of 2021 due to continued pressure from students who opposed her views on transgender people. The Daily Mail described this comparison as "bizarre", and noted that Stock had not been accused of bullying nor had her conduct probed.

She added that the report included "few, relatively minor, findings against [her]" and that she had 'serious concerns' about the accuracy of some of the report".

Gast said that the information that has already been made public has led to her

NEWS

being attacked on social media and by the media in general (not least the Daily Mail, who brought this complaint to the ICO). Gast added that this abuse had “had a substantial effect on both her and her family – which further disclosure would exacerbate”. Felix is vehemently against any abuse like that described above, and strongly urges all readers not to consider carrying out anything similar. The Commissioner described the abuse as ‘unacceptable in a civilised society’.

All considered, the Commissioner decided that it was not reasonable for Gast and Sanderson to expect the information to be withheld. That they hold such senior roles within the College means “they should expect to be subject to a much greater degree of scrutiny, accountability and transparency than their subordinates”.

On redaction, the Commissioner ruled that as some parts of the report,

particularly those that detailed the events that took place, contained so many personal details of the witnesses, that they should not be published at all.

The Commissioner’s final judgement is that “there is a stronger than usual public interest in disclosing more of the report so that staff and students at the College can decide for themselves”. Rest assured findings will be in Felix the moment we see it.

Imperial College issued a statement saying that they “may... appeal part of [the] decision”. They clarified that more than 50 people had acted as witnesses in the internal investigation.

The College added that, since the investigation and disciplinary process, “Imperial’s culture and leadership style have been significantly improved”, and that all 12 recommendations from the internal report have been implemented fully.



Credit: Imperial College London

The infamous email, sent to all students and staff in December 2020 which included the line “*Following this process, I am more confident than ever that Imperial has the right leadership*”, was described as a

“judgement call” made by the College.

Any mention of the Daily Mail article breaking this news was conveniently left off the daily Imperial College News Digest.

History Group report hears praise and criticism at forum

The History Group Dialogue Forum was held this Wednesday, marking the next stage in the ongoing discussion on the history of Imperial College.

The forum, chaired by Proconsul Professor Peter Openshaw, gave platform to a range of views from a wide spectrum of people. Many senior College staff attended, as well as some members of the History Group itself. The forum was open to all staff and students. Many people submitted their views prior to the forum taking place and did not attend or speak.

Openshaw explained that the discussion had already included receipt of 228 contributions in the form of messages and essays. 61% of these responses were from alumni. Openshaw explained that these essays could not be shared in full for confidentiality reasons, however this was called into question by one attendee.

Prior work also included nine small group discussions, which 63 people attended in total. From these discussions, it was mostly agreed that there was a need for respectful discussion, to properly record and teach Imperial’s history, and to celebrate historical figures who have until now been unrecognised.

They key point of controversy in the dialogue had arisen around the potential re-naming of the Huxley Building, with almost every alumnus and many staff members who took part in the discussion stating their distaste for the idea. Less was heard in defence of the name of other buildings, including Beit halls.

Comments submitted prior to the forum reflected both sides of the argument. One said “the college should stand strong against the ridiculous accusations that this amounts to cancel culture”.

Others comments included “I am actually appalled that a university is even entertaining the idea of cancelling these figures” and “What this discussion is trying to do is re-write the past and make an ungrateful, spiteful generation feel better about themselves”.

Some more considered responses came in person, from various faculty members and largely focussed on the Huxley Building. One said that despite the History Group’s report highlighting Huxley’s links to eugenics, there was very little evidence for this and one could even consider him to be anti-

eugenics given the content of essays he wrote towards the end of his life.

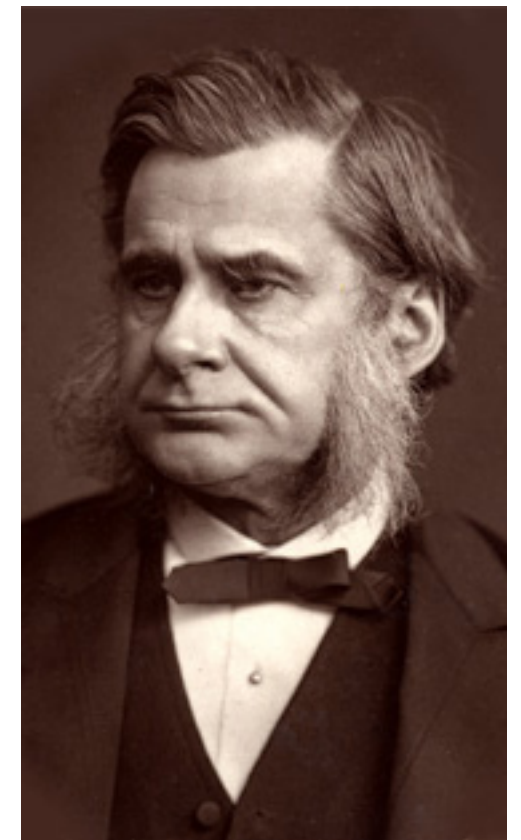
More criticism came against the History Group’s findings in relation to its reference to Huxley’s essay titled ‘Black and White’. One contributor said “The irony is that the article was a polemic for the abolition of slavery and was in favour of womans’ rights”. It was added that Huxley’s “scientific legacy dwarfs many of the finest scientists that are alive today”.

One professor said that if a student had submitted the History Group’s findings to him, he would have noted that they had only used one source and sent them away to do more work on it.

The subject of naming buildings was called into question. One contributor disapproved of the naming of buildings after rich or successful individuals, highlighted the recently unveiled Dangoor Plaza. It was also mentioned that this practice enforces an idea of a lone, heroic scientist working by themselves, which should not be supported.

Another asked “what is being done to communicate with [ethnic minorities] at their level i.e: in their language”.

References to 1984 were made, and one contributor said that the College “may as well be called the apartheid university of London or the colonial university of London”.



Credit: Lock & Whitfield - Wikipedia

Students concerned by lack of options to critique lecturers as SOLE replaced with MEQ

Credit: Envato Elements

The annual SOLE survey at Imperial College has been replaced with a 'Module Evaluation Questionnaire'. The questionnaire launched on December 7th and closed January 24th. It will be re-run for the Spring and Summer terms, from 17th March - 21st April and 24th May - 21st June.

A student on the discussion board noted that the MEQ did not offer the option to give feedback on individual lecturers. They also said that they were limited to 300 characters when giving feedback on individual modules.

Comms surrounding the MEQ included 'The core questions have been reformatted to focus on the teaching (module) rather than the teacher (lecturer)'. It added that feedback on the survey will be received from students and staff during its first year of implementation.

According to Union Deputy President (Education) Daniel Lo, a review of SOLE has been on the College's agenda since 2017.

The departments of Bioengineering and Earth Sciences are apparently boycotting the survey, though the reason for this boycott is currently unknown.

The 3rd year coordinator for the Computing Department explained that the MEQ had "focus... more on the module feedback rather than individual lecturer feedback".

It was highlighted that decisions on the changes to the survey has been made using "staff and student feedback and with input from the College Union".

The survey is currently not listed on the Imperial College website.

International concern has been raised over the abuse of anonymous surveys by unhappy or angry students. News website The Conversation surveyed 791 academics in Australia and heard testimony of a plethora of vindictive comments that could not reasonably be conceived as constructive.

One lecturer said she'd received a comment "That fucking d*ke bitch failed me she's fucking useless that's why I failed".

One comment, which is hard to believe was seriously submitted, was "What the fuck did you think you were doing to take a couple of days off for your grandmother's funeral when we had an assignment due?"

Threats included "I'd like to shove



a broom up her arse" and "She should be stabbed with a pitchfork".

On analysis of the data collected, the article said "a profile is emerging of a highly traumatised workforce".

Critics of such surveys have said that anonymity should not be upheld in severe circumstances. Others have said that anonymity should be maintained between student and lecturer but that the institution should know the identity of the person taking the survey.

The criticism comes against a backdrop

of wider discussion around the use of online anonymity to abuse people in ways that would not occur in public. The government's Online Safety Bill, which recently received strong criticism from its parliamentary committee for not going far enough in many areas, is expected to reach parliament early this year. It includes measures aimed at preventing hate speech and "cyberbullying".

Union CSP election timetable begins

The timeline for this year's Clubs, Societies, and Projects (CSP) elections begins on January 30th, with results announced on 18th of March.

Any Imperial College student who is also a full member of the Union may run for any position in any club they are a member of. This does not apply to associate and lifetime members, or those taking an interruption of studies.

Nominations for CSP positions will be open for almost a month, from February 7th until March 4th. Each position requires a manifesto to accompany the candidate's profile on the eVoting platform, the deadline for which is March 8th.

CSPs who cannot meet the stated timetable, for whatever reason, should 'opt out' using the Union's official procedure that is detailed on the website.

See <https://eactivities.union.ic.ac.uk/training/articles/531> for more information on this procedure.

A common reason for opting out is that the current committee structure, listed in your CSP's constitution, is different from how the current committee would like it to be. A change in constitution must be passed by your CSP's Management Group committee. The deadline to both change the structure of your committee, or opt out, is January 30th.

The Union Leadership Elections will also run, close to parallel with the CSP elections. Nominations will open in February and close on March 4th. Voting will take place 14th - 17th March and results will be announced on March 18th in person in the Metric club.

Roles elected in the leadership

elections include the Union President, and four Deputy President roles, the Union Council Chair and the Constituent Union Presidents.

Hustings for the Leadership

elections will take place in the Union, in collaboration with Felix and ICTV, where candidates for the Officer Trustee roles will be questioned on their aptness for the role and their manifestos.

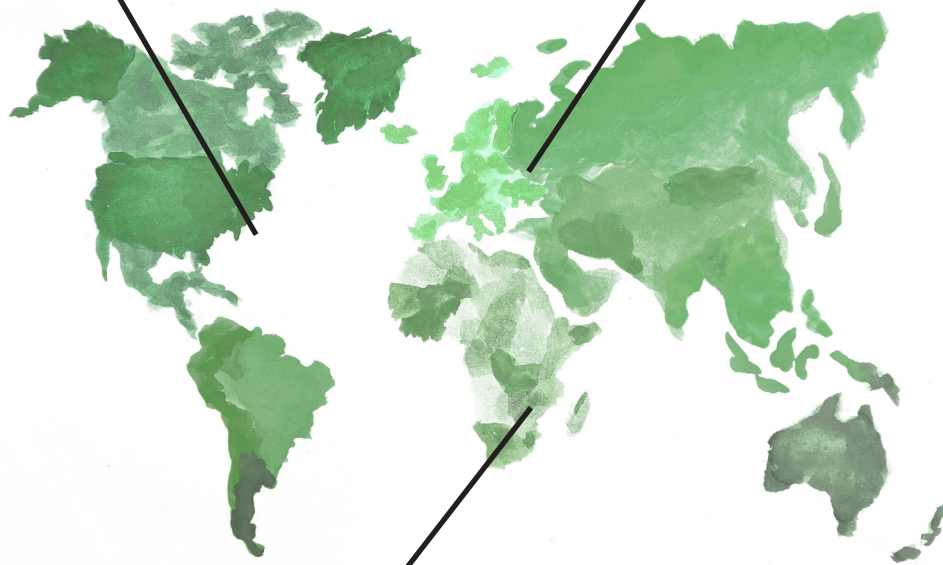
Milestone	Date & Time (GMT)
Completed committee structure changes deadline	17:00 30/01/2022 (Sunday)
Nominations Open	12:00 07/02/2022 (Monday)
Nominations Close	12:00 04/03/2022 (Friday)
Manifestos Upload Deadline	14:00 08/03/2022 (Tuesday)
Campaigning and hustings begins	14:00 09/03/2022 (Wednesday)
Voting opens	09:00 14/03/2022 (Monday)
Voting ends	14:00 17/03/2022 (Thursday)
Complaints Submission Deadline	17:00 17/03/2022 (Thursday)
Results Announced	18/03/2022 (Friday)

WHAT HAPPENED...**...in the world this week*****One dead and 38 missing after people smuggling boat capsizes***

A boat has capsized off the coast of Florida after meeting poor weather conditions, leaving one confirmed dead and 38 people missing. According to a survivor, the boat set out from the Bahamas four days previous. Washington said that the boat may have been being used for people smuggling, adding that the boat had been found on a "normal" smuggling route into the US. The US Coast Guard is now searching a large area in the hopes of finding debris and more survivors. Some objects have been located and will be further investigated in the hope of finding others who were aboard the boat before it capsized.

Russia and US at loggerheads over NATO expansion

The situation on the Russian-Ukrainian border continues to worsen as Russia meditates on its response to US documents. On Wednesday the US issued a notice to Russia, rejecting its demands for a removal of Western forces from Eastern Europe and a halt to NATO expansion. Over 100,000 Russian troops have amassed at the border in recent weeks and alliance forces have built up in Ukraine in response. Many expect a Russian invasion imminently. Boris Johnson said on Wednesday that an invasion would be "disastrous" and a "painful, violent and bloody business".

***At least four dead after Storm Ana hits Malawi and Mozambique***

Heavy downpours and strong winds have uprooted as many as 16,000 people in the southern African nations this week. At least two people have died in each country and more than 60 are injured. Many have taken refuge in schools being temporarily used as evacuation centres. The Guardian showed photos of floodwaters reaching the outside of people's houses. On Tuesday the rains had not stopped and the situation is set to become worse still. According to people in the area, most hospitals currently do not have power.

Aid to Tonga arrives whilst nation tries to remain covid-free

British and Australian ships are conducting contact-free delivery of aid supplies to the tiny island nation of Tonga. The country was devastated by an underwater volcanic eruption which caused a tsunami on January 15th. Images taken by New Zealand aircraft show islands of the archipelago completely ashen. Despite the damage, estimated death tolls remain low around three individuals. The Covid-free ambition has made delivering aid significantly harder. Through the whole pandemic, Tonga has recorded only one single positive case, and is currently officially Covid-free.

... in this issue's year (1790)***SAINT-DOMINGUE***

Aristocrat of mixed descent Vincent Ogé leads a rebellion in the name of the abolition of slavery. His movement is quashed by colonial forces and Ogé is executed.

BALTIC SEA

The Russo-Swede War comes to an end. Just under 6000 people died over the course of three years and the outcome is described as "mostly insignificant" by some historians today.

ENGLAND

The notorious 'London Monster' is arrested and receives a 40-year prison sentence. He routinely attacked women by stabbing them with a knife or needle.

THE UNITED STATES

The Supreme Court convenes for the first time in history.

THE UNITED STATES

The patent system is established.

FRIDAY 28TH JANUARY 2022

SCIENCE

Edited by: ISABELLE ZHANG
JAMIE JOHN
CARA BURKE
MAREK COTTINGHAM

Forever young is possible for some organisms

► *Death is ubiquitous in nature... and so is mocking it!*

Wang Guo Staff Writer

Mammals grow exponentially during embryonic and juvenile development. But the growth halts at the adult stage. Then, the period of ageing (or senescence) begins, and organisms undergo a gradual deterioration of tissues that result in age-related diseases, infertility and finally, death.

However, lobsters can grow indefinitely throughout their lives whilst maintaining juvenile vigour and reproducing until their death. The reason for this unique phenomenon is that lobsters have infinite supplies of telomerase, an enzyme that regenerates telomeres. These are fragments of DNA located at the end of eukaryotic chromosomes. Telomeres protect the integrity of the chromosome. However, the length of telomeres shortens with each cell division. When the chromosomes run out of telomere, the cell has a very high risk of suffering DNA damages during cell division and hence, are more likely to convert into a

malignant (or cancerous) cell. Therefore, for the sake of the whole body, the cell stops undergoing division and enters a period of cellular senescence. However, this means that the cells of tissue will not be replaced by new ones. Consequently, the fate of the organism is a continuous and systemic organic deterioration. Telomerase avoids this cruel destiny by elongating the telomeres again and allowing cells to undergo more cell divisions, rejuvenating the tissues. Lobsters have the gene that encodes for telomerase activated in every single cell of their body, but in the case of mammals, telomerase only works in the whole body during embryonic development and it then shuts down, except in the particular cells called stem cells. However, lobsters are far from being immortals, and do not usually live more than 40 years. This is because, like any other arthropod, they need to moult their shells as they grow. Shedding is a biologically stressful process and it only gets harder the larger the lobster is. Around 10-15% of lobsters die

during shedding due to exhaustion. This percentage is small because the most common causes of death in lobsters are diseases and predation.

If there is any creature on Earth that could be truly qualified as “immortal”, it is the jellyfish *Turritopsis dohrnii*. The jellyfish begins life as a polyp, a small tube-like structure attached to the ocean floor than eventually decided into a colony of specialised cells that can reproduce to form new polyps. The signature trait of *T. dohrnii* is the capability to “restart its life cycle. That is to say, *T. dohrnii* is able to ‘mock’ death by transforming itself into a cyst (a mass of tissue) and from this back again to its polyp stage, resetting its life cycle. If humans had this ability, we would be able to become babies again and grow normally to adulthood. Since the discovery of its ‘immortality’ in the 1980s, several studies have been conducted to find out the mechanisms behind it. Some of the most impressive research was carried out by the Japanese professor, Shin Kubota, who has kept

this species in captivity for over 10 years. In 2020, an investigation into the genetic material of *T. dohrnii* revealed high activity of genes that express telomerase in the cyst form, similar to lobster. Therefore, telomerase is a key player in repairing jellyfish DNA in its cyst stage so it may carry out its life cycle once again.

Humans cannot withstand more than three days without drinking water. A dehydration of around ¼ of our body mass is deadly. Astonish-

ingly, the resurrecting plant *Xerophyta viscosa* can survive having lost 95% of its water content! This plant lives in regions

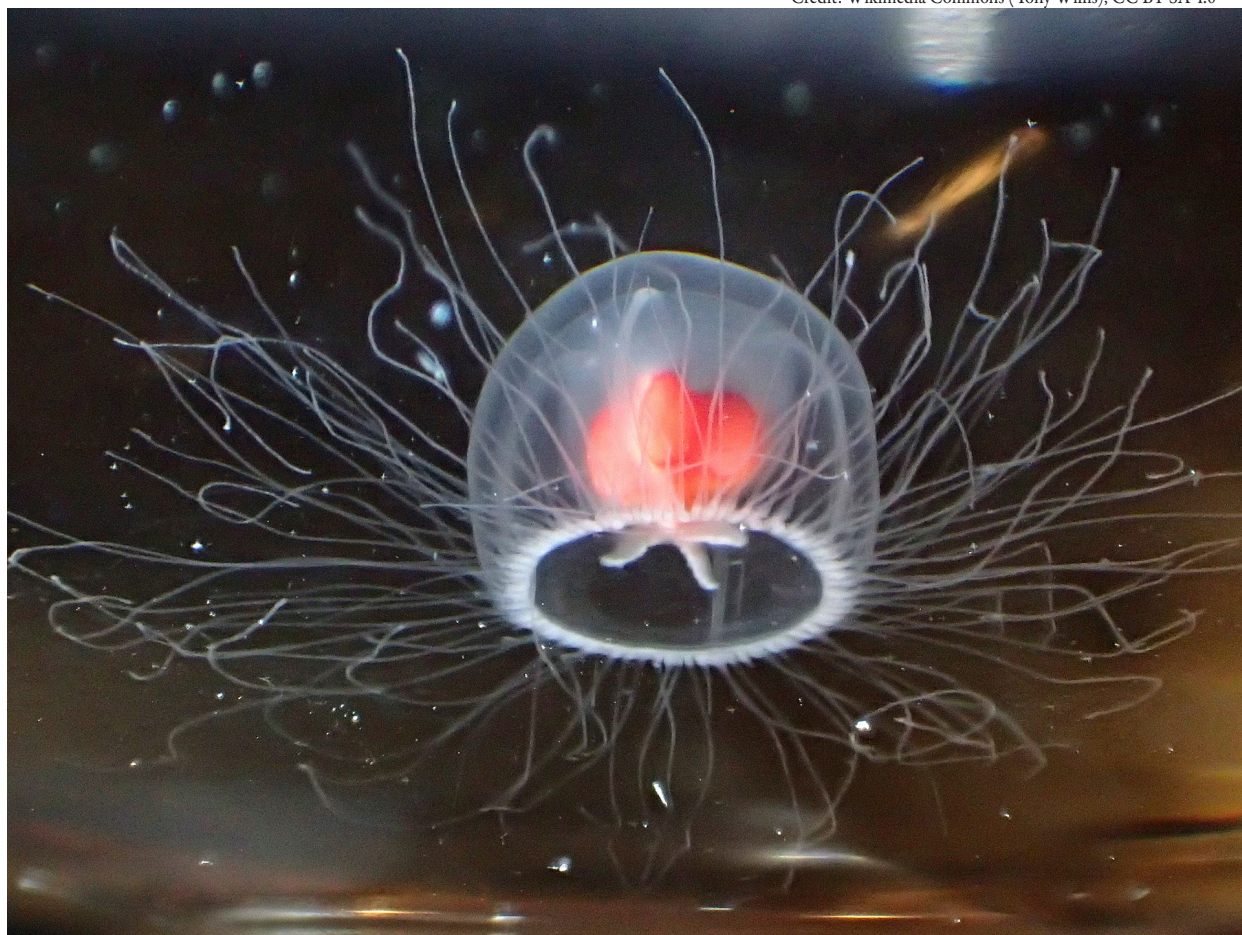
“

XEROPHYTA VISCOSA CAN SURVIVE LOSING 95% OF ITS WATER CONTENT!

of South Africa where there are periods of water scarcity. When *X. viscosa* detects that available water levels are plunging, it starts shutting down almost all its operating systems. *X. viscosa* can halt photosynthesis by degrading chlorophyll, a photosynthetic pigment that absorbs sunlight. Consequently, *X. viscosa* shuts down its metabolism and enters a stand-by state that would be lethal for most living beings. When the environmental humidity begins rising to optimal levels, the plant reacts quickly and can return to its normal metabolic activity in three days as if nothing happened!

Overall, there is a pattern in these organisms. First, they are able to modify greatly the DNA composition and structure in such a radical way that mammals, including us, cannot. Second, they possess the capability to enter into a dormant-regenerative phase (e.g., cyst form in the case of *T. dohrnii*). This would be deadly in human cells as they need to be in constant activity to continue living. Therefore, the “eternal fountain of youth” is still far away, if it even exists.

Credit: Wikimedia Commons (Tony Willis), CC BY-SA 4.0



Turritopsis rubra, a jellyfish very closely related to *T. dohrnii*. It is unknown whether or not this species can transform back into a polyp and “reset” its life cycle

The forgotten C - Cancer during COVID-19

Photo credits: Nicolas Geiseler Toran, 4th Year Mechanical Engineering

James Desmet Science Writer

In 2020, in the United States COVID-19 killed 350,831 people according to the CDC. This figure represents the highest number of COVID-19 deaths experienced by any country across the globe. 602,350 people died of cancer in the same year in the US, and cancer still took the lead over COVID-19 in death toll even in the worst affected countries. It begs the question: in what way has this pandemic impacted the world's cancer patients?

In a recent interview, Dr Jhon Schoonbee, Global Chief Medical Officer at Swiss RE stated, "The key pillars of cancer treatment are treating the physical pathology of the disease and... the support we give the patients, mentally and socially. During the pandemic all of these key pillars have been turned upside down."

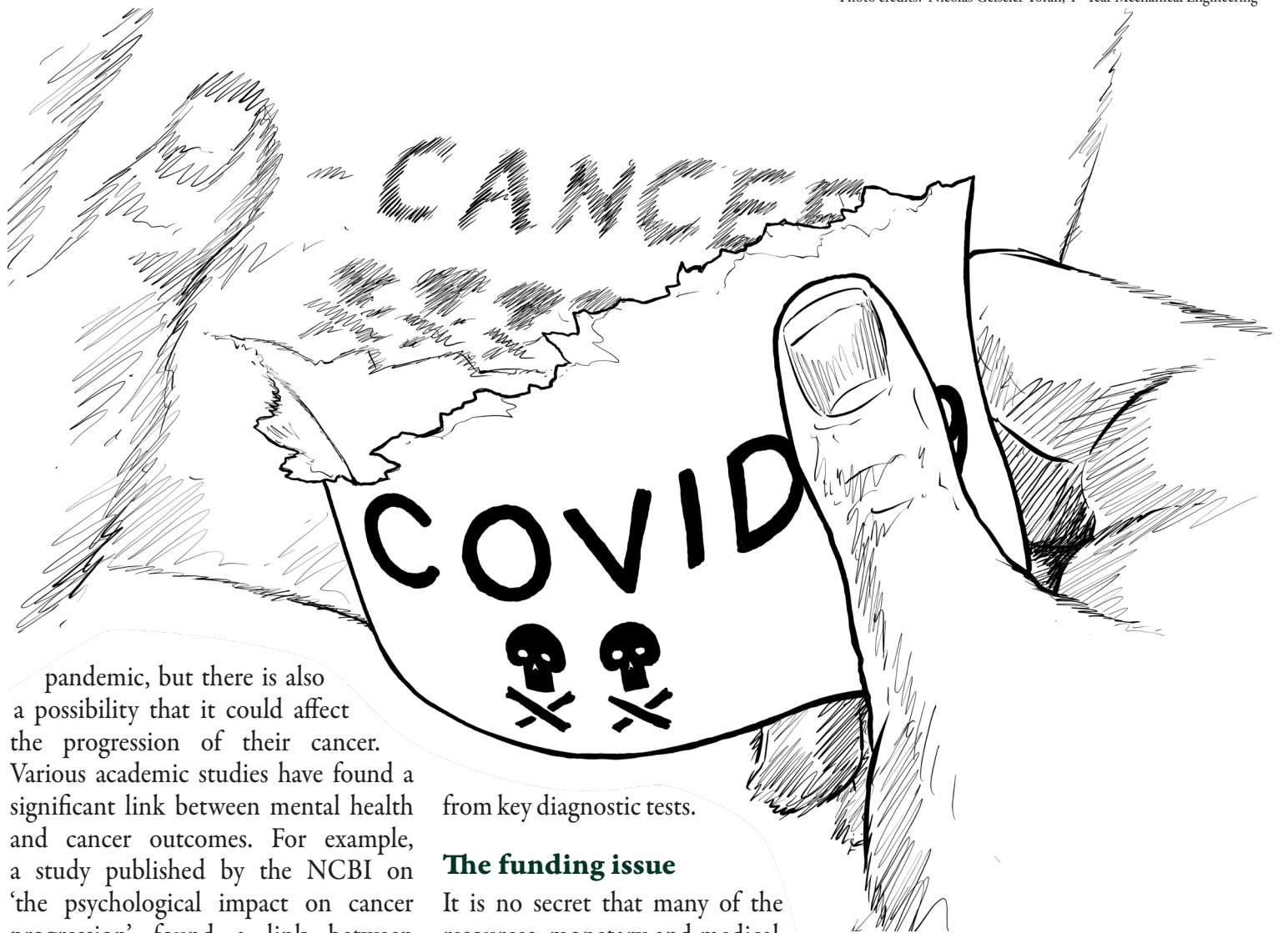
The social impact on cancer patients

Cancer patients are one of the many groups of people classified as vulnerable. As a result of this status, they have been forced to protect themselves for very long periods of time during the various stages of the pandemic. In the UK, the longest continuous period of shielding for vulnerable groups was four months, from March 2020 to July 2020. Since then, there have been other times where they have also been told to shield from COVID, such as in December 2020. Moreover, many individuals also chose to continue shielding even after the advice from governments changed, in order to protect themselves.

Millions of cancer patients were unable or too afraid to do basic everyday things and this in turn impacted their mental wellbeing. Once commonplace routines such as seeing family and friends, having partners attend treatment with them, or just going outside more than once a day were now out of the question.

This reality would have a devastating effect on the mental health of people who hadn't been diagnosed with a deadly disease, never mind those already trying to cope with a cancer diagnosis.

It is clear that patients' mental health has suffered as a result of the



pandemic, but there is also a possibility that it could affect the progression of their cancer. Various academic studies have found a significant link between mental health and cancer outcomes. For example, a study published by the NCBI on 'the psychological impact on cancer progression' found a link between depression and decreased five-year survival rates.

Treating the disease

During the pandemic, healthcare services were pushed to capacity. This meant that various non-COVID-19 related services and treatments had to be scaled back or delayed. Amongst the services that were affected were cancer treatments, particularly diagnosis and early-stage treatment.

The impact was described in a publication by Cancer Research UK, which stated that 3 million fewer cancer screenings took place between April 2020 and March 2021 and that the number of people starting cancer treatments after a diagnosis was down 42% across the same time period.

The same publication highlighted that waiting time targets were also consistently missed throughout the peak of the pandemic, with 88% of patients being seen within two weeks of an urgent suspected cancer referral – the target is 93%. 5-10 times more patients were also left waiting six or more weeks for results

from key diagnostic tests.

The funding issue

It is no secret that many of the resources, monetary and medical, used to fund and conduct research into COVID-19, were redirected from other sources, including cancer research.

Cancer Research UK was forced to divert £45 million of funding in 2021 to ongoing COVID-19 research. This translated to approximately 12 fewer fellowships, 24 fewer research programmes, 68 fewer short term research projects and around 328 fewer researchers working for Cancer Research UK alone.

These cuts will have drastic effects on the progress of cancer treatment, slowing the pace of research. It may very possibly cause Cancer Research UK's stated target of 3 in 4 people surviving their cancer by 2034 to be missed.

Furthermore, the effect of the pandemic may be seen for a prolonged period; Professor Karen Vousden, Cancer Research UK's Chief Scientist fears that the lack of funding may deter research talent from entering the field: "It has a knock-on effect. People who do basic research, fundamental research, a lot of them can answer very important and exciting research questions that

are not necessarily cancer research questions. So we lose these very clever researchers, who think, 'You know, there's no funding here. I'm going to start working on a different topic.' Will they ever come back to us?"

Conclusions

While cancer deaths during the pandemic seem to be similar to pre-pandemic levels, this is likely due to the long-term nature of the disease, spanning years of treatment and fighting. The pandemic's impact will therefore likely not be reflected in mortality figures until around the mid-2020s.

Nevertheless, it is evident that every aspect of cancer treatment and research has been severely impacted by the pandemic. It will likely take a long time for this effect to be fully felt and even longer for the world to recover.

Turning your immune system against itself: How HTLV-1 transforms immune cells into cancer

Photo credit: Dr Kumamoto Utsonomiya

Lorena Mejias Martinez Science Writer

Human T-lymphotropic virus (HTLV-1) is a virus which mainly infects T cells, a type of white blood cell that makes up an essential part of our immune system, and induces chronic and lifelong infection. This virus spreads in the same way as HIV, via blood, sharing needles, sexual contact and breastfeeding. In the majority of people it causes no symptoms, however, in some infected individuals, infection with HTLV-1 can lead to the development of cancer. An estimated 5-10 million people are infected with HTLV-1 worldwide, for which there is currently no treatment or

cure.

Now, an international team made up of scientists from Imperial College London and the Kumamoto University in Japan, have shown that the HTLV-1 is able to cause a rare type of leukemia, known as adult T-cell leukemia/lymphoma (ATL).

How does HTLV-1 cause leukemia?

The team's research was recently published in *The Journal of Clinical Investigation*, and showed that HTLV-1 infects T cells, where it inserts a copy of itself into human DNA in a process known as integration. After integration, the vi-

Credit: Aim Kumpusiri, 1st Year Biotechnology

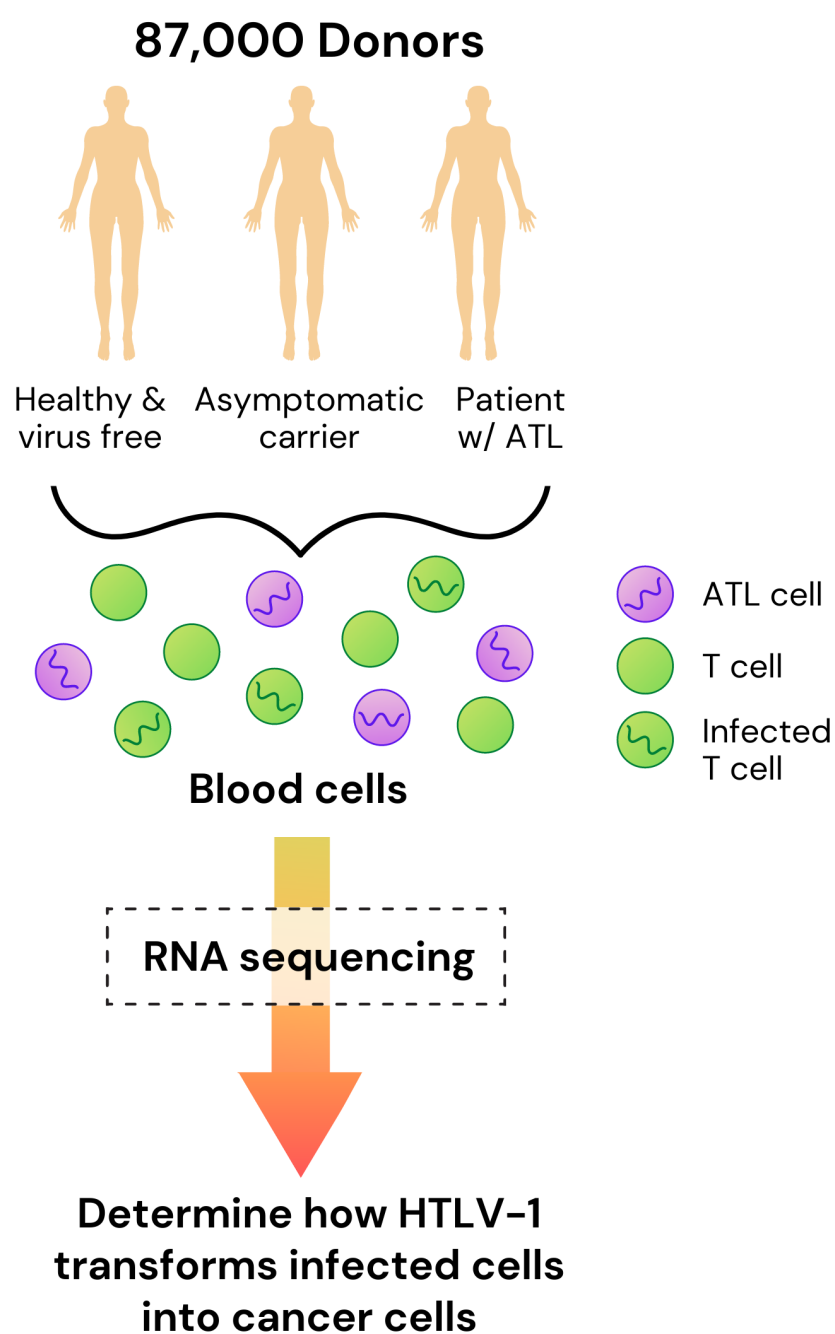
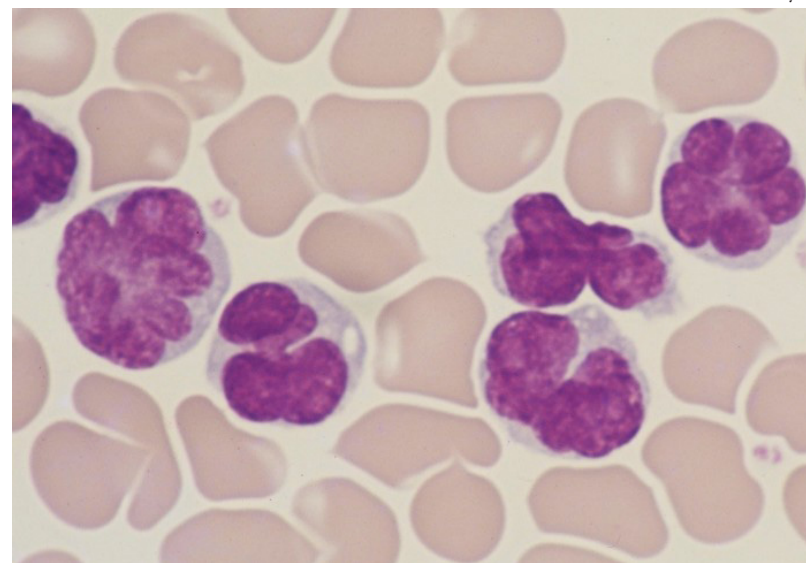
rus remains latent, meaning it does not multiply within the host cells or produce any viral particles. Due to this, the majority of infected individuals will not have any symptoms, and thus not know they

have been infected, remaining as asymptomatic carriers throughout their life. However, 5-10% of infected individuals may go on to develop ATL, decades after initial infection.

In the study, the researchers took T cells from over 87,000 healthy virus-free donors, asymptomatic carriers, and patients with ATL. Then, using bioinformatics approaches, they sequenced the RNA (a simpler, single stranded form of DNA, which carries genetic information) from these T cells, to determine how HTLV-1 causes the transformation of infected T cells into leukemic, cancerous T cells.

Under normal conditions, T cells become activated in order to fight invading pathogens. However, once their function has been completed, these immune cells need to be turned off to avoid an overactive immune response and excessive inflammation. For this reason, activated T cells will then express various proteins that stop T cell activation and restore the immune system back to normal. The team revealed that these immunosuppressive proteins were constantly activated during HTLV-1 infection, allowing the virus to escape detection by the immune system. Overall, the system. The team believe that this persistent activation is crucial to understand how the virus triggers the development of cancer.

Next, the researchers showed that the T cells in individuals who progressed from asymptomatic carriers to cancer were over-reactive and highly activat-



ed. This led these infected T cells to over-produce proteins which keep multiplying, or proliferating. This state of overactivity is believed to make these T cells more susceptible to DNA damage, a critical factor in the development of cancer.

What is ATL?

Leukemia is a type of cancer which originates from the blood or cells of the bone marrow, and is characterized by an increased number of abnormal white blood cells. There are five major types of leukemia, one of which is ATL, for which the survival rate in adult patients falls under 50% percent. Additionally, for patients who do not respond well to treatment or relapse, this percentage drastically drops to 7% percent, signaling an essential need for novel treatment options.

What does this research mean?

Continuing this research may lead to the development of new and improved treatment options. Dr Masahiro Ono from Imperial, one of the leaders of this collaborative study, stated that “the chronic activation of T-cells could be halted by molecules that block signaling pathways that tell the cells to activate. Alternatively, treatments could target the proteins the activated T-cells create to help them proliferate.”

SCIENCE

This week in Science...

FROM IMPERIAL...

Watch out! Risks of head injury from e-scooters simulated for first time

A team at Imperial's Dyson School of Engineering have simulated 185 falls from e-scooters by digital human body models of three different sizes and weights to determine their risk of head injury. Research on the safety of e-scooters is limited, and it is hard to inform safety regulations regarding speed limits, helmet and wheel design and pothole management. Falls at all 5 speeds tested reached the threshold for skull fracture, and speed of impact between the rider's heads and the ground were comparable to the speed used to test bicycles. Only around 4% of e-scooter riders wear helmets, but increasing helmet use may not be enough as bicycle helmets are open-faced, and 44% of impacts from an e-scooter were directly to the face.

Blink and you'll miss it! Fastest ever study of how electrons respond to X-rays performed

Conventional X-rays can cause damage to cells, but exactly how is not known. By using an ultrafast X-ray laser to knock an electron out of a molecule of nitrous oxide and a laser pulse to time the resultant changes, the researchers were able to study the electron dynamics on timescales of less than millionths of a billionth of a second. The pulse created a superposition of different electron quantum states (quantum coherence), and measuring the response revealed a quantum beat, which is a repeated pattern created by the coherence. The "quantum beats" observed are a completely different type of dynamic than is usual, and translate into irreversible chemical change. to tackle poverty and provide adequate social support and healthcare."

FROM AROUND THE WORLD...

Antimicrobial resistance found to be the global leading cause of death

In 2019, bacterial antimicrobial resistance played a role in 4.95 million deaths globally, including 1.27 million deaths directly caused by treatment-resistant infections. Two classes of antibiotics played a role in 70% of these deaths: beta-lactams (including penicillin) and fluoroquinolones. Mortality rates were higher in places with fewer health care resources. Western sub-Saharan Africa had the highest mortality rates. Limiting antibiotic use are key in some areas, but in places like Western sub-Saharan Africa, increasing access to antibiotics are important as second-line antibiotics after first-line antibiotics fail are not readily available.

"Doomsday" glacial is predicted to soon fall into the ocean, potentially causing dramatic sea-level rise

The Thwaites glacier is one of the biggest in Antarctica, spanning 120km across. It is held up by a floating ice shelf jutting out from the glacier which is lodged against a mountain around 50km offshore. Data from sensors placed beneath and around the ice shelf for the past two years have revealed that warming ocean waters are causing the ice shelf to retreat from the mountain, and are creating fractures that is weakening the structure. It could collapse within the next 3 to 5 years, which would raise sea levels by 65cm, making it the world's biggest threat to sea level rise in the next 80 years.

Science Spotlight

Fire Safety in Tall Buildings

with Dr Matthew Bonner, Hazelab

Jamie John Science Editor

Dr Matthew Bonner is a Research Assistant at Hazelab, a fire science research group in the Department of Mechanical Engineering, under the supervision of Professor Guillermo Rein. Dr Bonner researches the fire safety of tall buildings, focusing on the external walls (known as the façade).

"Over the last 30 years, there have been over 50 fires where the façade has ignited and spread fire rapidly across a building", he says. "These fires are getting more frequent. The desire for taller, energy efficient buildings has led to façades being built with newer materials." These materials are lighter and faster to build, better insulators, and visually appealing – but they are often flammable, like some plastics.

Dr Bonner seeks to understand how building façades burn and how we can make them safer. His work integrates experiments with knowledge from the fields of fire science, statistics, machine learning, optimisation and heat transfer. As part of his research, he investigates the safety tests currently used in industry, by setting fire to façades in the lab.

Photo credits: Dr Matthew Bonner/Hazelab



DIN 4102-20 façade fire test

"These kinds of safety tests are used to decide whether facades containing combustible components are suitable to use on tall buildings or not. Although many countries use these kinds of tests to check the same thing – whether a facade will propagate fire along a building – they use test rigs of different sizes and expose the facade to different sizes of fire. We are investigating whether these different methods give consistent results when ranking facades in terms of their flammability, or whether they in fact disagree with each other."

"The images here are of the DIN 4102-20 test, used in Germany. The wall is 5.5 m tall. These photos are from the control test using a facade with non-combustible insulation."

Photo credits: Dr Matthew Bonner/Hazelab



DIN 4102-20 façade fire test: before and after. Dr Matthew Bonner (left)



Theatre

So incredibly wrong it has to be right!

The Play That Goes Wrong ★★★★★

Credits: Photo/ Robert Day

Where? *Duchess Theatre***When?** *Booking until October 2022***How much?** *Tickets from £22*Reviewed by **Ameena Hassan** Deputy Editor

If you wish to experience a bit of adventure this weekend, book yourself tickets to *The Play That Goes Wrong*, performed by Mischief Theatre. During the production, an ‘amateur’ acting group attempt to put on a play called “The Murder at Haversham Manor” — but nothing seems to go right!

By the time we took our seats, the stage had (mostly) been set. The entire show takes place in one location — a grand room of their fictional Haversham Manor, complete with fireplace and accompanying cutlasses. Whilst the set design is static, there are multiple levels for the cast to explore: with a study set on a second floor above a library. The set design incorporates a lift that (quite understandably, given the nature of the play) stops working in the first act. Meanwhile a grandfather clock erroneously shows the time to be 5 o’clock out of sync with both the real world, and the events of the play.

The show starts in a delightfully haphazard manner, with some crew members asking the audience to “check underneath [their] seats” for a missing actor. This merely served to segue into some emergency repairs to the set! (If you do attend, please bring a hammer, because it will be required). The events of the play begin with

The cast of *The Play That Goes Wrong* at the Duchess Theatre, London.

the liveliest corpse you will ever encounter, and within the first five minutes, I was wholly convinced that I had come instead to see the murder mystery: “The Murder at Haversham Manor”. Albeit being butchered by some

Credits: Photo/Robert Day

terrible actors(!).

The Play That Goes Wrong truly satisfies the trifecta of classic “amateur acting mistakes”: missed lines, missing cues, and missing props. What the physical comedy doesn’t provoke, the actors line up themselves in a comedic fashion. Props “innocently” misplaced by one actor result in hilarious consequences a few scenes later — hindsight wonders why the audience had not previously anticipated such an obvious mishap. But it is the transitions between scenes that keeps the jokes fresh, as the build-up invests the audience in trying to spot the next thing to go wrong!

A wronged brother starts a sword fight (what did you expect, putting cutlasses next to the fireplace?); but it turns into a good game of play fighting when the swords... stop existing. Paint stripper is the drink of the day it seems, after another comedic “accidental” mixup, with the butler very much unaware that the bourbon he is meant to be serving has turned clear.

Rather disappointingly, the first act ended on a much-laboured gag that lasted far too long to remain funny. However, the intermission had me wondering why my cheeks were hurting; and, despite the unfortunate conclusion to the first half, all the audience re-

Part of the delight of *The Play That Goes Wrong* is trying to anticipate just what is going awry next!

ARTS

markably returned for a second act.

If anyone was wondering how the troupe could possibly top the set catching fire in the first act, these fears are quickly allayed as: murder and betrayal plague the second half.

In keeping with the chaotic brilliance of this show, the leading lady gets knocked out and recast so many times I had to give up keeping count. In fact, I'm pretty sure she spent more time unconscious than acting at all!

The physical tension built up from the deteriorating set eventually gives way—there were gasps and screams from audience and actors alike as the set breaks—put-

“

**YOU'D THINK
THEY'D RUN OUT
OF THINGS TO GO
WRONG... BUT, I
ACTUALLY LEFT
DISAPPOINTED THAT A
FEW THINGS DIDN'T!**

ting actors in precarious positions. Although the scenes (and catastrophes!) in the first act appear crafted for theatre, the second act delivers mishaps so ludicrous you have to question how on earth they can be performed safely.

You would think that they would eventually run out of things to have go awry, but I actually left disappointed that more things didn't go wrong! For this reason alone, I was almost tempted to give this a 4.99/5 rating, but I have to concede that it does, in fact, deserve my five-star rating.

It is perfect for people who appreciate this type of humour, and I would recommend watching a few excerpts of previous abridged performances before confirming your tickets. With Covid passes and e-tickets in hand, we were seated within 3 minutes of approaching Duchess Theatre, and I promise that staying for Act 2 will be well worth it!

Poetry Corner

Foreign and Pleasant Land

Credits: Photo/ Brett Jordan

By Alexander Cohen Arts Editor

There's a bench on Hampstead Heath
that bears my family name,
so I wandered one morning
to search for it in vain.
Hot coffee breath panting
over mud kissed trainers squelched
seeing off hours under grey clouds idling
the city's screech is miles away
but here lies the gentle wind's poetic hum.

There are benches bearing lovers' names
tattooed in their wooden flesh
for all the world to see and remember
someone who it never knew
but those benches stand alone
rejected at the school dance sulking
with nobody to take them home.

But not the bench of M. Cohen!
the holy man, the holy priest,
the father's father who never
spoke his grandson's name.
Your bench is my inheritance and
I will claim it as my own and
never leave it alone
as if I had been on that
long Exodus first hand
and claimed its view for my own:
no more a stranger in a foreign
green and pleasant land.



The view from Hamstead Heath in North London.

What's on?

Coming up soon...

Cyrano de Bergerac @ HPT

James McAvoy reprises his role as Edmond in *Cyrano de Bergerac* at the Harold Pinter Theatre next month for a limited five week run!

Opens 3rd February 2022

Red Pitch @ Bush Theatre

A new coming-of-age play penned by British playwright Tyrell Williams about belonging, home, and football. Set in South London, this new play is a fast-paced look at gentrification and community.

Opens 16th February 2022

The Collaboration @ Young Vic

Set in 80s New York City, Andy Warhol and Basquiat become the talk of the town when they agree to collaborate on what quickly becomes the most hotly anticipated exhibition in modern art. *The Collaboration* is a new work by Anthony McCarten's debuting at the Young Vic this month!

Opens 16th February 2022

Check out our reviews of...

Peggy for You @ Hampstead Theatre

"If you enjoy light-hearted comedies, then this play is a perfect choice for you!"

★★★★ Reviewed by [Sophie Elizarova](#) (1789)

Marriage of Figaro @ ROH

"What better opera to start with than one that celebrates love — that most fickle and amorphous of human experiences?"

★★★★★ Reviewed by [Alexander Cohen](#) (1789)

Are you an aspiring arts writer?

Drop the Arts Section an email or join our Facebook page for the opportunity to review live performances in and around London!

Exhibition

Our Broken Planet:

How We Got Here and Ways to Fix It – Natural History Museum Temporary Exhibition

Credits: Photo/ Trustees of the Natural History Museum

Our Broken Planet

**Where?** *Natural History Museum***When?** *Until late summer 2022***How much?** *Free when booked*Reviewed by **Zanna Buckland** Books Editor

It is no secret that our planet is broken, and that time is running out for us to take the necessary action to fix it. 'Our Broken Planet' is a semi-interactive temporary exhibition that should probably become a permanent one, as we'll likely be fighting the climate change war for at least the rest of our generation's lifetimes, if not longer. In over 40 objects and images, the exhibition details the many battles that humans can, and do, wage against the loss of biodiversity, increase in greenhouse gas emissions, and the resulting increase in the average temperature of the Earth.

As you enter the 'Our Broken Planet' exhibition, you see a vast high-ceilinged room, with simple dark-walls, much like other exhibits in the museum. There are numerous small displays scattered throughout this room, mounted against dark grey backgrounds with spotlighting. Each individual display highlights a particular environmental issue, or side-effect of climate change.

One display entitled 'Wheat for a Hotter Future', is of two different varieties of wheat; 'common wheat' which dominates our population's wheat intake, and 'emmer', a sturdier variation that could be more tolerant of our planet's rising temperatures. It may soon become necessary to adopt a wider variety of food sources as the agricultural sector adapts to the challenges an altered climate brings. This would not only increase



The exhibit curiously curates a selection of objects chosen by scientists.

humanity's chances of future survival, but could encourage restoration of greater biodiversity, not only for plant species, but for animals too.

'People, Pets, and the Planet', another exhibit, presents two models of a *Canis lupus familiaris* (a dog); one is an English Bulldog, and the other a Samoyed. It describes how our attachment to owning pets is having a profoundly detrimental effect on the planet, as their consumption of food and other products is similarly unsustainable to our own. The visual juxtaposition of the two varieties of dog is also a reminder of our continued control over the environment and how our domestication of animals has led to somewhat unnatural breeding. The bulldog is often seen as a monument to Britain, but consistent inbreeding of these creatures to maintain their iconic look has led them to display genetic health issues such as ear and skin infections and obesity that are generally less common in their mon-

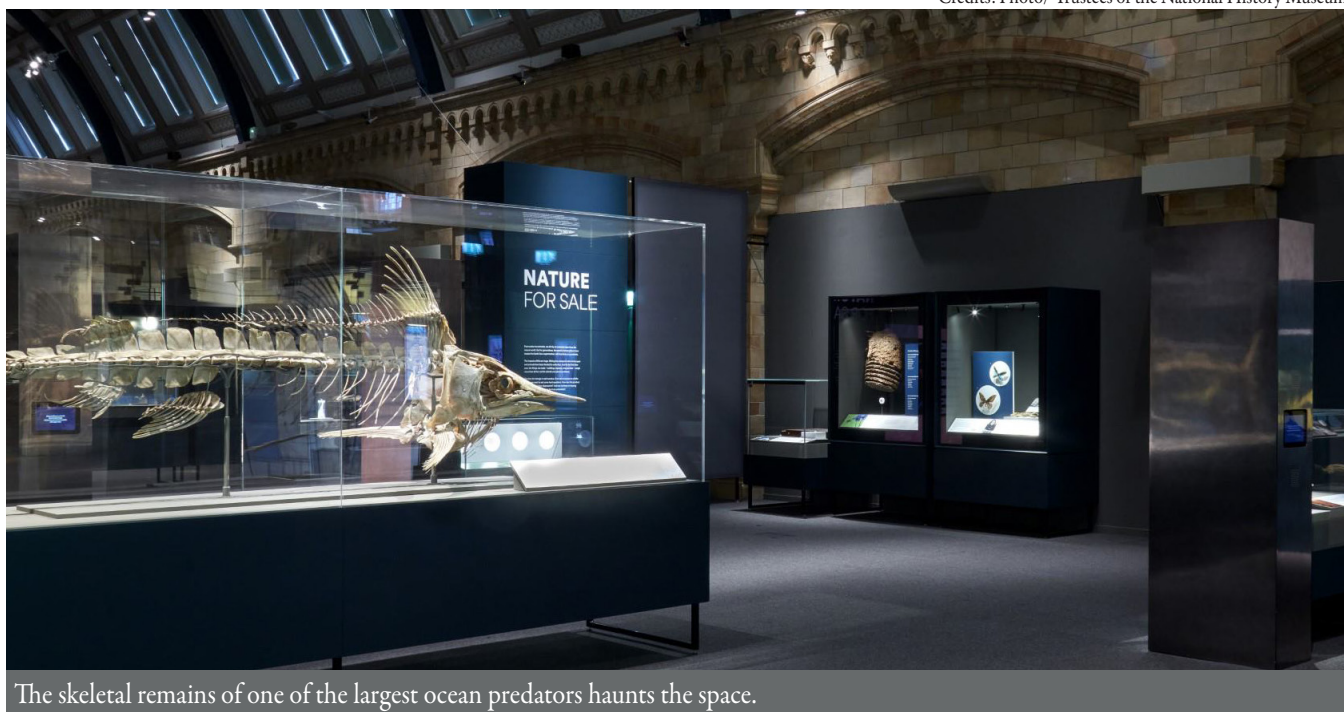
grel counterparts.

The interactive stations appear to be designed for children, but they may also engage adult visitors. These include an area where visitors can pick up an eco-warrior sticker, containing slogans describing an action the wearer will take to reduce their carbon footprint, and one where visitors may write a climate-focused idea or message on a coloured paper circle and add it to a collaborative wall. A good way to get people thinking and engaging with the climate crisis, but one wonders whether there might be more environmentally-friendly ways to do so that don't involve the use of disposable paper?

There are also displays concerning the rapid decline in diversity of insects such as bees and butterflies; the benefits and challenges of seaweed farming for the food industry; how jellyfish could be the next major superfood trend; and whether experimental deep-sea mining will be a potential solution to on-land mining, or present us with a new way to destroy our home planet. These sit alongside a number of contemporary art installations that are designed to make you think about our situation (and appeal to the Insta junkies!) – these include a fake phone charging at the wall with text messages about power usage, and a mirror with 'my species really can make a difference to our planet' written on it.

I believe there is more that could be done to make the exhibition itself more sustainable, to reflect what it advocates for. However, I also believe that it could be expanded and made a permanent fixture at the museum, as it is thought-provoking and inspiring, and brings to light many of the niches of the climate crisis, and I would happily recommend it to anyone who can find the time, and gladly visit again myself. It addresses the question of how we as individuals can and should aspire to contribute to the repair of our broken planet. After all, it is still the only one we have.

Credits: Photo/ Trustees of the National History Museum



The skeletal remains of one of the largest ocean predators haunts the space.

ENVIRONMENT

Edited by: MONAMI MIYAMOTO
MONIKA YORDANOVA
MARIE MORI
JACK CRIBB

Hippos in Colombia: The tale of a charismatic invasion

View online here! 

Carolina Piamonte Environment Writer

Colombia is considered one of the world's most diverse countries, making up 10% of the planet's biodiversity. Surprisingly, the most publicised species living in the country is not Colombian. This is a tale about a foreign species: the hippopotamus. Hippos live natively in sub-Saharan Africa where they spend most of the time in water. So how did these hippos end up in Colombia?

Back in 1981, drug lord Pablo Escobar imported three females and one male hippo, amongst other exotic animals, from a zoo in the USA to his ranch named Hacienda Nápoles. This 20 square-kilometre ranch is located close to the Magdalena River, which is the main river of Colombia, travelling over 1,528 kilometres. In 1993, Pablo Escobar died and with him his exotic zoo—most animals were distributed to other preservation sites. An exception were the hippos, who were left in their comfortable pond, mainly due to transportation difficulties as well as the lack of awareness at the time of any risk of leaving the hippos behind. By 2006, when the ranch was remodelled as a touristic park, the initial hippos had reproduced into approximately 16 individuals, wandering through the premises and proximate ponds. More recently, these hippo offspring have been sighted 100 kilometres up the river.

Currently, there is no census data available for the hippo population in Colombia, but models are predicting over 5,000 individuals by 2050. This rapid increase in population reflects the gravity of invasive species. These hippos don't have natural predators in the country, are enjoying wetlands areas that last the whole year (in Africa the dry season diminishes their living conditions), and find enough food from the biodiverse area. It has even been found that they are maturing faster than their fellow African individuals, due

to their excellent growing conditions.

In 2009 some hippos started living closer to villages, affecting crops and cattle. Given this situation the government and hunting specialists killed one male hippo named Pepe. Pictures of the deceased Pepe were seen with outrage in the world. So much so that a US federal judge granted the description of "interested persons" to these hippos, becoming the first time that the American judicial system has recognised the legal personhood of a nonhuman. After culling was banned in Colombia, the new measure from the government has been to sterilise the individuals. Unfortunately, this process requires complex logistics and is slow and costly. In addition, experts have announced that this measure will only be successful if a high proportion of males are castrated rapidly.

Still, the problem becomes bigger with time. The consequences of this charismatic species range from endangering native species, such as

manatees, to causing changes in the river. For example, an increase in algae and oxygen depletion have been attributed to the hippos' faeces. Also, it has created a divide between locals—those that have found in hippos the perfect touristic attraction and others affected by hippos destroying their livelihoods or threatening their lives.

A political debate has arisen with opposing views on what the future of the hippos in Colombia should be. A candidate for this year's elections has suggested building a sanctuary for the animals, based on the moral standard that the hippos have a right to live. On the other hand, this idea has been criticised given its costs and lack of coherence for preserving hippos over Colombian native endangered species. In this sense, some have suggested that it is time to acknowledge this charismatic species as an invasive and dangerous one for the country, and to not discard culling as a possible way out.

The solutions are far from ready,

especially in the public scene where Colombia has adopted hippos as an unofficial mascot. This issue needs to be prioritised immediately by the government, gathering experts, locals, and scientists, amongst others, to discuss the current situation and the need to work fast and forward to avoid damages and further expansion of this species that doesn't belong, however attractive it is.

NB

With this article I want to expand on an issue analysed by the students of the MSc of Environmental Technology last term regarding the hunting of charismatic species and the debates it imposes. This time with a case from my home country Colombia where this invasive tale comes in hand with the consequences we are still living from our history, which in many ways relates to the environment.



Illustration by Natalie Yu

Science Museum Exhibition: an Environment perspective

Rachel Rajan George Environment Writer

The exhibition, named 'Our Future Planet', showcases the potential of carbon capture in reducing the amount of carbon dioxide in the atmosphere. Carbon capture is the process by which carbon dioxide emissions from industrial processes are collected and stored before they enter the atmosphere. The diverse methods on display range from applications of hard engineering to nature-based solutions.

A direct air capture machine takes centre-stage in the exhibition hall. This technology was developed by the Swiss company, Climeworks. Each unit can remove 50 tonnes of carbon dioxide from the air annually. Companies and individuals can employ Climeworks to remove carbon dioxide on their behalf, enabling others to take ownership of their carbon dioxide emissions.

Ambient air enters the unit through a collector, following which carbon dioxide is removed through a filter. After the carbon dioxide is stored within the machine, the residual air is discharged from the unit. The stored carbon dioxide can then be used for commercial purposes such as manufacturing bracelets or carbonating fizzy drinks.

Engineering solutions were also presented such that they mimic the natural process in trees. Professor Klaus Lackner from Arizona State University designed a mechanical tree to capture carbon dioxide. The leaves of the tree are coated with carbonate-containing resin which combine with carbon dioxide to form bicarbonate. As the leaves move towards the base of the tree, they get wetted. Consequently, the bicarbonate reverts back to a carbonate



form, releasing carbon dioxide into a storage chamber. When the lid of the base is opened, the leaves get air-dried before the carbon capture process is repeated. A prototype of the mechanical tree towers over all the other exhibits.

The pressing need for a massive storage space becomes evident after the carbon dioxide is captured. The UK is in a good position to employ carbon capture technology due to its close proximity to the emptying oil fields at the Northern Sea and Irish Sea. The Northern Endurance Partnership facilitates offshore transportation to sequester

the UK's captured carbon at sea.

To circumvent the requirement for storage, nature-based solutions can be employed to organically store carbon dioxide. The Carbfix project, originating from Iceland, offers a natural storage method by combining carbon dioxide with underground stone. Carbon dioxide is dissolved in water and then injected into reactive rocks which are rich in metals. These rocks function as a permanent store for carbon dioxide as the carbonates formed in this process are chemically stable.

To minimise the embodied carbon

used in construction materials, civil engineers are starting to prefer the use of wood over concrete and steel. A model of a building with wooden frames and flooring is displayed in the hall. Such a building is set to be constructed at Goldsmiths, University of London with sustainably sourced timber.

Echoing the recently renewed call for tree planting, the exhibition highlights some forest management strategies. Good upkeep of trees in a forest will allow for their carbon-capturing power to be maximised. A soil respiration apparatus developed by the University of Birmingham is displayed at the exhibition. This device can be used to measure the carbon dioxide released by soil, roots and fungi in a woodland ecosystem. A falling branch during a tornado resulted in the dent seen on the apparatus.

The enthusiasm of the developers of these innovations was evident in the video presentations displayed around the exhibits. The next step will be to transform these laboratory-based innovations into mechanisms that work on a large scale. Our endeavour to reduce the amount of carbon dioxide in the atmosphere will also benefit from global policy and political will. The free exhibition will run till September 2022. Visit the Wellcome Wing, Level 0, at the Science Museum to learn how carbon capture systems can rescue our future planet.



Science Museum Exhibition: an Environment perspective

Monika Yordanova Environment Editor

The UK government is once again placing the interests of large companies above the health of our planet and its inhabitants—this time allowing agricultural giants to ship thousands of tonnes of illegal pesticides to countries with less stringent regulations.

According to data unearthed by Greenpeace, the UK is not the only country to make use of legal loopholes allowing it to ship pesticides illegal for use under its own jurisdiction, however it is the largest exporter. Based on official 2018 figures, the UK exports three times more than the amounts shipped out by the second country on the list, Italy. It is also more than four times compared to Germany and France. As this data surfaced, the EU has stepped up to lead by example and ban the ongoing production and export of illegal pesticides, yet as the UK is no longer part

of the union, such legal amendments will not be applicable within its borders.

But what is the problem—aren't pesticides important for ensuring food security in our increasingly unstable environments and growing populations? Yes, pesticides can be important tools when tackling a variety of agricultural pests faced today, however, they encompass a wide range of chemicals. Pesticides are consistently tested, and new pesticides are constantly being developed leading to safer options available both for the planet and people (especially farmers).

Some of the insecticides shipped by the UK are the neonicotinoids, thiamethoxam, imidacloprid or clothianidin, which can have devastating effects on pollinator health. Bees, wasps and beetles act as ecosystem engineers, as their foraging behaviour allows the spread of flowering plants which provide the basis for a myriad of food chains.

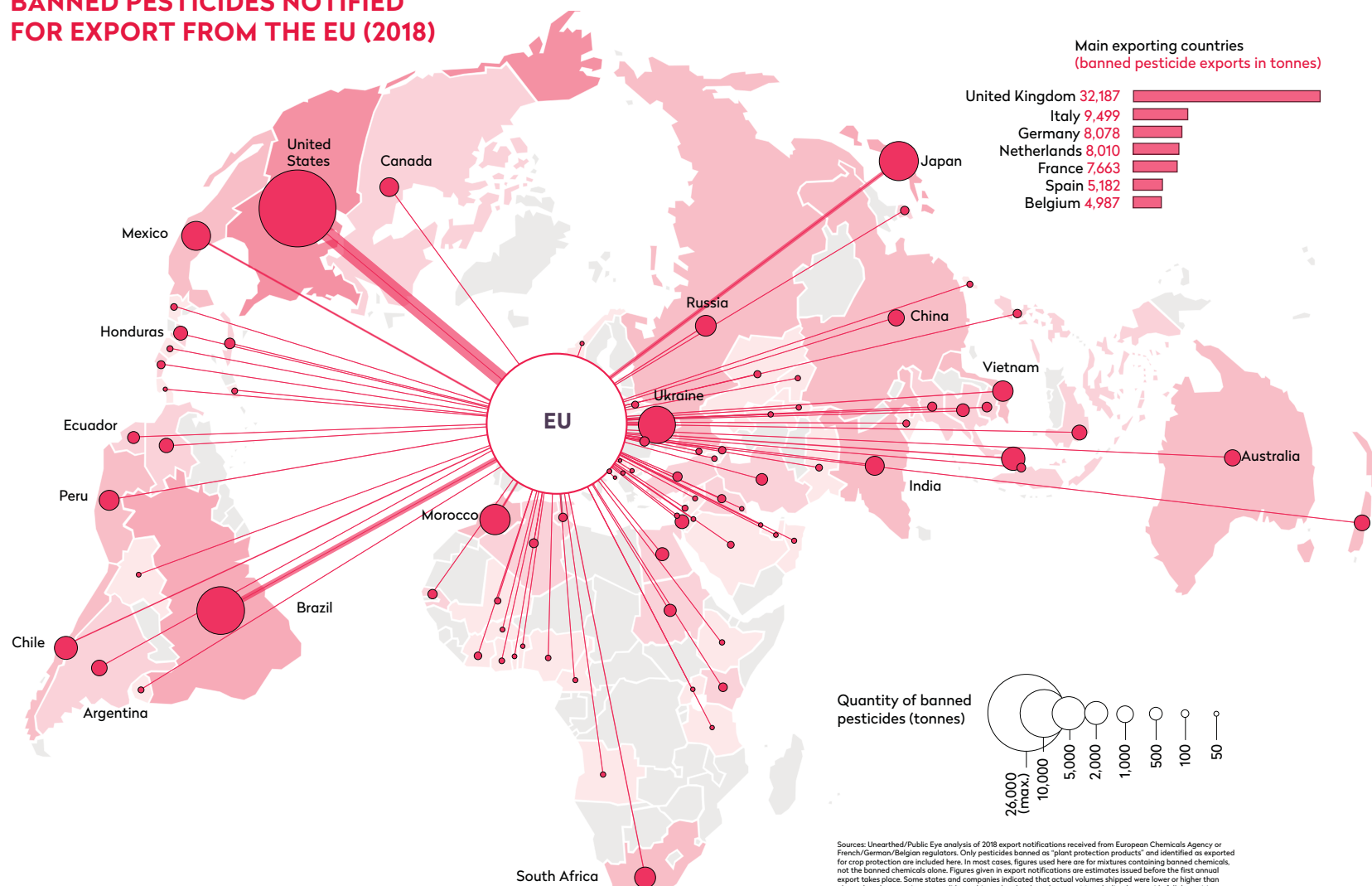
Neonicotinoids disrupt the behaviour and cognition of pollinators and increase their susceptibility to diseases which can increase their mortality and reduce their efficacy in maintaining our ecosystems. Furthermore, they can reduce the reproductive success of native pollinators, which are especially important for maintaining local species' richness. Reductions in the populations of pollinators can therefore have downstream effects on biodiversity losses throughout entire landscapes as food sources for other species become depleted.

Pesticides are also continuously evaluated to ensure their safe contact with humans, but unfortunately not all of them pass with flying colours. For example, paraquat is so potent, a single sip of it can be lethal. So much so that it has become a common suicide method in countries where it is available and countries that have banned it such as

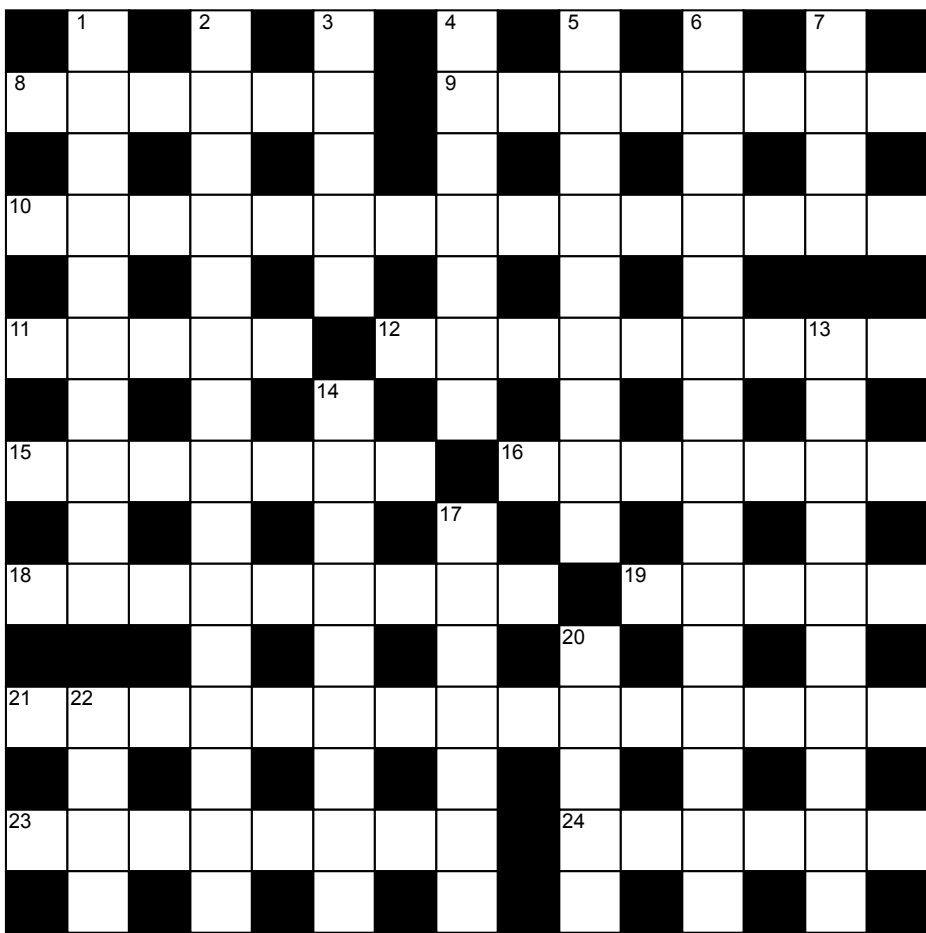
Sri Lanka have seen major decreases in suicide rates. But similar to bees, humans can experience sublethal effects as a result of chronic exposure to pesticides and this has been widely linked to Parkinson's, pulmonary and kidney diseases.

Yet despite all the evidence, regulations regarding this are wavering in the UK. While the problem may seem fixed at home, the global ecosystem is interconnected. By producing and shipping these chemicals to the United States, Brazil, Mexico, Colombia and Ecuador, we are ensuring that it is their people and ecosystems that will suffer instead of us. By its inaction, the UK government is actively prioritising the profits of large corporations over the lives of people and our planet. But who knows—perhaps with the interest of the UK to arrange trade deals with the US, maybe our pesticides will wind up right back on our plates one day.

BANNED PESTICIDES NOTIFIED FOR EXPORT FROM THE EU (2018)



CRYPTIC Crossword Grid



CRYPTIC Crossword Clues

Across

- 8) Terrible A&E making us worse-off. [6]
- 9) How the words in some of these clues must be! [8]
- 10) Treat diseased cochlea to get data. [9 6]
- 11) Have had fifty to cut. [5]
- 12) Grand creature? [9]
- 15) Smear the colour on a lateral flow test so it's unclear! [7]
- 16) Might your stomach feel like this if you eat wood? [7]
- 18) Two blokes in the older period. [9]
- 19) Spoilt brat with nothing to stop him. [5]
- 21) I would choose between the sick one and the orange ladybug on getting your first insect subject. [15]
- 23) None have that structured soul like Chopin's piece! [8]
- 24) Pet found in laundry net, back-to-front. [6]

Down

- 1) Is the replanned mall hotbed for stores going dormant until later? [10]
- 2) You all! [15]
- 3) Stuff right inside it for some flare. [5]
- 4) Kind of band with sound like an air stunt? [7]
- 5) Fatty part you get when you break into fish? [9]
- 6) Company of MP has bad IT proficiency all-round, causing disagreement. [15]
- 7) Most dreadful misery when you're only at half-mast. [4]
- 13) Profound sadness when the man ungracefully petered out. [4 6]
- 14) Committee of leaders for bed part. [9]
- 17) This cat can rest up the right way. [7]
- 20) Get smashed even though you've got no money! [5]
- 22) Get a sore back from that love god! [4]

REGULAR Crossword Clues

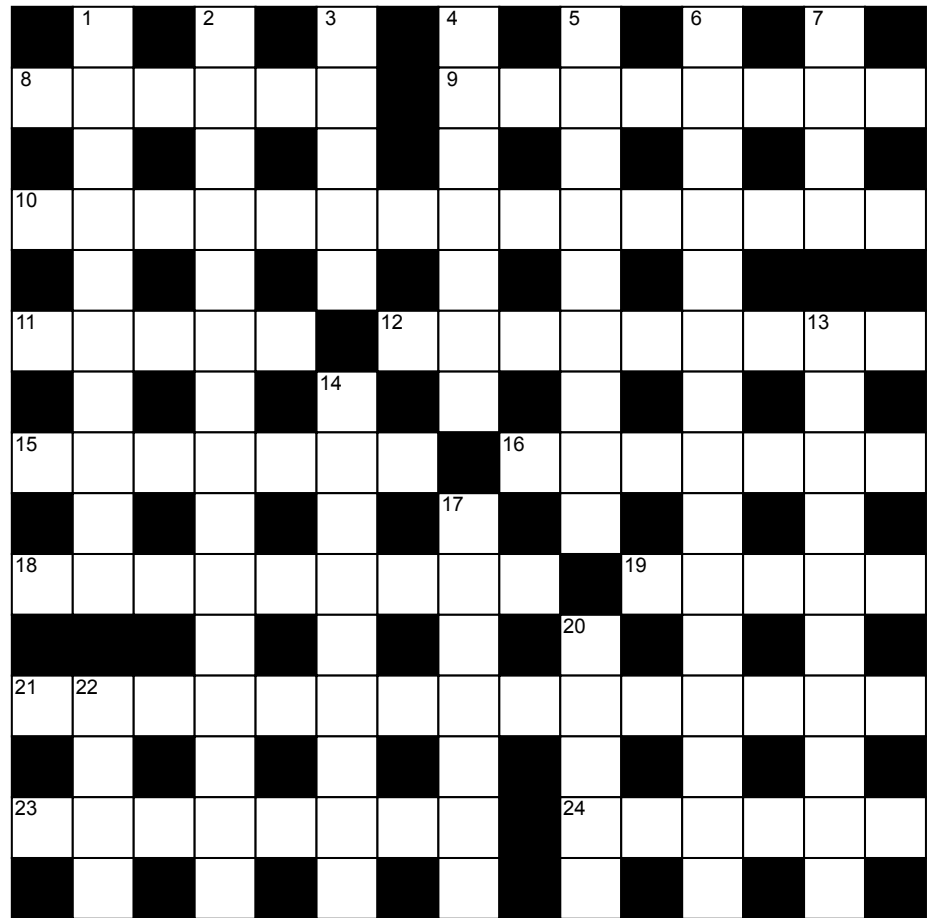
Across

- 8) Produce foam. [6]
- 9) Takes for true without evidence. [8]
- 10) Psychological influence on physical change to the brain. [15]
- 11) Instruction in bread recipe. [5]
- 12) Blind adoration. [5 4]
- 15) Level, rank. [7]
- 16) Medusan arch nemesis. [7]
- 18) Jubilation. [9]
- 19) Berlin airport. [5]
- 21) Famous spectrum in physics. [15]
- 23) With which serious crime might be committed. [8]
- 24) Consultant for future prediction. [6]

Down

- 1) Religious building or tent. [10]
- 2) Drugs, vaccines, etc. [15]
- 3) Vine fruit. [5]
- 4) Let oneself be known. [5 2]
- 5) One with five sisters, for example. [9]
- 6) System with bones and tendons. [15]
- 7) Amphibian and phobia of Agatha Trunchbull. [4]
- 13) London theatre and light entertainment style. [10]
- 14) Jackman in X-Men. [9]
- 17) Originated. [7]
- 20) Shelter of a Canadian native. [5]
- 22) Expelled through the cloaca. [4]

REGULAR Crossword Grid



Easy Sudoku

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

Normal Sudoku

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

Difficult Sudoku

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

THE HEADLINES THIS WEEK...

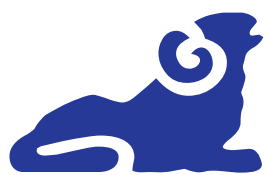
China struggling to think of ending for Breaking Bad that shows the CCP in a good light

Financial expert? This woman knew she'd spent too much on drinks this month before Monzo even told her

Pen Farthing sets things straight by personally putting down all those dogs

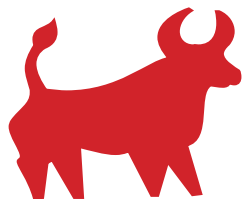
Quantum pubic crabs prove statistically impossible to get rid of

Officials unsure of next move after walking in on Chris Whitty blowing a raspberry on Vallance's tummy



ARIES

This week finds you spitting directly into the LFT



TAURUS

This week your supervisor asks you if you want some hot milk before bed



GEMINI

This week you are so starved of attention you smoke inside to get attention from your smoke detector



CANCER

This week a sexual harrasment case leads to Sergeant Pusspants demoted to Private Sillywhiskers



LEO

This week lecturers are excited as interest rates rise (idk I don't do money)



VIRGO

This week you look speculatively at the raw potato at the back of the cupboard



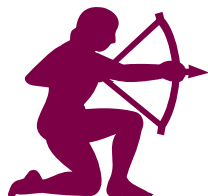
LIBRA

This week you find your flatmate's pubes in the toilet



SCORPIO

This week your flatmate finds your pubes in the toilet



SAGITTARIUS

This week your Hinge date goes poorly and you ask him what prompted putting 'humour' as one of his qualities



CAPRICORN

This week you're sactioned by the government for deepfaking a video titled 'Winston Twerkhill'



AQUARIUS

This week you run out of floss so just use Timothée Chalamet instead



PISCES

This week you fight antibiotic resistance by sucking the mud off the soles of your shoes

CATNIP

NEW CONSUMER PRICE INDEX BASKET ANNOUNCED

Already under pressure from a developing cost of living crisis, the government has reacted with dismay to news that kebabs, Jager bombs and second hand jeans among other objects considered 'essential' by students will be added to the London University Consumer Price index basket of goods.

Having long fought against the change, a senior government employee told NegaFelix, on the condition of anonymity "The amount that the average student in London will spend on a tote bag is obscene. Rent, food or going out will all be ignored in favour of one more raw hemp commune produced shoulder bag. If the prices of these goods get included in inflation calculations, we are in big trouble."

However, London students have applauded the move as drawing attention to the price gouging going on by bad faith actors. First year DesEng student and style

influencer Ann Faylward told NegaFelix "A large part of the reason I came to Imperial was to access the London charity shops. It hasn't been anything like I imagined though. When I ask for a student discount they actually increase their prices."

Research by this newspaper shows that public perception of students has changed enormously since the early Noughties and they are now regarded as one of the most affluent groups living in London, and landlords, club owners and kebab shop captains are keen to take a slice out of this wealth. Efforts to sample members of the student population, however, have been stymied by the large proportion of students unable to hear questions due to their AirPods.

Students have also reacted with dismay to the College's response to the crisis. Union President Oiled Hames said in the statement "We here at the Union did

not find the College's suggestion that they 'shout at the shopkeepers until they cry and resign' a workable solution."

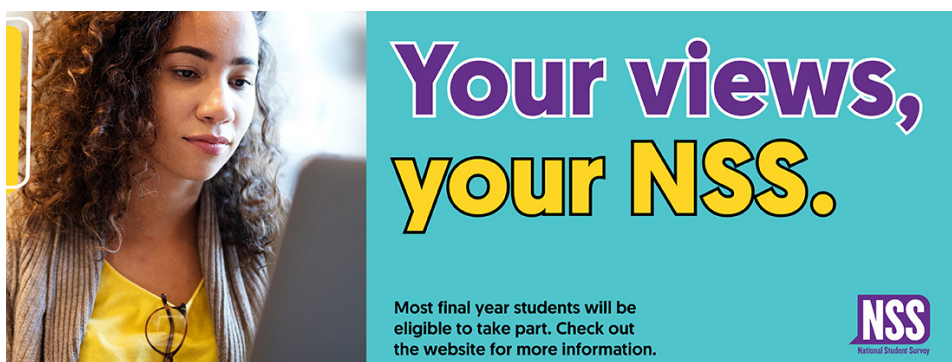


Artistic interlude

By Karolina Wilgus



Your Union



Complete the NSS!

Are you a final year undergraduate? Then it's time to rate your experience at Imperial as the 2022 National Student Survey is now open. In truth, you've got until 30 April to complete it, but you might as well do it now, right?

The NSS asks you to rate the extent to which you agree with 27 statements grouped into 9 subject areas such as teaching on your course, the support you received from staff members and the resources you were given to support your learning. You will also be able to highlight any particular positive or negative aspects on your student experience.

If you have something to say, would like to influence your own and others' experience at Imperial, complete the survey at www.thestudentsurvey.com.



The Sexual Misconduct Survey

Last year, the Union teamed up with ICUsToo (Imperial's campaign group against sexual violence) on an unprecedented project at Imperial: to create an anonymous survey which gauges the prevalence of sexual misconduct at Imperial, the degree to which students feel able to access support, and the situations in which it occurs most often.

Over a period of 1 month over the summer of 2021, we gained over 600 responses. The perspective that they shared was heart-wrenching but not altogether surprising.

- 30.8% of respondents reported having personally experienced sexual harassment. Of these respondents, 84.2% were women.

A significant number of sexual misconduct at Imperial are heterosexual women



- 15.0% of respondents reported having personally experienced sexual violence. Of these respondents, 87.5% were women.
- Students with disabilities are more likely than able-bodied students to experience both sexual harassment and sexual violence.
- Union bars, off-campus socials and halls of residence are the top three venues in which sexual misconduct takes place.
- Only 18.7% of survivors sought the help of support services at Imperial College. The most named reason for not seeking support is that they did not think that any action would be taken.

Union Bars were selected as the most common venue for sexual harassment



Now that we have a much-needed understanding of where the problem areas are, the Union will take steps to action the recommendations which are outlined in the report. This will involve liaising with the College on their communications, working with Student Services to improve the accessibility and visibility of support services, and taking part in a full review of the College's Student Disciplinary Procedures. We need to work together to ensure that survivors feel heard and supported and create a culture of respect for consent.

If you want to read the survey report you can find it on our website in DP Welfare's latest blog.



Your Union



**OPEN
MIC
NIGHT**

OPEN MIC NIGHT

Friday 28 JANUARY 2022 | 19:00 | Metric

Join us on the 28th January for the first Open Mic Night of 2022! Get involved, whether you're a seasoned performer, or this would be your first time playing in front of others (kudos!) In the bustling, lively surrounding of Metric, this will be a great opportunity for an exciting evening enjoying a pint and some great music!

imperialcollegeunion.org/whats-on/event/10456



MEETING OF THE MINDS

Saturday 29 JANUARY 2022 | 08:30 | SAF

Meeting of the Minds 2022 will bring you talks, seminars and workshops spanning across the many disciplines within neuroscience; from computational to real-world applications.

imperialcollegeunion.org/whats-on/event/10398



NT LIVE: LEOPOLDSTADT

Monday 31 JANUARY 2022 | 19:00 | Union Concert Hall (Beit Building)

Filmed live on stage in London's West End, 'Tom Stoppard's masterpiece is magnificent' (Independent) and should not be missed. Tickets for Imperial students are only £6, while for anyone not an Imperial Student, they are £10.

Run-time is 150 minutes with no interval and has a rating of 12A.

imperialcollegeunion.org/whats-on/event/10446



**IMPERIAL CINEMA X IC FASHION AND DESIGN:
HOUSE OF GUCCI**

Tuesday 1 February 2022 | 19:00 | Union Concert Hall (Beit Building)

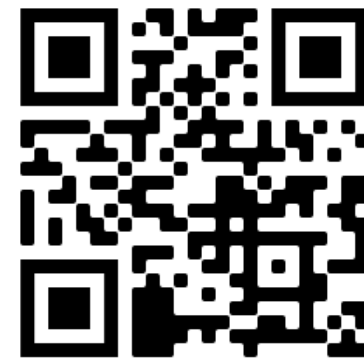
Imperial Cinema is bringing this film to you in collaboration with IC Fashion and Design, so if you are a member of IC Fashion and Design, you can get discounted tickets! To everyone else you are still getting a steal with the regular tickets priced at £5 each!

Tickets can be bought online or you can pay in CASH on the door.

imperialcollegeunion.org/whats-on/event/10447

More info & events: imperialcollegeunion.org/whatson

@ewbimperialchapter
EWB Imperial on Facebook



WORKING
TOWARDS
SOCIAL AND
ENVIRONMENTAL
JUSTICE BY
PUTTING GLOBAL
RESPONSIBILITY
AT THE HEART OF
ENGINEERING

GOOD IDEAS
COME FROM
INDIVIDUALS.
GREAT IDEAS
COME FROM
PEOPLE

Join us!

UK

ENGINEERS

WITHOUT BORDERS

The world as we know it is an extraordinarily complex system of people, their actions and interactions, institutions, and functions. And one cannot change the system by small nudges and ephemeral motivations. There needs to be a shift in perspectives, motivations, and goals and only from there can we progress towards positive radical changes. By understanding that we can do better for ourselves and the things that surround us, we take a step towards changing something that is so intrinsically fractal that it can change the world as we know it. For the better.

For this, we have set up a society at imperial to involve those that are committed to inspiring, upskilling, and empowering students to maximise their potential and bring more value and ethics into their professions, while putting global responsibility at the heart of their work.

Our vision is to provide an open space for our fellow students to discuss pressing humanitarian issues, exchange ideas and critically evaluate solutions, while empowering them with the knowledge and tools to work towards social and ecological justice.

We will achieve our vision through talks and discussions on topics such as “setting up socially and ecologically regenerative projects”, “tackling the systematic issues that underpin issues affecting society” and much more - let us know your ideas! We will also give students an opportunity to upskill through workshops on self-mastery tools, listening, sensing journeys, mindfulness, and prototyping practices. Other ideas down the pipeline include design challenges and hackathons focused on achieving the UN Sustainable Development Goals.

Finally, we will provide a space to innovate through ideating and brainstorming sessions. Focussing on problems we identify, giving members tools for brainstorming and enabling them to come up with ingenious solutions.



TrendyToros

THE NEW PLACE TO FIND OPINIONS
ABOUT CRYPTOCURRENCIES, ALL FOR
FREE!

[TRENDYTOROS.COM/CRYPTO](https://trendytoros.com/crypto)



Felix celebrates Pride Month

Illustration by Aim Ruchipat



FRIDAY 28TH JANUARY 2022

FILM

Edited by: EVA BORRAS

Film review

Encanto

Directed by: *Jared Bush, Byron Howard*Starring: *Stephanie Beatriz, John Leguizamo, ...*

Ameena Hassan Deputy Editor

Encanto is a Columbian word for “enchantment”, and after watching it last weekend, I can say that the name fits. Animation technology has come a long way since my first watch of Aladdin on VCR in 2004, and it shows in this masterpiece.

The main character, Mirabel Madrigal (voiced by Stephanie Beatriz), is the second youngest grandchild in a family blessed with a Miracle™. The Miracle has historically provided a safe haven from looters and blessed all members of the family with various powers that are used to help the rest of the town. All members of the family except Mirabel, of course - for how would we get invested in a classic fairytale if the main character didn't have a tragic backstory?

The backstory is well developed, explaining quite early on how the isolated town came to be, and everything else is attributed to the Miracle. However, the plot is in so much disarray that viewers are left with more questions than answers as the movie progresses. Scenes shift between each other without care for continuity of the narrative.

There are certainly tear-jerking scenes, but despite

terrific buildup, an abrupt change in scene to a “happy” one ruins more than a few moments.

While the pretty scenes of the far-off mountains distinctively remind you of Lilo and Stitch, there doesn't seem to be any sort of moral parable other than “family sticks together”, which Lilo and Stitch have already covered quite well - or, as might well be the case, there are too many moral lessons that can be taken from each scene that it confuses the message.

There were too many characters attempting to play the role of protagonist, with an especial focus on their powers - perhaps to further highlight that the other members of Mirabel's family had made their powers their personality over their ties to each other.

With songs written by Broadway Musical Hamilton creator, Lin-Manuel Miranda, I was expecting a bit more than eight songs squashed in together - some being absolute bops, and others being even less memorable than the three random children who contributed nothing but vague commentary after the first song “Meet the Madrigals”.

Now, “Meet the Madrigals” is somewhat bouncy to listen to, but the star of the entire movie is “We Don't Talk About Bruno”. If you haven't yet heard of it, you were busy with January exams. I still promise it is worth a listen. Bruno (Mirabel's maternal uncle) is the black



sheep of the family - seer of the future, he was asked to investigate the future of the Miracle and family Madrigal after Mirabel failed to obtain power when she came of age. He has not been seen since that fateful night.

Back to “We don't talk about Bruno”, the characters talk about Bruno - did you expect any less? Without revealing too many details, the visual and musical aspects of this song blend in so well together that I would not be surprised if it ended up winning a prize.

Musicality aside, the movie nonetheless leaves a bitter aftertaste, as too much is very abruptly revealed in the last twenty minutes of the movie through flashbacks and vague reassurances that “the Miracle is you.”

Not to fret, there are still comedic moments - the guy who makes the spackle puts a pail on his head to protect it as he headbutts the walls of a crumbling house, an aspiring novella director with wayward actors, and of course, the capybara who does not care about your 'special' circle of sand.

This movie is a feat for the eyes and ears, but certainly not for the brain - I would recommend watching it after grueling coursework, or at a point where your brain is comfortable with nothing of the storyline making sense.

Television

Hawkeye Takes a Bow

Zanna Buckland Books Editor

Following on from the review in Issue 1786, ‘Hawkeye’ has delivered in true Marvel fashion, with twists leading to a satisfying conclusion. Barton and Bishop make every effort to impress in their battle against the Tracksuit Mafia, with a bigger baddie appearing on the scene as Maya Lopez starts to gain our sympathy.

Native American actress Alaqua Cox portrays deaf character Maya, taking the baton from Lauren Ridloff as Makkari in ‘Eternals’. Both Cox and Ridloff are actually deaf, making their long overdue representation in the MCU all the more significant. Lopez has a poignant backstory; a past riddled with crime and the death of her father weighing on her shoulders. Her eventual liberation from the clutches of the mafia sets the scene for a future Marvel TV series in which she becomes the superhero ‘Echo’. The main villain of the series reveals himself to be a crime lord named Wilson Fisk, with the alias ‘Kingpin’, a huge specimen of a man with ties to Daredevil. Kate finally appears to have met her match in Kingpin, and their confrontation arguably allows

her to cement her place in the new line-up of heroes.

We are also graced with the presence of the highly anticipated Florence Pugh as Yelena Belova. Yelena maintains a comedic comradely banter with Kate throughout each of their interactions, reminiscent of jesting with her sister, leading to a gut-wrenching exchange with Barton. Episode 5 also affords us a poignant glimpse into her experiences following the blip, which makes Natasha's spiritual presence even stronger, with the show becoming a second tribute to the fallen Avenger. As always, Pugh leaves us wanting to see more of Yelena, and she is sure to continue as a prominent feature in the MCU.

Hawkeye and Bishop manage to amass a team of amiable and accommodating, albeit naïve, Medieval ‘LARPer’. They come along for the ride, helping where they can, but are relegated to the sidelines; there to service Hawkeye's needs. There are hints that they may develop into characters that are more fleshed out, but for now they remain loyal sidekicks.

Marvel opted for Hawkeye's story to be a TV show in lieu of a film due to the complexity of the story

they wanted to tell, and it's easy to see why. Eleanor Bishop herself turns out to be less innocent than she appears, and Laura Barton's character is given a new spark with intriguing connections to S.H.I.E.L.D. and a potential explanation for how she met Clint – something that could be explored in a second season? ‘Lucky’ the golden retriever remains more a symbol of companionship and comfort than an active part of the team, although he will surely be at Kate's heel in future shenanigans.

While many bits and pieces of the show are suggestive of the earlier films – Rogers: The Musical and the Avengers memorial being notable examples – a particularly interesting scene is that of the two archers assembling their multitudes of trick arrows, that recalls scenes of Tony Stark tinkering with his suits and tech in the Ironman movies. The series gives us an insight into Barton's preparation for battles that we didn't tend to see earlier on.

Our beloved Barton and Bishop have yet to have future appearances confirmed, although we are hopeful they will be back on the big screen.

MUSIC

Edited by: ROSIE MILLNS &
TARA PAL CHAUDHURI

DON'T MISS THE GIG - OPEN MIC NIGHT BY LIVE MUSIC SOCIETY @ UNION BAR, 28TH JANUARY

LIVE MUSIC SOCIETY IS HOSTING ITS FIRST OPEN MIC NIGHT THIS TERM AT THE UNION BAR. DROP IN TO HEAR SOME LOWKEY ACOUSTIC SOUNDS (AND IF YOU'RE LUCKY, SOME METAL BY XANSHI OR DRAMATIC MANDOPOP IN A CHINESE OPERATIC OUTFIT).



Single of the Week

Snow Globes by BCNR

Clocking in at 9 minutes and 12 seconds, Black Country, New Road have dropped a fourth single, 'Snow Globes', from their upcoming sophomore album *Ants From Up There*. The track has been around since before their debut album *For the First Time* and has been a staple fan-favourite at live sets. It's not hard to see why: the track is a clash of instruments and vocals that just shouldn't sound coherent and yet do, and they do so with incredible skill. *Ants from Up There* drops on February 4th 2022, followed by a headline show for the band at London's Roundhouse on February 8th.



TODAY IN MUSIC HISTORY

IN 1927, RENOWNED TENOR SAXOPHONE PLAYER RONNIE SCOTT WAS BORN IN ALDGATE. HIS JAZZ CLUB, OPENED IN 1959, IS STILL OPEN AND RUNNING IN SOHO.

IN 1978, FLEETWOOD MAC'S 11TH STUDIO ALBUM *RUMOURS* HIT NO. 1 IN THE UK ALBUM CHART. FEATURING SONGS SUCH AS 'DREAMS' AND 'GO YOUR OWN WAY', IT IS THE BAND'S MOST WELL-KNOWN ALBUM.



Felix Recommends

Jamie T's debut album is old enough to watch Superbad

Written by Joe Riordan Music Writer

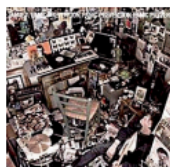
Celebrating 15 Years of Jamie T's Panic Prevention

Orchestrated in the age of Lily Allen and post-Libertines, Jamie T's debut album *Panic Prevention* still holds up today, 15 years after its release. Seamlessly blending genres from indie to rap with elements of punk and ska, the album has a distinct sound that seems like it could only have come from mid-noughties London. With Arctic Monkeys dominating the North with sagas of life in Sheffield, Jamie T (short for Treays) cornered the market for tracks about life in the capital.

The Wimbledon-born artist paints a picture of teenage confidence in one of the biggest cities in the world. This is seen explicitly in stand-out track 'Sheila'. An indie club night would be non-existent without it. 'Sheila' tells a depressing trilogy of tales with the help from poet laureate John Betjeman who features on the track in the form of a sample of his poem 'The Cockney Amorist'. Utilising my favourite musical technique, samples of spoken word on a track, 'Sheila' rightly takes its place as probably the most famous song from the album and a mainstay in hundreds of indie playlists.

Also using my favourite technique is one of the only songs that has ever made me cry – 'So Lonely Was The Ballad'. The sample in this track is a recording of a tape that Treays used to use to help with panic attacks, hence the album title. It is this sample at about two minutes in that always gets me, "people who have panic attacks often feel that they should be able to deal with them / And indeed the resources you need to deal with them are already within you. / It's just that sometimes

album review



Jamie T
Panic Prevention
(EMI)

★★★★☆

At the tender ages of 20 Jamie T should be pretty impressed with the amazing amount of hype and speculation that has been surrounding his debut album *Panic Prevention*. I first heard his debut single *Sheila* over the summer when it amassed a simply staggering amount of airplay on the likes of XFM and Radio 1 since which the Jamie T bandwagon has been growing at an alarming rate with his latest singles *If you ain't got the money* and *Calm Down Dearest* only served to further fuel the hype.

Armed with his acoustic bass guitar and some of the freshest, sharpest, most observant lyrics around at the moment Jamie T has managed to combine elements from a wide range of genres. Fusing funk, hip-hop, punk and reggae he manages to create a fairly unique sound, at least in the more commercial music scene, that will only help to cement this young man into the British music scene.

Literally speaking Jamie T takes his inspiration from his surroundings of grimy London bringing in aspects of teenage life in London to most of his songs such as *Sheila* and *XXX*. Discussion of teenage life is something Jamie T certainly doesn't shy away speaking openly about girls finding love behind the bike-shed and drunken bar fights doesn't seem to phase this youngster.

Speaking volumes about teenage life in Britain *Panic Prevention* will no doubt strike a chord with its intended audience across the country almost certainly making it a huge seller.

Tom Whitson

The original Felix review for *Panic Prevention*. Check out issue 1372 in the Felix archives to read it!



View online here!



the appropriate responses to a particular situation / Are not immediately accessible". The song is ultimately very personal and Treays uses several different synths that are each constant in different parts of the track, a calming listen.

With only a bass, some guitars and drums, one or two synths, and his voice, *Panic Prevention* is an album that you can imagine being played live. The tracks range from the bare minimum of vocals and the bass guitar in 'Back In The Game' to an absolute maximum of the full band in 'Operation'. Both extremes are perfectly produced. 'Back In The Game' is a personal step back from the bounciness of some of the other tracks on the album, while 'Operation' edges into global geopolitics, preceding Declan McKenna but never reaching his extent of protest.

This album, paired with *Gone Now* by Bleachers are my two favourite albums. Both for their relatability and personality. Shared experience is helpful to hear in music and relatability is one of the main things that draws me to songs. *Panic Prevention* does this in droves, an album about dealing with anxiety and growing up. Here's to another 15 years.

For the 15 year anniversary, Jamie T is releasing a limited edition vinyl pressing of *Panic Prevention* and a double CD, both available to pre-order via his website. The announcement for this new 12-inch was joined by a confirmation of new music soon – "yeah, yeah, new music is coming".

FRIDAY 28TH JANUARY 2022

Album Review

MUSIC

You're It: A Narrow Escape From a Sophomore Slump

Written by **Giovanni Franca** Music Writer*Gupi's latest project is a controversial compilation of half-baked, but refreshing ideas*

Electronic music producer, Berklee alumnus, and hyperpop star Spencer Hawk (yes, he is Tony's son), better known as Gupi, released his sophomore effort, *You're It*, on January 7th. The album follows *None*, his debut, released in the beginning of 2020. Hawk has also worked with Fraxiom in their Food House project, which sparked from *None's* centrepiece, the anthemic 'Thos Moser'.

You're It was described by its creator as "a collection of tracks [he]'s been hoarding for the past two years", which is quite important information. The bubblegum bass sound of *None* is very much still present, the drops are just as hard, and the songwriting, song naming and track sequencing continue to be chaotic. Of course, Gupi's production has gone through logical technical improvement, with fresh ideas and new sounds – such as incredible blends of organic and synthesised instrumentals, as seen in 'Dance While You Can', a track that reinterprets the Electro House sound of the early 2010s. These "post-EDM" reinventions are laid throughout the entire project, with the artist bringing sounds used in the past by Skrillex and

deadmau5 back to the table, and recycling them into a modern, original songs. While this process may create exhilarating tunes, like 'Divinorum Spin', it sometimes fails, with the result being tracks like 'Body Horror' – which falls into the old brostep idiosyncrasies, lacking constructive songwriting and aiming for repetitive drops. Indeed, songwriting is Hawk's worst sin in *You're It*. He clearly displays a talent for creating absorbing melodies, but remains stubborn when writing each song, insisting on flipping the same idea over and over – which can work sometimes, but is set to exhaust the listener by the end of the A-side.

I was surprised by the lack of vocals, which brought life to songs like 'Modest' and 'Delusion' in his debut. While there are exceptions in 'Spiralcourse' and 'Feel', the singing is rather obnoxious, taking a very abrasive tone, distancing itself from the "cute" aesthetic of *None's* vocals, as it boasts an excess of sped-up autotune, even for hyperpop standards. 'Spiralcourse' sounds like a Five Nights at Freddy's fan song, and nothing will change my mind.

All in all, *You're It* is solid, even if it is more polarising



than its predecessor. In a way, the album's cover art is a perfect depiction of its music. Made by Hawk himself on the default Mac app, Preview, the artwork is tacky and unconcise, but demonstrates creativity that is hard to come by. Undoubtedly, Gupi is still full of ideas, but his songwriting needs to be revised. There is a lot of potential to be explored, and I am confident the third album will show it.

“**GUI IS STILL FULL OF IDEAS, BUT HIS SONGWRITING NEEDS TO BE REVISED**”

Single Review

Mom Jeans graduate from their new sound in 'Graduating Life'

Written by **Rosie Millns** Music Editor*Emo band Mom Jeans release a refreshingly nostalgic track as their 4th single from their upcoming album*

Hidden in every Mom Jeans record are some heart-wrenching gems. For their upcoming third album, *Sweet Tooth*, released February 25th, that gem will be the band's latest single 'Graduating Life'.

Sweet Tooth is the band's first album in four years, since the group released *Puppy Love* in 2018, and will be the band's first fully-studio recorded album. *Sweet Tooth* is produced by renowned emo-producer Brett Romnes, known for his work with Oso Oso, Sorority Noise, and The Front Bottoms, when they became good again.

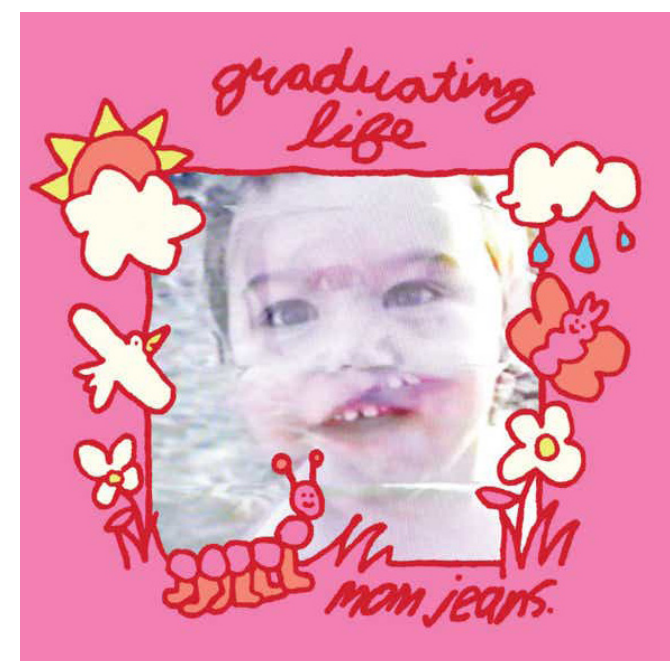
'Graduating Life' is the 4th single out from *Sweet Tooth*, and honestly, the only one I have really liked. It is the lightest single released so far, which is a welcome contrast from its more pop-punk influenced predecessors that feel so far detached from Mom Jeans' characteristic sound. 'Graduating Life' could easily fit in on *Puppy Love* or 2016's *Best Buds*, unlike the other new tracks. For those who have listened to Mom Jeans' past albums, the track is the 'now THIS is podracing' of *Sweet Tooth*, or the retrospective cousin of 'Scott Pilgrim Vs. My GPA'.

In 'Graduating Life' the band have replaced their

usual math-rock inspired guitar riffs with acoustic guitar strums, complemented beautifully by their signature warm brass refrains in the second half of the song. The short-and-sweet track is dripping with sentimentality, with anecdotal lyrics that provide the song's retrospective mood.

Reminiscence for both the band's journey and life is a feeling intensified through the crowd-sung vocals in the latter part of the song ("This moment feels so nice / But you just can't wait to graduate life"). The music video also invites nostalgia, featuring old footage of gigs, and childhood videos of the band. The track feels like a celebration of the band's history, and an acknowledgement to the fan support that got the group to where they are today.

I don't have high hopes for *Sweet Tooth*. The relatable and depressing lyrics of past albums are gone, alongside the intricate drum rhythms, math-rock inspired riffs, and unpolished DIY sounds that I loved this band for. Even their witty and unrelated song titles ('jon bong jovi', 'you can't eat cats kevin') are gone. But if, like me, you are a fan of Mom Jeans who has been disappointed by their recent tracks, 'Graduating Life' proves that the



band are still worth a chance.

I am not filled with enough teenage angst to enjoy any new Mom Jeans release as much as I did 2016's *Best Buds*, but more nostalgic songs from the group definitely have the potential to send me down the rabbit-hole of exclusively listening to Mom Jeans again.

INVESTMENT

Edited by: AHMAD DANESH

 Investment Society
Imperial College London

A bubble is forming...

What really is Cleantech investing?

Credits: Peter Beukema // Unsplash



Clean, renewable energy is making a huge comeback in investing, and it's not going away for a long time!

How clean really is the technology that's been getting fast praise in the green era of investing?

Nitya Agarwal

Writer



Cleantech, or clean technology, means using technology to find solutions for a reduction in negative environmental changes. It focuses on shifting production processes and the use of goods and services that are harmful for the environment into environment-friendly processes. The importance of climate and the idea to work towards conserving and saving it is not new. The cleantech trend has been in the market since the early 2000s, but was substantially reduced when the cleantech bubble burst after 2009. Nevertheless, as the climate conditions worsen, the value of clean tech has increased again, but this time it has increased across all sectors and with better technology and policies.

The cleantech trend during 2006-2011 was ahead of its time. Nevertheless, the trend was strong and encouraged a lot of investments in the start-up industry. Most of the investments made in the start-ups during this period were in capital intensive start-ups, e.g. Solyndra (solar energy company) and so on, which were long period investments with large timelines for technology development and slower returns. However, with the bubble burst, so did the investments. The VC firms lost more than half of their investments and many start-ups were unable to pay back the money invested. There are two main groups of factors that led to this downfall. Firstly, the factors that directly affected the cleantech industry: The high price of renewable energy, inadequate technology, lack of urgency i.e., people's belief that the effects of climate changes will affect the future generations to come, but not substantially the present. Second, factors that indirectly affected the cleantech industry: the great recession. The financial crisis in 2007-2008, led to the shortage of cash flow,

falling real estate market, high unemployment, decrease in the confidence of investors in the market. Understandably, surviving in such a period would have been a challenge.

However, the recent and persistent climate change effects have caught the attention of everyone. The forest fires in California, floods in Germany and heatwaves in Europe and Canada all within a couple of years have emphasised the severity of climate change. This allowed for the re-emergence of the cleantech trend. However, this time the 'cleantech revolution' is more mature as compared to its previous version and also covers a wider spectrum of sectors. In the early 2000s the main investments in cleantech were in solar and wind energy. This has now expanded to hydrogen and Electric vehicles with a major focus on decarbonisation. In the recent United Nations climate change conference (COP26), there was an emphasis on reducing emissions from agricultural production as well rather than just industries and transportation. This shows a serious climate change consideration from all the sectors rather than just the basic ones.

Additionally, there has been a substantial increase in technological advancement which has allowed a great reduction in the prices of renewable energy, allowing them to compete with prices of fossil fuels. Due to technological advancement in solar energy, the price has decreased from \$359Mwh in 2009 to \$40Mwh in 2019 i.e. 89% reduction due to development of solar photovoltaics. Similarly, due to the development of onshore wind the price of wind energy has reduced from \$135 Mwh (2009) to \$41MWh (2019), a 70% reduction.

The development in this industry is complemented by various government policies such as the US-Consolidated Appropriations Act and Notice 2021-05 from the Treasury, which includes the extension of tax credits for solar investment and wind production; USA's intention of spending \$2 trillion in EV development and establishing charging stations; the launch of 'hydrogen strategy' by the UK, which aims at using hydrogen for 20-35% of energy generation by 2050; China and Japan also aim to achieve net-zero

carbon emission by 2060 and 2050 respectively. Also, Canada's 2021 budget emphasizes carbon reduction by introducing investment tax credit for investments in carbon capture, utilization and storage projects to reduce more than 15 megatons of CO₂ annually. There is a surge in policies of climate change in different nations all over the world indicating the emergence of a global market for cleantech. This global cleantech sector is expected to be worth more than \$2.5 trillion by the end of 2022.

Along with this, due to the increase in negative effects of climate change, many companies have established ESG (Environmental, Social and Governance) departments that analyse the sustainability of the investments, the impact of a decision on society and so on.

The evolution and progress in the industry has increased the investor's confidence considerably. This increase is depicted in the performance of the stocks of this industry in the market. The stocks started to gain traction again by the end of 2018 and eventually outperformed the already bullish market during COVID-19. For instance, the Deloitte Australian Cleantech index rose by 33.9% in 2020. The Venture capitalists have also started to invest strongly in start-ups as the funding increased from \$1.5 billion in 2020 to nearly \$6 billion in 2021.

The rapid attention and popularity in the cleantech market has led to a considerable increase in stock prices and funding. The growth in the sector is mainly due to technological developments and since this is an evolving industry, there exists a huge scope for improvement. As new improvements are introduced, the industry will keep on performing well. However, as more players enter the industry, the competition will increase leading to an increase in investment options and decreased profit margins of individual companies. Therefore, the growth momentum of the cleantech industry on average will eventually start to reduce, unless a major technological advancement is experienced in the industry.

Nitya is a member of the Investment Society writers' team, studying an MSc in Financial Technology at Imperial College Business School.

A "BUBBLE"... TELL ME MORE - I'M A BIT CONFUSED!

A bubble refers to a situation when prices of a good/service/stock is higher than it could be reasonably justified.

These are generally caused when the confidence in the future performance of good/service/stock is exceptionally high.

When the bubble bursts the value of the good/service/stock reduces back to what it should have been. For instance, Gamestop stock experienced a bubble.

A fire is brewing in the East...

Europe's Energy Price Crisis & its High-Stake Politics

Credits: Jason Blackeye // Unsplash



Oil and gas prices are going up, but is it solely because of our desire to switch to green energy?

Ukraine is a big news story over the past few weeks, but how could macroeconomics be playing a part in stoking tensions between the different sides involved? Laura Marconi discusses the factors involved.

Laura Marconi

Writer



With Groningen down, oil production and natural gas supply still lagging behind the recovered post-pandemic demand, and the overzealous shift from fossil fuels to renewable energies, Europe finds itself amongst sky-high energy prices, with Germany paying the biggest bill. But with Europe paying almost quadruple the US price for natural gas, the question arises why the continent was hit so much harder by the surge in energy prices than the US. Apart from the US being one of the biggest Liquefied Natural Gas (LNG) exporters in the world – well on its way to becoming the biggest exporter in 2022 – Europe is stuck between the adverse consequences of its past decisions, unfavourable coincidences and a potential power play, all of which influence five major reasons.

First, ensuing last winter's depletion of natural gas supplies, the continent's hasty decarbonization efforts led to limited domestic gas and coal capacity alongside a lack of establishing sufficient alternative energy resources. Second, Europe also failed to recognize the imminent supply shock and replace its limited pipeline capacity with the globally-sold LNG, unlike Asia and South America, which were the quickest to react and increase their LNG imports, keeping their prices down. Rendering the situation even more precarious, third, the Netherlands is phasing out Europe's top natural gas producer, the gas field in the Dutch province Groningen, as it triggers earthquakes. Additionally, the supply's failure to catch up with recovered demand poses the fourth complication. However, the fifth reason – Russia's limited gas supplies to Europe – already points into a very different direction: a political one. While it stands as a fact that Russian pipeline flows are lower than in previous years, it remains a point of controversy whether the cold Russian winter, increasing domestic

gas demand, or a political power play to push Nord Stream 2 (NS2) negotiations stands behind Gazprom's (Russia's national gas producer) decreased supply.

Since the situation is quite complex, let's take a minute to get an overview. With 55 billion cubic meters of Russian gas imported annually, more than a third of Europe's gas requirements are already provided by Gazprom. Europe's next step to a secure gas supply and the delivery of an emission-friendly transition fuel (compared to coal and oil) was the construction of NS2, running from Russia through the Baltic Sea to Germany. However, German authorities have been continuously delaying the final legal permission of the second pipeline. Initial concerns surrounded three topics: the sustainability aspect, Europe's heightened dependency on Russia and the economic burden on previous transition countries. Ukraine, Poland, and the Baltic States accommodate the current gas land routes, the Brotherhood and the Yamal-Europe pipelines, whose transit fees act as significant revenue sources, e.g., making up 4% of Ukraine's GDP. But NS2 not only bypasses previous transit countries, it also puts alternative gas suppliers, such as the US, at a disadvantage. Hence, the US and Germany are committed to imposing sanctions on Russia if NS2 is exploited as a political weapon.

Now, I titled the aforementioned concerns as "initial" ones. The situation is much more complex now. Because now, NS2 has grown to be one of Europe's primary defences against Russia's menacing invasion of Ukraine. Last year, President Putin could not resist writing a 5000-word article "On the Historical Unity of Russians and Ukrainians", revealing his imperialist ambitions and distaste for Ukraine's increasingly westernized culture under pro-European president Zelensky and putting Ukraine under a "join Russia or be taken over" ultimatum. Put into practice, Putin fears Ukraine's entry into NATO, which would bring the intergovernmental military alliance right to Russia's borders, and insists on a confirmation that this entry will never happen despite Ukraine's persistent efforts. With Russia's illegitimate Crimea takeover in 2014 and the more than 100,000 Russian troops currently stationed along Ukraine's border in apparent readiness

for an invasion, the conflict puts mounting pressure on Germany to stall NS2 further, and even cut Russia off from the Swift global payment system. Nevertheless, consensus stands that Russia is unlikely to actually start a fight with NATO, not to mention that inflation pressure would hit the impoverished former Soviet nation hard. While officially keeping Ukraine out of NATO is illegal, it is more probable that the military alliance will simply continue calling off any entry efforts.

Looking back to the bigger picture, although Germany seems to be the centrepiece of the current conflict, it is crucial to recognize that all of Western Europe is involved. European gas suppliers harmonize their energy prices by sharing their resources, and while this strategy helps balance prices in regular times, it poses a significant problem in the environment of scarce supply. Although the Ukraine-Russia conflict remains unbeaten in its gravity, France's substantial 10GW worth of electricity exports across Europe put the country into the perfect position for another power play. Amongst the sky-high energy prices, Spain and France have already announced considerations of keeping their energy resources to themselves. France even threatened to cut its energy supplies to the UK if it further violates the Brexit deal. While limiting resources will push down prices for France, France's current importers will suffer from an even higher price hike. And as Germany is a customer, the country's internal conflict, between accepting NS2 to ease its own price position and supporting Ukraine at the potential cost of even higher prices, visualizes how high the stakes of energy crisis-induced politics are.

Laura is a member of the writers' team at the Investment Society whilst studying for an MSc in Finance at Imperial College Business School.



I'M CONFUSED HERE... HOW DOES SUPPLY AND DEMAND COME INTO THE PICTURE?

Need some help understanding the current supply and demand mismatch? Well, imagine a global pandemic is going on, and no one cares about the new iPhone, so Apple reduces its production. But right after the pandemic, everyone quickly gets super hyped about the new iPhone, and people storm into the stores to buy it. However, Apple needs time to increase production again, such that a ton of people suddenly try to buy one of just a few phones. Intuitively, the price of the iPhone will go up – that is at least until Apple manages to produce more, such that everyone can have one and prices fall.

Now imagine we talk about the gas you are trying to heat your home with, not the new iPhone, and you are good to go.

FOOD

Edited by: **BENCAN YALCIN**

Restaurant Review

Irasshaimase! - Welcome to Shoryu

★★★★

Price range: £££

Signature dishes: Hakata Tonkotsu Ramen

Style: Casual

Reviewed by **Bencan Yalcin** Food Editor

Happy new year to my beautiful mandem at Imperial, I hope everyone has had some time to rest during the winter break and xin nian kuai le to my Chinese mandem. It's been a month since my last column, where I talked about Berenjak - a modern Persian restaurant in the heart of London. In today's segment, we will be talking about Shoryu Ramen a minimalist Japanese ramen chain restaurant that is scattered in a few spots in and around London, such as: Regent Street, Carnaby, Liverpool Street and Shoreditch to name a few, (to see their full list please refer to their website). Shoryu Ramen specialises in Hakata tonkotsu (pork) ramen of Fukuoka city which is located in the southern island of Kyushu (one of the four main islands of Japan). The core feature of this ramen is that it is made with a thick, rich, white pork soup and thin straight ramen noodles. Like all variations of ramen - what makes each ramen unique is the type of noodle being used along with the broth that accompanies such noodles. Toppings and other additives are just extras that a chef would use to express their style of cooking, knowledge and preference in order to distinguish themselves from other competitors.

Before moving onto the foods that Shoryu serves, I want to go through the brief history of ramen and what it is about, so you the reader can appreciate the food you eat even more. The Japanese word ramen originates from the Mandarin Chinese word *lāmiàn* (拉麵 [拉面]), which means "pulled noodles". There's a myth that ramen was introduced to Japan during the 1660s by the Chinese neo-Confucian scholar Zhu Shunsui who served as an advisor to Tokugawa Mitsukuni after he became a refugee in Japan. However, a more plausible theory to when ramen was introduced to Japan, states that the dish was introduced in the late 19th century or early 20th century by Chinese immigrants living in Yokohama Chinatown (just south of Tokyo).

While standard versions of ramen are available throughout Japan, the last few decades have shown a proliferation of regional variations throughout the country, such as the aforementioned tonkotsu (pork bone broth) of Kyushu island called Hakata style. Another variation is Miso ramen, found in Hokkaido - the most northern island out of the four main islands. In between this geographical spectrum you have styles such as: Tokyo-style ramen which consist of slightly thin, curly noodles served in a soy-flavoured chicken

broth and Kitakata style that is known for its rather thick, flat, curly noodles served in a pork and niboshi (dried sardines) broth.

Of the branches available we visited Shoryu at Carnaby, so if you do attend another branch please keep in mind that the experience may slightly vary. The location itself is very vibrant and busy at night, filled with many people on the weekends. Shoryu provides indoor and outdoor seating, where the tables inside are more spacious and the air is more warm and the outside is active and colourful, with many side-by-side restaurants and people walking around.

Shoryu offers an abundance of different ramen combinations, with your main source of protein being either pork, chicken, tofu or seafood. This gives rise to dishes such as: Chicken Katsu Curry, Kimchi Seafood Natural and Piri Piri Tonkotsu to name a few. Their most notable sides would be Takoyaki, Chicken Karaage and Hirata buns, which is a cushiony steamed bun that can include fillings such as BBQ pork, Chicken Karaage and Pumpkin Croquette. As for drinks, there is a wide selection of non-alcoholic beverages ranging from your standard coffee and soft drinks to alcoholic beverages such as wines, beers and cocktails. However, as Shoryu is a Japanese restaurant, they put a big emphasis (rightfully so) on the Japanese alcoholic beverages like Sake, Japanese whiskey, and teas.



Our 8 piece Takoyaki along side some pickled ginger

One thing to note on the overall menu is the lacklustre of vegetarian and vegan options. In terms of ramen, they only have one vegan option (White Natural) and in terms of sides their vegetarian options are the Pumpkin Croquette Buns, Edamame, Cucumber and two kinds of Salads. They do have a Pumpkin Croquette Curry, a twist to the traditional Chicken Katsu Curry.



Crispy Chicken Karaage along with some kewpie mayo

However, even though they're not a vegetarian based restaurant, a diversification in vegetarian and vegan options would still be appreciated.

For our main meal, we ordered three different ramens. The White Natural (£13.90) which is a spicy vegan ramen, the Miso Tonkotsu Ramen (£14.40) which is a seasonal exclusive, and the Special Miso Wafu Chicken Ramen (£13.90). At first glance, the ramens that we ordered were big in volume, and their toppings were generously added. Each ramen had a very flavourful broth, enriched by a variety of flavours which blended together in harmony.

For sides, we ordered 8pc Takoyaki (£8.50) and a 6pc Chicken Karaage (£8.50). To those who don't know, Takoyaki is considered a popular street food and snack in Japan. They come in small balls of diced octopus with a slightly crispy batter around it. The Takoyaki ordered from Shoryu was served with a side of pickled ginger which added a nice sharp zest in your mouth, that compliments the warm mellow flavour provided by the Takoyaki. When bitten into, the soft and slightly gooey interior of the Takoyaki melts in your mouth, creating a warm and comforting buzz. The Takoyaki is also garnished with takoyaki sauce and shavings of dried fish called bonito and when dipped in kewpie mayo the flavours really mesh well together - telling of why it is considered a comfort food. Chicken Karaage can be described as Japanese fried chicken and is typically made from the deboned thigh of the chicken - providing a more deep flavour than what you'd get from breast. Served with kewpie mayonnaise and a slice of lemon, the Karaage was tender and juicy on the inside and crispy and light on the outside. Once garnished

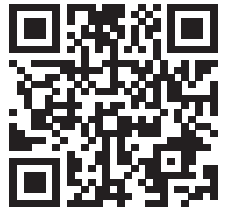


Photo credits: Bencan Yalcin

with some lemon juice, the flavours of the chicken were even more heightened and brought into the spotlight. The Miso Wafu also has Chicken Karaage served as a

Photo credits: Bencan Yalcin



Miso Wafu Chicken Ramen

topping, for those who want a little more of crispy fried chicken!

The White Natural, a vegetarian ramen, consisted of a broth made from kombu seaweed and shiitake mushrooms, and it was a very warming and soothing broth. The heat from the broth was much needed on a cold day, and the spice added an extra kick. The broth was complemented with atsugae fried tofu, kikurage mushrooms, menma bamboo shoots and nori seaweed on the side. It also included a very generous serving of ramen noodles. The atsugae fried tofu wasn't anything special, it tasted like a standard tofu but it did add some nice texture which I appreciated as I do like a good tofu. The sides were firm and slightly crisp but the inside was softer but not too soft that it crumbled in the ramen broth. Menma bamboo shoots had a very interesting taste, and although I'm not a fan of the standalone strong bamboo taste or the rubbery texture, I would be lying if I didn't acknowledge the flavour it added to the broth without overpowering the other ingredients or having its taste rub onto the ramen itself. Overall it was highly enjoyable, extremely satisfying and for the price

Photo credits: Melis Efecan



The White Natural - The Vegetarian Ramen

you pay, the volume of ramen you get is a great deal.

The Miso Wafu Chicken was delicious and flavourful, containing a lot of umami in its broth which is made from a unique tonyu soy milk, white miso, shiitake mushroom and kombu soy combination. The ramen is then topped off with the previously mentioned juicy and crispy chicken karaage, kikurage mushrooms, spring onions, red ginger and nori seaweed. Each top-

ping in the ramen was delicious and provided its own flavour and texture to the dish. Besides the Chicken Karaage (see above, it was juicy and crunchy), the mushrooms were nice and firm, adding another subtle layer of umami to the dish and brought a different texture to the bowl. The ginger once again provided a nice zesty flavour cutting through the built up rich flavour of umami in your mouth and the spring onion provided was subtly placed in the bowl, but had a nice touch of sweetness and zing - bringing the whole dish together. The noodles were once again plentiful and at the right firmness doing a good job in holding and absorbing the broth it was resting in and did not get soggy over time.

The Miso Tonkotsu Ramen is a seasonal exclusive, made with a rich broth of miso and pork soup and garnished with soy marinated braised kakuni pork belly, pak choi, nitamago egg, kikurage mushrooms, spring onion, red ginger and nori seaweed. The pork was nice and soft in texture and tasty and rich in flavour but I found it to be a little bit over marinated for my taste buds - which is just a preference. The noodles were also the same as the other two ramen, the right firmness and good at holding the broth. I found the egg to be timely cooked, providing a subtle gooey softness at its core, adding a nice level of umami into the broth when spilt over. The other garnishes were also well matched with this style of ramen providing different textures and flavours in each bite, keeping you at your toes and stop-

Photo credits: Jerry Zheng



Miso Tonkotsu Ramen

ping you from getting bored of the broth.

Dessert was a must, especially after a nice flavour-packed and a good value for money ramen dish. The heat from the ramen broths and the sides of Takoyaki and crispy Chicken Karaage, served with Japanese Kewpie mayonnaise called for a cool and sweet ending.

All in all, their dessert selection isn't the widest, which is understandable as dessert isn't Shoryu's speciality. However, we got our hands on some matcha cheesecake, mochi ice-cream (chocolate cookie-dough) and a standard ice-cream with two scoops of chocolate and matcha flavour.

First let's talk about the Matcha Cheesecake (£5.90), although I'm personally not the biggest fan of matcha, I still wanted to try it out as I'm an avid cheesecake lover. The size you get for the price you pay is a little disappointing. The cheesecake consisted of a very gen-



Matcha Cheesecake

erous amount of matcha filling on top and the crust at the bottom seemed quite stiff and wasn't much. Regardless, the flavours of the matcha were still present - which I'm sure a matcha lover would appreciate. I also found the filling to be very airy and light, so depending on how you like your cheesecake, this is either good or bad. Personally I think this would've gone well with some tea, which Shoryu served as either hot or iced - which I didn't buy.

Secondly we had Mochi Ice-cream (£5.50), which reminded me of the 'Little Moons' craze last year. I wouldn't say there is much of a difference between the two, for the flavour, we picked Cookie-Dough. The glutinous rice of the mochi thinly coats the cookie-dough ice-cream, providing a nice chewy texture of a traditional mochi. The chocolatey goodness was definitely mouth-soothing, and the cookie-dough flavour was very apparent as well. I'd definitely recommend this if you buy something extremely spicy, as it was definitely a mouth cooler! Finally, the Ice Cream (£4.60) was nice and standard, not too sweet and the flavours were clear and apparent, go for this if you want to go for something safe and reliable.

To summarise the overall experience at Shoryu, I would definitely say the price you pay for the meal and service is worth it. They have deals like 'Bun Monday', a buy-1-get-1-free deal, when you buy any ramen or curry, and 'Takoyaki Tuesday' which is the 8pc Takoyaki at half price with any ramen or curry. A 10% student discount is also available here, so make sure you keep that in mind when going, along with an empty stomach as the food is quite filling!

Photo credits: Bencan Yalcin



Cookie -Dough Mochi Ice Cream

FRIDAY 28TH JANUARY 2022

COMMENT

» HAVE AN ARTICLE IN MIND?
EMAIL YOUR IDEA OR PIECE TO:
COMMENT.FELIX@IMPERIAL.AC.UK

Edited by: KHAMA GUNDE

Not another teen series?

► *HBO's Euphoria is back, and I will not be watching it this time.*

Anonymous



Euphoria is a HBO television series that follows the fast-paced lives of high school students in a suburban town. Euphoria premiered in June 2019, and it very quickly became a hit series, with the show winning 15 of its 47 award nominations. Most notably, lead actress Zendaya Coleman won the award for Outstanding Lead Actress in a Drama Series in the 2020 Emmys, which, at the age of 24, made her the youngest actress to win the accolade in the award history. I was also delighted to see British musician Labrinth pick up the Creative Arts Emmy for Outstanding Original Music and Lyrics because the soundtrack he produced for the series was simply sublime.

The series itself was a whirlwind, with the “Danny Elfman meets Yeezus meets Gospel” music, stylish characters, and dreamy visuals, juxtaposed by the dark, raw storylines. A combination that undoubtedly helped pull in viewers who were attracted to the aesthetics of youth but were seeking a teenage drama that did not shy away from controversial themes. See, Euphoria is roughly what *Skins* was, if you were to remove the grittiness that came with a mid-2000s show set in Bristol. That said, Euphoria was based off a 2012 Israeli mini-series of the same name, and it was this show that was inspired by *Skins*. Just like its original and *Skins*, Euphoria is very explicit, and uncensored in the depiction of teenager’s relationships, addictions, insecurities, and flaws.

This unfiltered approach to adolescence is appreciated by some, but naturally there were critics who questioned whether it was appropriate to depict teenagers in such explicit and mature content. Three years ago, I somewhat disagreed with such criticism. At the time, I thought I appreciated the ‘realism’ of such content. Yet now, after almost three years, the show has returned to the streaming world, and I have de-

ecided that I will not be watching it this time.

In the three-year gap between season one and two, I grew from a 19-year-old to a 21-year-old woman. A small jump in age, but for me it was years of mental, emotional, and (admittedly very little) physical growth. So, in that time, I gravitated away from media that centred on teenagers. If I do watch any coming-of-age content, they tend to be films or series I watched when I was a teenager, so the appeal is more nostalgic for me. At this age, it feels odd to consume new media that is for teenagers and about teenagers; especially as teenage representation is becoming increasingly mature in its nature. So, after I came across the trailer for season two of Euphoria, the thought of watching adult actors, who had also aged three years since season one, pretending to be 17 to 18-year-olds prompted me to ask myself: “who is this show for?”

Well in October, the series Director and Writer, Sam Levinson, made it clear that the new season was going to be a “brutal season” for the teenage characters, even more so than the last. So, it came as no surprise when, lead actress, Zendaya issued a message on Instagram just before the new season aired, warning that the show was created for “mature audiences”. Which, if we go by American TV Parental Guidelines, means that the show is not suitable for viewers below 17 years old. Given that the show is quite forthright in its presentation of teenagers having sex, taking drugs, and everything else in between, I can see why it is not appropriate for younger viewers. So, by process of elimination, this would mean that the show is therefore appropriate for adult viewers. This prompted me to ask myself another question: “is there not something slightly weird about adults watching imaginary minors in their most intimate moments?”

Granted, I understand that every adult was once a teenager, and so we can all relate to the trials and tribulations experienced through teenage years. Levinson himself was addicted to drugs in his youth until he was 19 years old, and it was his retrospection into his teenage years that also motivated him to write the HBO series. In a 2019 Entertainment Weekly interview, he stated that he wrote the series in an attempt to “capture that kind of heightened sense of emotion, when you’re young and how relationships feel. Relationships have such a pull and people have such a pull, and the world feels like it’s just constantly sort of bearing down on you and that anxiety and those sort of mood swings that I think are inherent to being young, in general then, but are even more so when you struggle with anxiety and depression and addiction.” While I may disagree with the execution of his vision, Levinson is right. Those formative teenage years are emotionally, physically, and mentally tumultuous, so I appreciate it when the struggles of youth are taken seriously in the media, instead of being swept aside.

So, yes, not every adult viewer has nefarious intentions for watching the show. It is understandable that some just like to watch the show for entertainment. Or to reminisce on their youth vicariously through teenage characters, and as wild and unfamiliar as the character’s lifestyles may seem to some, there are undoubtedly people who can relate to their experiences. I am not arguing for censorship of the often-harrowing experiences that teenagers have; I am a prudent person. I believe that there is a lot of value in having open and serious discussions about the realities faced in our teenage years, media can sometimes facilitate these discussions. I accept that there is nuance to this topic, and I understand the arguments against mine, but I still think that there is an issue here with the voyeuristic way in which adults consume explicit content about teenagers. I think that the age of the actors plays a large role in why adult viewers are not very hesitant to watch the show. These ‘teenagers’ look like adults because the actors are adults, and I am sure that plays a role

in desensitising viewers to mature content depicting minors. Though, there is a pragmatic reason behind casting adults. Due to US child labour laws, having an actor under the age of 18, a minor, on a television series can be quite costly. This is due to the restrictions on the hours they can work. I can only hope that if such a law did not exist, and minors on-screen could be minors off-screen, people would see the glaring issue in teenagers being overtly sexualised in the media. On social media, a suggestion that I have seen viewers propose is that the show should have been made in a college setting, since that would be more age-appropriate, and college tends to be when most young people gain the freedom for more experiences. Of course, other viewers countered that point with the fact that college is not a relatable setting for all viewers, but high school is. Never mind how odd it was that this insistence seemed to come mostly from viewers who were not minors, the characters in the show spend no visible amount of time doing any schoolwork at all. The high school is simply a physical setting at most, something that connects characters with little in common. And at best, the high school setting provides a clear identifier of their youth, which is undoubtedly a source of nostalgia for adult viewers. Ultimately, I have a problem with the growing trend to portray fictional minors in explicit media, even more so when the content becomes so explicit that it is marketed as something for mature audiences only. As adults we should be highly aware of the fact that the representation of teen-hood in the media is not without consequence. My biggest concern is that shows that claim to open dialogue about the growing pains of youth, simply desensitise viewers to the point that we forget that teenagers in such extreme circumstances are vulnerable minors. As adults it is weird to indulge in media that softly romanticises these experiences for entertainment.