

# Schrödinger Lecture to go ahead despite grooming revelations

Imperial College  
London

## How can a divided world combat climate change?

Dr. Rajiv J. Shah presents the  
Faculty of Natural Sciences' Schrödinger Lecture 2022

Thursday 7 April 2022, 17.30



Sam Lovatt Editor-in-Chief

Imperial College will continue with the planned annual Schroedinger Lecture this year, despite recent revelations of Schroedinger's grooming and abuse of young women and girls when he was alive.

*The Irish Times* revealed, in December last year, that Schrödinger had abused women and girls as young as 12, details of which he recorded in a diary. Among other reasons, he gave his academic capabilities as justification for his actions - "it seems to be the usual thing that men of strong, genuine intellectuality are immensely attracted only by women who, forming the very beginning of the intellectual series, are as nearly connected to the preferred springs of nature as they themselves" he wrote.

His writings also suggested beliefs of male supremacy. To the above, he added "no woman will ever approach nearer to genius by intellectual education than some un-intellectuals do by birth so to speak".

In January this year, Trinity College Dublin announced that it would rename its Schrödinger lecture theatre and discontinue their annual Schrödinger lecture series.

Imperial College has arrived at a different conclusion to Trinity, with its 2022 Schrödinger lecture still scheduled for

April 7<sup>th</sup>, to be hosted by Dr Rajiv J Shah.

Dr. Shah serves as President of the Rockefeller Foundation, ironically touted on the Imperial website as a foundation that 'applies science, and innovation to improve health for women and children'.

Erwin

Schrödinger is one of history's most famous scientists, renowned for his contributions to quantum theory, win-



## College launches Sanctuary Scholarship Fund

Sam Lovatt Editor-in-Chief

Imperial College have announced the Sanctuary Scholarship Fund, aimed at providing scholarships for both undergraduate and masters level tuition, for students from displaced communities. The fund stands at around £250,000 at the time of publishing. The College has matched

every donation to the fund so far, and will continue to do so.

A Sanctuary Fellowship Fund, to help academics from similar situations continue their work, will also be established and backed by College money.

The College aims to award initial scholarships from the Scholarship Fund in time for the 22/23 academic year.

The announcement comes just over three weeks after Russia invaded Ukraine, leading to as many as 2 million Ukrainians fleeing their home country with nowhere to settle.

On 2<sup>nd</sup> March, the Provost and President circulated an email among students, staff and alumni condemning the 'unjustified and inhumane' invasion of Ukraine, and added that the College "will do whatever we can to support them".

The announcement also detailed that the College would pay compassionate leave to any staff currently working in Ukraine.

The College leaders highlighted nuance in continued relations around the conflict. "UK, Russian and Ukrainian scientists have worked closely for decades ... These individual relationships must continue; however, we will not partner with the Russian state" they said.

The email also mentions the Council

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# EDITORIAL

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## Racism

I am very much not a person to cry racism without evidence for it, but the West's attitude to conflicts abroad cannot be described in any other way.

I stand fervently with Ukraine and feel the UK should be doing more to support them, but the attention given by our populace to the conflict when compared to others around the world is inhumane.

For eight years now, the civil war in Yemen has been ravaging the country's population, and currently constitutes one of the worst humanitarian disasters in global history. The Council on Foreign Relations state that almost 21 million people are in need of humanitarian aid, with around 5 million of these people reduced to just skin and bone as they struggle to find food. An estimated 110,000 people have died so far as a result of the war, and it is classified as 'worsening'.

The fighting began in 2014, and remains today as a conflict between the Yemeni government and a rebel group known as the Houthis. The Houthis are backed by Iran, and the Yemeni government is backed by Saudi Arabian leader Mohammed bin Salman.

Houthis control parts of northern Yemen, whilst the government-Arab state coalition occupies most other areas. Iran has deployed its navy to the region to support the Houthis, and Saudi Arabia, among other Arab states, have provided countless weapons to the government's forces and have set up a naval blockade preventing arms reaching Houthi-controlled areas of the country, which also prevents millions of dollars in aid from reaching civilians in affected regions of the country.

This is all backed by the West. The UK still sells arms to Saudi Arabia, which uses them directly to arm forces that assault and rocket civilian occupied areas. Only in February 2021 did Joe Biden announce a withdrawal of support for Saudi-led offensive operations.

Not only do we let so many millions of people undergo unimaginable suffering every day for almost a decade, but we actually profit from it.

Footage from war-torn areas shows children screaming, blind, bloodied, bones poking through their skin as not a millimeter of flesh remains due to the prolonged starvation.

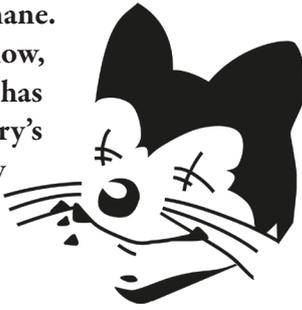
Bandaged teenagers cry at video cameras in pure terror, and no one comes to help them.

This is not just the fault of the West's civilian morality - if the media gave an ounce of attention to what is going on there then things would be drastically different, but they don't. Googling 'Yemen conflict' whilst doing background for this piece, the first article that comes up was published five months ago.

Even Yemen is at the thick end of the media coverage wedge. Ethiopia's civil war has been ongoing for well over a year now. Reports of what appear to be concentration camps for Tigrayan people inch their way into the middle pages of *Private Eye* and no where else. Videos have surfaced of the military burning civilians alive, and no one knows about it.

Recently a prison in the Democratic Republic of the Congo was overtaken by inmates. Women and teenagers in the prison begged fleeing guards to help them escape, but they said no. The vulnerable were rounded up in the prison yard and raped and beaten for days on end until the prison was eventually reclaimed. No one knows about it.

This week Michael Gove announced that unlimited people fleeing the Ukraine conflict could settle in the UK for at least three years. This is brilliant news, but this has been needed for decades to help those who are not white and European. The open arms approach of the EU in this conflict, when compared to the response to the 2015 migrant crisis of mostly Syrians, is nothing but shameful.



## Statement of Intent

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

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

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

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

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

Signed by Sam Lovatt  
Editor-in-Chief

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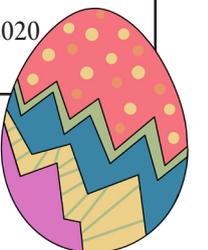
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## Schrödinger

ning a Nobel Prize, and for the “Schrödinger’s cat” thought experiment.

Schrödinger’s legacy seems to have been overlooked by Imperial College’s History Group, a body of College staff and external academics tasked with assessing the College’s past and its links to colonial and racist issues.

The College recently said they would ‘consider’ names such as the Huxley-Salam Building among other ways to celebrate under-appreciated scientists such as Abdus Salam.

A College spokesperson said “We are looking into these recent reports of historic abuse and will keep our community updated.

“Imperial has been working to address its history and legacy, including the way in which historical figures are marked on campus. We will continue to examine these important questions, especially as new understanding and information comes to light, and we welcome input from our community.”



Credit: Philbo on Unsplash

*continued from page 1...*

NEWS

## Scholarship Fund

for At Risk Academics (Cara), which Imperial is a part of. Cara exists to offer support to academics at risk of trauma or imprisonment find refuge in UK academic institutions. The College encourages those sympathetic to the cause to donate to both Cara and the College’s Student Hardship Fund as a means to help those displaced by the conflict.

The College highlights, in its press release on the fund, that refugees with asylum-seeker status are classed as overseas applicants by the British Government, meaning higher fees that will prevent even more of those escaping disaster from continuing their education or research. Once asylum applications are granted, individuals are classed as home students.

College Council member John Allan and Business School Advisory Board member Mary Meany have already made what the College described as “significant” donations to the Fund. Allan is the current chairman of Tesco, and Meany is a former Senior Partner at McKinsey & Company.

# Students set to be up to £700 worse off next year as inflation hits

**Sam Lovatt** Editor-in-Chief

Home status students studying in the UK are set to be more than £700 a year worse off in 2022/23, future maintenance loan figures suggest.

According to *The Guardian*, last month, chief UK economist at Capital Economics Paul Dales warned that inflation could reach 7.9% in April. The hike comes as a result of a number of superimposing factors, including the war in Ukraine and the increased gas price cap, set by the regulatory body OFGEM and set to come into force next month, raising the maximum annual household gas bill by around £700.

According to WonkHE, the maximum maintenance loan is set to rise for the next year by the inflationary rate predicted by Office for Budget Responsibility, at 2.3%. This increase is determined by the predicted rate of inflation for the

first quarter of 2023, a figure that was published in November 2020. This, of course, was before the Ukraine conflict could have been predicted, and during a time where economic recovery from the pandemic was still guess work.

Whilst an increase in the maintenance loan to keep in line with inflation would cause the cap to increase to something close to £13,360. Instead, the prediction of 2.3% will see the cap rise to around £12,670. This represents a real-terms saving for the taxpayer and a real-terms cut in funding to students.

The source of this problem is similar to that which has led members of the University and College Union (UCU) to strike recently, causing disruption to university courses across the UK.

The USS pension scheme management used a prediction of risk, at a time when markets were unusually low due to the pandemic, to justify an

increase in contribution from employees and as much as a 30% lifetime reduction in payout to members, once they retire. The UCU saw this as largely unfair, and members at tens of universities voted in favour of strike action. This action, as well as action short of striking, is ongoing.

Students are also not able to benefit

from bill relief schemes implemented by the government to help cover increased costs of living. One scheme, which allows households to reclaim £150 of their gas bill through a council tax rebate, is unavailable to students as they already do not pay council tax.



## NEWS

# Strikes continue through final week of Spring term

*Students express concern about further strikes and potential marking boycott in summer term*

**Ameena Hassan** Deputy Editor

Further industrial action including a strike is set to take place in the last week of Spring term, 21<sup>st</sup>-25<sup>th</sup> March 2022. This coincides with final exams in some departments, sparking concerns that issues occurring during timed remote assessments (TRAs) will not be resolved.

University and College Union's (UCU) Imperial branch has a mandate to take industrial action, which consists of both strike action and action short of a strike (ASOS). This mandate started after the ballot in October 2021 (*Felix 1782*), and this expires on 3<sup>rd</sup> May 2022. To extend this mandate, a rebalot is being conducted - this started on Wednesday 16<sup>th</sup> March, and will remain open until Friday 5pm on 8<sup>th</sup> April.

As the mandate is still in effect, Imperial staff members of the UCU are allowed to go on strike in the meantime, including next week. An email sent to all Imperial students by Vice Provost of Education and Student Experience on 14<sup>th</sup> March mentioned that it is "possible that, on the day of strike action, some digital learning materials may be temporarily unavailable", which some affected students take to mean that TRAs in the last week of term may face some issues.

"Individual staff members do not need to warn the College in advance of taking part in a strike", which means that in order to cause the most disruption, there may be instances of staff striking on examination days. Additionally, staff are not obligated to inform employers until the day of the strike. The strikes will go ahead "unless vice chancellors revoke pension cuts and meet staff demands over pay and working conditions", according to the UCU official site.

These will be the last strikes conducted

before the next set of changes to the Universities Superannuation Scheme (USS) pension scheme come into effect on 1<sup>st</sup> April 2022 (*Felix 1795*).

Under ASOS, there is also a new action that may be taken - "Removing uploaded materials related to, and/or not sharing materials related to, lectures or classes that will be or have been cancelled as a result of strike action". This includes coursework, and any materials that may be required for coursework due during the last week of term. However, these materials will not be destroyed, or taken down if at least one contributor to the materials is not striking.

For reference, here are the standard actions included within ASOS:

- Only working to contracted hours
- Not undertaking voluntary activities
- Not rescheduling classes and lectures cancelled due to strike action
- Not covering for absent colleagues

In the previous October 2021 ballot of 748 UCU Imperial members with a 55.9% turnout, 71.7% (297) voted for strike action, with 86.3% (360) voting

for ASOS, which is usually considered less drastic action compared to strike action. As a UCU counter-proposal was rejected since the last strike action period on 21<sup>st</sup>-22<sup>nd</sup> February, UCU general secretary Jo Grady has said "Successful rebalots could see this [strike] action extended throughout the rest of the calendar year and include a marking and assessment boycott, which could prevent universities being able to award degrees - bringing the sector to a standstill".

A marking and assessment boycott falls under ASOS, and is looking increasingly likely if a resolution is not achieved soon.



*Imperial UCU members picketing at the College main entrance earlier this year*

Apologies, we accidentally published an erroneous title in the previous issue (*Felix 1797*), which should have read "'Huxley-Salam Building' considered as History Dialogue next steps announced".

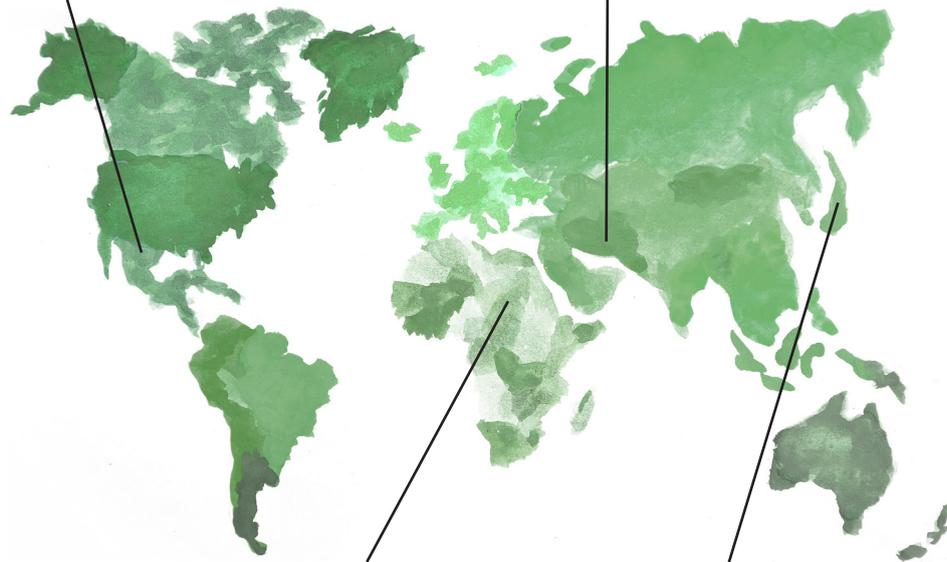
# ...in the world this week

## *Eight journalists killed in Mexico in 2022*

The murder of Armando Linares López marks the eight killing of a journalist in Mexico in 2022. López was gunned down outside his home in the district of Michoacán on Tuesday, just six weeks after announcing the death of a colleague under the same circumstances. Those who killed López are still at large, and few have faith in the government's ability to effectively follow up the crime. According to the Guardian, 90% of similar crimes go unsolved in Mexico. Mexico's president, Andrés Manuel López Obrador, has been accused of intimidating journalists in the past; last week, members of the European Parliament voted to condemn Obrador's use of "populist rhetoric" to "intimidate independent journalists, media owners and activists".

## *Zaghari-Ratcliffe freed*

The British-Iranian journalist Nazanin Zaghari-Ratcliffe has been freed by the Iranian government, and returned to the UK on Wednesday. Zaghari-Ratcliffe was detained by the Iranian government in 2016 when visiting a relative with her daughter, who at the time was still not yet two years old. She was held on charges of plotting to overthrow the Iranian government, charges almost universally seen as trumped up, and sentenced to five years in jail. Her detention and a £400 million debt owed to Iran by the British government from 1979 have widely been seen as linked for the duration of her detention. This week the government paid this debt, and Zaghari-Ratcliffe was released along with Anoosheh Ashoori, a civil engineer detained four years ago on similar charges. Richard Ratcliffe said the first thing Nazanin wanted was for him to make her a cup of tea.



## *Protests against security forces in Sudan*

Protests have continued in Sudan since October's military coup led to military rule in the country and the detention of the elected prime minister. Recent protests have centred around allegations of horrendous behaviour of the security forces in quelling peaceful demonstration. Most notably, reports of up to nine officers stopping a bus whilst looking for individuals involved in the protests, then tear gassing those inside and gang-raping an 18 year old teenager as she tried to get off have sparked fury.

## *Earthquake rocks Fukushima*

An earthquake, originating off the coast of Fukushima, struck Japan on Wednesday, leaving two million homes without power and damaging many buildings. The quake reached a magnitude of 7.3, and reportedly caused damage to buildings and shattered windows. Fukushima was hit by a 9.0 magnitude earthquake in 2011, which triggered a tsunami and caused the Fukushima nuclear powerplant to meltdown. It was the most severe nuclear disaster since Chernobyl.

# ... in this issue's year (1797)

## **UNITED KINGDOM**

Mary Shelley, author of *Frankenstein*, is born

## **SPACE**

Bouvard-Herschel comet comes within 0.0879 astronomical units from Earth

## **ITALY**

Napoleon conquers Venice

## **SPAIN**

Horatio Nelson loses an arm at the Battle of Santa Cruz

## **ECUADOR**

Earthquake in Quito kills an estimated 41,000 people

## **THE UNITED STATES**

John Adams is sworn in as the second president of the USA

# SCIENCE

## Engineering the modern concrete jungle

Emily Donald Science Writer

Could a new method for modelling concrete lead the way in sustainable design? MIT and IBM are collaborating to create AI-modelled geopolymers cement formulations made with recycled industrial by-products, reducing the carbon emissions associated with the manufacture of traditional cement.

### The problem with concrete

What comes to mind when you think of the building materials of the future? Towering glass skyscrapers, walls covered in flora and fauna?

What about concrete? Low-cost, and with high mechanical strength and durability, the material has become ubiquitous. Made from particles called aggregates glued together with a binder, concrete has been a reliable building material for centuries, taking us from the Roman Pantheon to the buildings and bridges of the modern city. But concrete has its flaws. Releasing 2.8 billion tonnes of CO<sub>2</sub> annually, if concrete were a country, it would be the third highest emitter after China and the US.

Portland cement is the most common binder, a mix of limestone and clay. It is the production of clinker, the main constituent of cement, that emits that largest amount of CO<sub>2</sub> in concrete production. Cement is also responsible for nearly 10% of global industrial water

use, and in 2050, 75% of the water demand for concrete production will likely occur in regions that are expected to experience water stress. Aggregates include sand and gravel extracted from quarries, pits, and submerged deposits. Quarrying destroys precious agricultural land and wildlife habitats. Over 45 billion tonnes of sand are mined each year, eroding riverbeds and beaches. In Indonesia, sand mining has destroyed several islands, and globally the scramble for 'usable' sand has led to a dangerous black-market trade.

### Making concrete from waste

As growing economies inevitably become more urbanised, demand for concrete is set to increase. At the same time, the amount of waste produced is set to increase as lifestyles change accordingly. One solution is geopolymer concrete, a concrete that uses industrial waste products as a concrete binder. Aggregate particles can also be made from recycled materials - 28% of UK concrete aggregates are currently derived from recycled sources. The difficulty is in testing the properties of concrete produced from various combinations of available waste products. Researchers at MIT are using AI to model the performance of concrete formulations. The work follows a growing trend in materials development, where time-consuming laboratory work is being replaced with new advanced al-

## EXPLAINER

### MACHINE LEARNING

Machine learning is all about training models from data. It is how the researchers used specific concrete performance to predict the properties of new formulations. Let's say we have photos of wombats and butterflies. In one type of machine learning, we ask a human expert to label each photo W or B, and then feed this labelled data to our algorithm. The algorithm then 'learns' from this training data how to label previously unseen data (i.e., correctly identify a new butterfly photo). This is called supervised learning (think of the supervision being from the human expert who can label perfectly). Since we have discrete data, this algorithm would also be a classification algorithm (we're classifying data into two separate categories). In unsupervised learning algorithms, there are no labels.

gorithms. Whereas previously samples had to be made and tested individually, now properties such as strength, durability and fracture toughness can be accurately predicted with just the material composition as an input. Microstructure properties and performances can be accurately predicted using data directly extracted from scientific literature. This use of natural language processing means that the database the algorithm can draw upon increases in real time as further research is carried out.

### Modelling with machine

#### learning

The research is a collaboration between the Department of Materials Science and Engineering at MIT, and the IBM

Photo credit: Ddenbenn, Wikimedia Commons, CC-BY-SA-2.0

Watson AI Lab. The materials side of the research involves understanding glass and mineral reactivities, processing techniques and the development of defects in material samples. Machine learning (where tasks are repeated until data is sorted into hierarchies) is combined with multi-objective optimisation to not only sift through crystal structures but to extrapolate concrete behaviour as time passes.

In this case, a semi-supervised algorithm (where a small amount of labelled data is combined with a larger amount of unlabelled data during training) was used. It considered not only mechanical and chemical performance criteria, but also cost and environmental impact. The researchers used a different form of AI (natural language processing) to read through and extract materials test data from research papers.

By limiting possible reactants to regional waste supply, rather than virgin material, a circular industrial materials economy could be introduced. Reliance on imports could be minimised and CO<sub>2</sub> emissions reduced. And then just maybe, concrete can become a little bit greener.



Cement mixer

# Are we programmed to die?

Wang Guo Staff Writer

Besides disease and predation, living beings die mainly due to ageing, which is defined as the gradual organic deterioration of the body. Many factors, such as gene mutation or oxidation damage, can cause ageing. However, an interesting idea for the possible cause of ageing has been gaining traction in the scientific community. What if death was programmed? Here, we are going to discuss why many organisms, if not all, are "programmed" to die after a certain time.

Natural selection is the master of deciding which traits perpetuate over time, including lifespan. A common misconception is that animals that live longer do so only because they have more opportunities to copulate and hence, have more offspring. But this assumption does not take into account the Malthusian law, which explains that although the rate of proliferation of living beings is exponential and almost infinite, the limited quantity of resources available in the environment limits the number of individuals, and creates competition between them. If an organism can both reproduce incredibly fast and live incredibly long, the ecosystem would eventually be unable to support that population, causing resources to run out and resulting in the death of the population. Therefore, natural selection has generally favoured species that can self-regulate their popu-

Photo credit: LadyofHats, Wikimedia Commons, CC0



A frog's life stages, from tadpole to death

lations. How do you control the number of individuals while keeping acceptable birth rates? The answer is death. There is no more scandalous but correct oxymoron than "for life, you must also have death". Constantly producing new organisms has many evolutionary advantages (for example, higher genetic variability in the population that increases its fitness to environmental changes). Death is the removal of older members to give more resources and space for new generations so that they can thrive in an environment with less competition. This gives their offspring, which can carry on their genes, more chance of survival, because there is less competition for resources. Specific examples of strategically programmed death are present in nature. For instance, the octopus is an animal that only reproduces once in its lifetime and dies soon after, even though the parent is perfectly healthy. Studies carried out by Dr. Jerome Wodinsky have shown that octopuses have a hormonal gland that triggers this abrupt death. If the hormonal gland is extirpated, then the octopus can copulate many times.

Hamsters, with luck, can live up to seven years, while elephants older than 50 are common. Why such a great disparity in longevity? If we analyse the longevity of all living beings, from simple bacteria to huge whales, we discern a pattern: the bigger the animal is, the longer it lives. Why do bigger organisms live longer? A common argument is that bigger is



Greater blue-ringed octopus with its eggs. Their eggs are incubated under the females arms for six months. Once they hatched, the female dies.

usually associated with lower metabolic rates, so the cells of the body grow and die slower, and hence ageing is slower. But this has contradictions. For example, smaller dogs live longer than bigger ones. Even though we do not have a definitive physiological answer, researchers have attempted to induce a reason from an evolutionary perspective. Research has suggested that in general, animals tend to evolve towards larger sizes and longer lives. Why would that be, when we have established that too high longevity and reproductive rates are unsustainable for the survival of an individual's offspring? Balance and trade-offs are key. Bacteria live some days but reproduce in minutes. It is not surprising today to see humans surpassing the barrier of 70 years. However, their reproductive rates are in timeframes of almost a year. Long-life animals compensate for their longer lives with lower offspring yields, so they keep up the population size in healthy numbers. However, nature provides plenty of exceptions. For example, the pathogenic bacteria *Mycobacterium tuberculosis* grows very slowly compared to other types of bacteria, taking around 48 hours to divide! The reason for this slow growth rate is due to its cell wall, which is very costly to make and is also a highly complex biological structures

with many molecules and layers.

Humans that live more than 100 years usually share similar characteristics: stress-free life, no drugs, regular exercise, and healthy diets. However, there is also a genetic component. It is estimated that around 25% of the longevity of a human is determined by its genetic inheritance. Studies have shown that relatives of centenarians have a higher probability of being centenarians and are at lower risk of contracting age-related diseases such as cancer or Alzheimer's. Identifying and isolating the genes unique in centenarians will help us to develop novel anti-ageing therapies and drugs.

We do not live in the natural wild world anymore. We have created our own world with its own rules, particularly because of developments in medicine. There is no need for humans to follow the rules of Mother Nature or be considered old at 25-30 years, as would have been the case a thousand years ago. We can change the genetic mechanisms that cause ageing to live longer and healthier lives.

Like virtual reality? Food reimbursements? Possibly increasing exam scores?

# STRESSED?

Take part in a 2-hour virtual reality study exploring prevention of exam stress.



<https://cutt.ly/bApskNc>

\* Participants must be undergraduates aged 18 or older.  
Questions? Contact [a.caltabiano21@imperial.ac.uk](mailto:a.caltabiano21@imperial.ac.uk).

Imperial College  
London

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30/08/21

## This week in Science...

### FROM IMPERIAL

#### Does that hurt? "Patient" robots with realistic pain expressions have been developed

Researchers have developed a way to generate accurate pain expressions which could decrease examination error and racial bias. Many medical training simulators cannot display real-time facial expressions relating to pain and include a limited number of patient identities. These new robots (called FaceMorph) could allow students to recognise pain expressions and improve their physical examinations on that basis. The robots changed expression based on the pressure that undergraduate students (acting as participants) exerted on them during physical examinations of the abdomen. How participants perceived the expressions changed depending on the gender and ethnic differences of participant and patient. Further studies including a broader range of patient and participant identities could reveal more about this underlying bias.

#### Map of COVID-19 symptom variations between countries and health conditions

COVID-19 symptoms have been found to vary between countries and health conditions, researchers have found in partnership with the symptom mapper Healthily. 78,299 participants across 190 countries were surveyed. Symptoms were found to vary depending on underlying health conditions (such as lung conditions), and countries, with several reporting on average more chest and joint pain than others. This information could help speed up diagnoses, accurately predict outcomes and target treatments more effectively.

### FROM AROUND THE WORLD...

#### Sex trap for male Asian giant hornets

A new study has identified three chemicals in the sex pheromones of Asian giant hornet queens that can entice and trap male Asian giant hornets looking to mate. Traps using pheromones could be particularly useful during the "murder hornets's" (so-called for their appetite for bumblebees) mating season. Gas chromatography and mass spectrometry allowed the team to identify hexanoic acid, octanoic acid and decanoic acid in the queen's pheromones. The male hornets were effectively captured when both individual extracts and mixtures of the three chemicals were used. In future it would be good to find ways to attract worker hornets and not just males in search of a mate, but this study shows huge potential for using pheromones to attract and capture Asian giant hornets.

#### Oink oink! Researchers develop the first algorithm that translates pig sounds into emotions

An international team of researchers have recorded over 7,000 acoustic recordings from different life stages of 411 pigs. Pigs were found to have higher-pitched calls such as screams and squeals when "stressed and scared", and emitted low grunts when "happy or excited". They were recorded in a range of positive and negative scenarios. Positive scenarios included seeing family after a period of separation, and negative scenarios ranged from isolation to castration and slaughter. They were recorded in a commercial environment and in experimental scenarios. Some of these tested more nuanced situations, such as being placed in areas with food and toys to explore, or in areas with nothing to stimulate them. The researchers hope the algorithm could be developed into an app that would allow farmers to monitor the mental wellbeing of their livestock. With more data to "train" the algorithm, it could be used for other mammals and could have wider commercial purposes, such as in zoos or other livestock.

# ENVIRONMENT

Edited by: MONAMI MIYAMOTO  
MARIE MORI  
MONIKA YORDANOVA

## What is Imperial doing to meet its sustainability goals?



*View online here!*

Camilla Billari Environmental Officer

Imperial launched its first Sustainability Strategy in December 2020, consisting of a roadmap to 2026 and a commitment to become a net zero institution by 2040. The strategy aims to work towards this by targeting three key areas: resource management (e.g. energy, catering, travel), academic excellence (research) and engagement of its staff and students, as well as partners and local communities. Its release was officially presented at the College's Sustainability Week in February 2021. With this year's Sustainability Week coming up from Monday 21st March, hosting various daily speaker events and activities throughout the week, we wanted to review the progress that has been made on this roadmap.

So, how is the College doing one year on? What has been achieved, and where are we going? The 2021 People and Planet league table of UK universities on environmental and ethical performance bumped Imperial up from the 130th position in 2019 to the 66th, scoring a 2:2. Nothing to be boasting about around the country, but it shows the upwards direction the College is taking for the coming years. As you might expect, it scores highest in education for sustainable development, staff

and student engagement, and energy sources. In terms of sustainability, it scores lowest in water, sustainable food, waste, recycling and ethical investment. Let us, therefore, take a look at what the college has been doing on each of its focus points, starting with resource management.

Last summer, various staff and student projects were launched to start collecting data to track Imperial's progress on various sustainability metrics. This includes a biodiversity audit carried out on all College campuses, and a preliminary calculation of the College's carbon footprint due to flying. Future projects in the plan include assessments of prepared food, energy usage and waste from the catering, a carbon foot-printing tool and water usage on campus. A Sustainable Food Policy is in review and will be released later in 2022. All campus catering outlets are phasing out the use of single-use plastics, as well as encouraging the use of reusable cups and containers. Union sports clubs have switched to PlayerLayer to supply their standard student range of sports kits, a company that uses eco-fabrics and biodegradable packaging, which are made to order. A new Carbon Offset for Travel Policy has been published by the Imperial Research Office, and the Estates Team released its latest Carbon Management

and Sustainability Activities Report. The Laboratory Efficiency Assessment Framework has awarded six silver and 15 bronze certificates to Imperial labs, with the College pushing to increase these numbers. The College will also be appointing two new members of staff who will be working full-time on these sustainability projects in the Estates team and beyond.

On the topic of academic excellence, Imperial has numerous academics researching sustainability across its departments - from green technologies and materials to policies and the circular economy. The Grantham Institute organised a variety of events in the run-up to and during COP26, with various academics speaking and presenting their research at the conference. There is also an increasing number of modules and courses integrating sustainability into undergraduate and postgraduate studies, as well as bursaries and competitions for innovative scientific and engineering solutions to climate problems.

For engagement of students, halls have been running the annual Student Switch Off campaign to encourage students to reduce their energy consumption, with complementary competitions such as the February Student Switch Off Climate Quiz, where Imperial's Beit and Xenia halls of residence took the top

two spots on the national leader board. The Union is increasing the funding and publicity of their Liberation and Community networks, including the Ethics and Environment network. Together with Sustainable Imperial, the network has once again been organising Sustainability Week to bring attention to all the research and action that is taking place at the university to staff and students. In addition, Imperial recently took part in this year's London Student Sustainability Conference, with the College's Academic Leader in Sustainability (Professor Paul Lickiss) and the Union's Deputy President of Finance & Services (Sam Lee) being on the steering group for the conference.

Professor Lickiss will also be hosting a panel to kick off Sustainability Week on Monday, for a more in-depth update on the College's progress. To answer questions on this, Sam Lee, Kamil Khoury (Head of Catering & Events) and Andrew Hammond (Head of Energy, Engineering and Environment in the Estates Division) will be sitting on the panel. Check the Sustainable Imperial and Union website for the calendar of events for the upcoming week!



## ENVIRONMENT

# A deep-dive into carbon offsetting: understanding its complexities

Léa Haber Environment Writer

Is the practice of carbon offsetting, increasingly prevalent for both businesses and consumers, a good thing? Offsetting assumes that “an emission reduction achieved in one location has the same beneficial effects as an emission reduction achieved anywhere else”. It suggests that balancing carbon levels is a zero-sum game.

But the reality is that emissions occurring in one place cannot be equated to capture somewhere else. For instance, a business with a factory emitting high levels of pollutants is still harming the local community and ecosystem, even if they may be offsetting this emission elsewhere. And this is just one example of the many problems associated with carbon offsetting - unbeknownst to much of the public, there are several issues related to existing offsetting projects that must be considered when determining whether the offset is justified and productive.

## Issues of pricing and efficacy

Currently, purchasing carbon offsets is relatively cheap. There are considerable numbers of projects being offered for little demand, so for businesses, merely “managing” a non-sustainable business model of high emission becomes more appealing than actually changing their operations.

Yet, this is an unsustainable perspective in the long term. Although the global market for carbon offsetting was approximately \$300 million in 2018 (compared to the chocolate market in the UK, which averages at \$3bn per year), this number has been growing rapidly and is expected to continue rising. Quite simply, if companies aim to commit to their net-zero targets or emissions reduction targets, they have to reduce emissions; there’s only so much land that

can be used for offsetting.

In addition, there are issues of offsetting quality, which can be hard to assess. But several certification programmes have revealed the efficiency of existing projects (including non-certified), and only 2% were found to be effective at removing emissions. The problem here is that it is hard to predict how long the trees will stay put with their stored carbon, and any climatic or anthropogenic impacts on that land in the future may compromise this carbon offset in the long run.

## Offsetting by consumers

Another dubious area of offsetting is those encouraged for consumers. Most commonly seen when purchasing plane tickets, businesses can offer their customers a chance to pay voluntarily to offset the carbon impacts of their activity. While this looks like a good initiative that can help customers feel good, it can potentially encourage more unsustainable behaviours compared to if there were no offsetting options. This is the concept of “self-licensing” and can become a slippery slope.

In addition, asking customers to pay to offset the carbon emission of taking a flight could also be a lazy excuse for companies not innovating enough towards reducing emissions. For example, if planes are still flying with kerosene, it is partly because it’s cheap to produce and not taxed, driving away any need to substitute it. In this case, airline companies fail everyone by not using an alternative fuel and encouraging customers to bear their failure. It is simply called greenwashing and greenlighting (I coined it from gaslighting).

This type of greenwashing is one of



the major risks of offsetting projects. Instead of reducing emissions, organisations find ways to carbon offset or push it onto their customers.

## Land-grabbing for sustainable management

The last issue that is worth mentioning is land grabbing. Carbon offsetting programmes are supposedly meant to increase the prevalence of sustainably managed forests. Yet often, if there are indigenous tribes or local communities occupying potential land for offsetting, they are deemed incapable of handling that land. There have been claims that this was done within some UN REDD+ programmes. All of this is done in the name of offsetting our high maintenance lifestyle.

## So offsetting is still a good thing?

It depends on who is in charge and who it is done for. Does offsetting ever make up enough for the previous environmental harm to be compensated for?

Recently the petrochemical company Eni has promised to plant trees in Africa to become “net zero” by 2030, through the REDD+ scheme.

Yet, a Greenpeace report has calculated what this PR stunt would mean in practice: “this bold claim may be impossible to achieve as it would require enormous tracts of forests to be saved from deforestation to meet this target” and summarising “if ENI was to offset all their emissions [...] using carbon projects in developing countries’ forests, this is nearly impossible. These targets will not be achieved without harm to the forest-dependent communities.”

Overall, voluntary carbon offsets make me think of redemption for our consumption by planting a few trees between the tropics. Is it a modern take on the middle-age practice of buying indulgences for a place in heaven? Maybe that’s just how I see it.

FRIDAY 18TH MARCH 2022

ARTS

**RIGOLETTO REVIEW**  
 BY ALEXANDER COHEN  
 POWER LIES AND CORRUPTION RETURN  
 TO THE ROYAL OPERA HOUSE

page 13

Edited by:  
 ALEXANDER COHEN  
 ALEX JACKSON  
 BOXHUAN ZHANG

Theatre

## *Dogs of Europe* — A nightmare coming true

**Dogs of Europe** ★★★★★

Credits: Photo/ Jennifer Reynolds

**Where?** Barbican Theatre  
**When?** 10-12th March 2022  
**How much?** £10

Reviewed by **Louis Jabouri** Arts Writer

After I left the show, I was baffled, confused, and exhausted.

What do these things have in common: An Orthodox Patriarch dancing with a klobuk and hiding his face, a young boy with a suspicious affection towards geese, and a naked Sisyphus-esque character moving a huge boulder out of books in the background? I honestly do not know and I assume there need not be a good answer to this question. Trying to make sense out of this spectacle appears to be a futile endeavour, and that is fine. The imprisonment of hundreds of people in Belarus doesn't make sense either — they are simply unsatisfied with the political situation; and trying to speak out against it. Belarus Free Theatre, as a sort of "theatre in exile", has also become a victim of this. And it is this deep and authentic frustration that is carried onto the stage.

Had this been performed two years ago, as originally scheduled pre-Covid, I would have said that this is based Alhierd Bacharevic's novel *Dogs of Europe*: a dystopian fiction set in the near future during the creation of a "Russian Reich" — a grim amalgamation of the former Russian empire and Soviet Union. That such fiction increasingly appears to be approximating the timeline we find ourselves in right now is, of course, deeply unsettling. And therefore, the whole stage was oozing with sombre perspectives and disturbingly reminiscent of canaries in coal mines.

Beyond these vague motifs, it is hard to pin down a precise plot. An eclectic choice of dance, music pieces varying between folk and electronic, and at least two story lines ensured that the audience never knew what to expect. Always going back and forth between the comprehensible and the indigestible, at some point I gave up and realised that I found myself more in an absurdist play more than something trying to convey a concise political statement.



"Wherever they burn books, in the end will also burn human beings."

### ‘BELARUS FREE THEATRE’ DELIVERS A GRAND PERFORMANCE OF A FEVER DREAM

Let me try to unravel a bit: Everything is set in the year 2049 and the first act concerns a small village in the aforementioned "Russian Reich". Corruption and blind deference plagues most of the village, and is most certainly a reflection of the experiences of many in the last century. Here, the majority of our company come together, there is a lot of non-dialogue, and some very wild scenes. In contrast, the final acts are a much more coherent Noir-style

tragedy, following a detective through a fantastical trip through Berlin, Hamburg, Paris, Prague, and Vilnius. One would hope that the antagonist of the "Russian Reich", the "League of European Nations" (successor of the European Union), would offer a more glamorous outlook. But, alas, it too has deteriorated into a blob of indifference. And, while our detective is trying to solve a murder; really, we are mourning the death of poetry and literature in the ostensibly free, but amorphous, Europe.

As someone who is somewhat familiar with German culture, I enjoyed the references made to it, especially

Credits: Photo/ Linda Ny Lind



*Dogs of Europe* is a disturbing, if confusing, absurdist experience.

## ARTS

Credits: Photo/Linda Nyland

as some were rather subtle. This to me is not only a sign of great literature, but also well-executed direction.

And, whatever else was happening on it, the stage was an active part of the drama, a vivid character in itself. To a certain degree this was necessary — the whole play was performed in the genuinely beautiful Belarusian language, so I was relying on the subtitles in the background. But it goes far beyond that: Whenever someone was smoking a cigar, or books were burning, a pungent smell was noticeable throughout the whole theatre; the stage lights drawing our attention to pair of shoes; the awesome outfits highlighting the character's ridiculous features; and so on. As an audience we had no other choice than to be dragged into this visceral mess — what a delight!

The absurdity and intensity of experience will naturally be polarising. Features like flashing lights and fast-paced music are demanding, and a run time of three hours guarantee that you will be in for a ride. But, put differently, I think the whole creative team deserve credit for filling the time consistently with content, with emotion, and with entertainment. I am certain that this was also physically exhausting, at the very least for the actor who was running in circles on the stage for more than 15 minutes during the interval — just so he could continue performing without a break.



Aliaksei Naranovich and Raman Shytsko from the Belarus Free Theatre.

Perhaps the clearest and most straightforward part of the play was the “epilogue” — an address towards the audience, characterised by its raw and desperate na-

ture; a mixture of a cry for help and a warning of what could befall us all.

## Musical

## Grease: Musical lovin'... had me a blast!

### Grease



**Where?** Imperial College MTSoc

**When?** Until 8th May, 2022

**How much?** £8 (Students)

Reviewed by **Disha Bandyopadhyay** Arts Writer

The plot is as elementary and basic as the classes in Rydell High. Boy meets girl, boy does something stupid and loses girl, girl changes her outfit, and they get back together. Rife with misogyny, sexism and slut-shaming, *Grease* somehow still retains its status as a timeless classic, a guilty pleasure for many. Musical Theatre Soc's rendition of *Grease* glosses over some of the problematic themes with an enthusiastic and passionate cast equipped with some snazzy tunes and radical moves.

Cecilia Longoni is an unassailable Sandy Dumrowski and her performance of “Hopelessly Devoted” was one of the best solo acts of the show. Tess Goudsward as Marty, Olivia Keene as Frenchy and Noemi Herrera Martin as Betty Rizzo beautifully captured the girl gang and the trial and tribulations of teenage boy drama, set alongside the bromance between Ken-

ickie (Fin Corney), Sonny (Isabella Breslin), Doody (Manuel Gageiro) and of course, the darling of Rydell High, Harry McCarthy as Danny Zuko.

Myrabeth Yeo Juann as Jan and George Chipperfield as Roger were outstanding and hilarious in their tre-moon-dous performances and brought an electric energy to the performances which got the audience clapping and swaying along. Where the show lacked in sound testing and volume control for mics, they made up by the commitment of the actors and their show-must-go-on attitude. The set designers did a fantastic job of bringing “Greased Lightning” to stage: preserving the dilapidated state of the car, keeping a macho posturing with just cardboard. From costumes to the slicked hair, to piercings during sleepovers, *Grease* portrayed a bygone era.

However, considering the current social climate, I would've appreciated if the production had addressed the themes of date rape, promiscuity, and spiking by Vince Fontaine (Shapeetha Ariyaratnam) without the desensitisation accompanied by the original movie-musical sensation. At face value *Grease* is a light-hearted and cheery show but ignoring the issues it brings up does not help the social tone we set today on campus and just recreating this classic was not enough. Nev-



ertheless, this production does bring up a conversation which is still important.

Overall, *Grease* was a wonderful production by the Musical Theatre Society, in a performance that clearly showed hard work and dedication. Rock n' Roll to jiving, what can't Imperial students do?

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## Opera

## Power, corruption, and lies

## Rigoletto



**Where?** Royal Opera House

**When?** Until 12th March 2022

**How much?** Tickets from £25

Reviewed by **Alexander Cohen** Arts Editor

Power, corruption, and lies take centre stage in Oliver Mears' production of *Rigoletto* which returns to the Royal Opera House after its première in September. Set in the court of the Duke of Mantua, Mears' dark take on the opera does not shy away from examining the dark underbelly of hedonism, the unscrupulousness, and the debris left in the wake of the libertine lifestyle. But Mears goes deeper. His production confronts the legacy of toxic masculinity in western art, forcing its audience not to be swept away with the gorgeous music, but to drill deep into their own psyche to unravel how the male gaze has shaped our understanding of art and society.

Luca Salsi's *Rigoletto* was electric as the tragic hero trapped between his life as the jester at the Duke's morally bankrupt court, and as a father trying to protect his daughter. As his worlds collide *Rigoletto*'s descent into violence was as enthralling as it was tragic, with a deep melancholy woven into his vocal texture. Salsi drew out Verdi's infatuation with Shakespeare by channeling both Shylock and Lear in *Rigoletto*'s duality as a bitter outsider and a loving father. *Rigoletto*'s daughter Gilda, performed by Rosa Feola, was the strongest vocally, hitting her high notes with confidence and ease, and conveying Gilda's demise with tenderness and deep



Power, corruption, and lies take centre stage in Oliver Mears' production of *Rigoletto* returning to the ROH.

affection for her father.

But the production was most interested in examining the Duke of Mantua. Beneath the slicked back hair, velvet dinner jackets, and bravado, Francesco Demuro's Duke was devilishly animalistic. Although his higher notes were sometimes tense and rough, he artfully captured the Duke's licentiousness and narcissism - painting a picture of man corrupted by unabashed greed, a nymphomaniac, the 19<sup>th</sup> century's answer to *The Tinder Swindler*.

Talking of paintings, a blown-up *Odalisque* dangled over the vast stage in act one as the Duke, accompanied by his court, a crowd of lavishly dressed men, taunt and seduce women; the sickening power of the male gaze brought into full view by set designer Simon Lima Holdsworth. In the second act it is replaced by another image: *Titan's Rape of Europa*, where the line between beast and man is disconcertingly skewed.

The opera's most famous tune, "La donna e mobile", was haunted by this lingering darkness; the Duke sings the upbeat song whilst unceremoniously paying a prostitute for sex. The lavish renaissance art is nowhere to be seen. Just the prostitute's dingy, barren, and dimly lit room. The impunity of his Epicurean philosophy is perhaps most disturbing. After all the crimes he commits there is no comeuppance. He is untouchable.

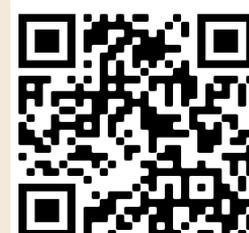
Mears' production plays out like a psychodrama. It is dark and difficult to digest. But in an artistic tradition where many inherited tropes and concepts were forged in less egalitarian sensibilities, we need operas to reflect on the legacies of their own moral outlook. *Rigoletto* does exactly this.



Titian's *The Rape of Europa* (1562).

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PUZZLES

**Cryptic Crossword Clues**

**Across**

- 1) Model a rapid shift of global market limits. [8]
- 4) Through biopsy, checks the mind. [6]
- 9) The lady's gone mad about her work, it's not normal. [13]
- 10) She might be Roman. [5]
- 11) Article in famous magazine about a fob watch? [9]
- 12) Commit, in part. [7]
- 13) Kindle them in snake eyes, they say. [6]
- 15) Photos taken back then around the right time for this paper. [6]
- 17) A number of workers, renting. [7]
- 19) Acrobat tightrope-walking on radio wires? [9]
- 20) Sudden instance of stinging pain in knee evoked a start. [5]
- 21) Causing settlement. [13]
- 22) Aren't I funny about my eyepiece? [6]
- 23) He got embarrassed and ultimately fired when it ended badly. [8]

**Down**

- 1) The neoplasm could be fleshy soft tissue, for example. [8]
- 2) Political reform for a Queen entwined with that destination. [15]
- 3) Excess on the order of a thousand kilos for that greedy one. [7]
- 5) Bad pension sped mild case of memory loss up? [7 4 4]
- 6) A patronising lie going the same way as this clue! [13]
- 7) "I've got a dead leg!", said she. [6]
- 8) Yes, in Spain there's a hundred current seafood types. [6]
- 9) Uninterrupted, modern-day power source. [6 7]
- 14) A performance-enhancer which rocks? [8]
- 16) Three through the quiz round. [6]
- 17) Add it slowly to your solution, at half or two-thirds of its rate. [7]
- 18) Doctor to reduce mass injection. [6]

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BOXES

**Cryptic Crossword Grid**

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**Regular Crossword Grid**

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**Regular Crossword Clues**

**Across**

- 1) Target for train pickpockets. [8]
- 4) Muzzle, chops. [6]
- 9) Connective roads. [13]
- 10) Almost undone. [5]
- 11) Guttering component. [9]
- 12) Rich red. [7]
- 13) Short-fused. [6]
- 15) Early release from punishment. [6]
- 17) Not from the Occident. [7]
- 19) Broke terms. [9]
- 20) Comes face-to-face with. [5]
- 21) One of them is covered with a knot in an hour. [8 5]
- 22) Bury. [6]
- 23) False nails. [8]

**Down**

- 1) Strand-like sweet. [8]
- 2) Proper behaviour in the workplace. [15]
- 3) London town connected with trams. [7]
- 5) To an arbitrarily small degree. [15]
- 6) Cosmetic implement and fire hazard. [13]
- 7) Swamp plants. [6]
- 8) Shocked. [6]
- 9) Pineapple, e.g. [8]
- 14) What you find behind 4-Ac. [8]
- 16) Section in a DVD menu. [6]
- 17) Ever-present. [7]
- 18) He's this before a husband. [6]

**Easy Sudoku**

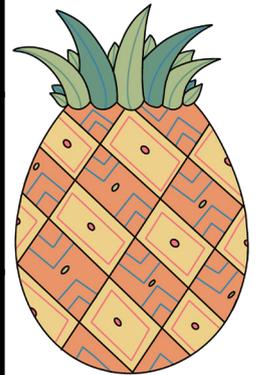
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**Normal Sudoku**

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	1	5				7		4
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**Difficult Sudoku**

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	9		4					
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**Nonogram #1**

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**Minesweeper**

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	2		1					
	1				2		1	
			1		1			

Leaderboard QR Code:



**FUCWIT**

- 1. Deep-Fried Charizard 150
- 2. It's not fat, it's power 139
- 3. AKGroup 130
- 4. Lucky's Magic Whisk 65
- 5. Plont Palace 30
- 6. Hea-ing 13
- 7. The First Order Physicists 6

As always, you can send your solutions to fsudoku@ic.ac.uk before Wednesday at 12:00!

**Puzzles Notices**

Section Editor: Lito Chatzidavari  
 Leaderboard: Raluca Constantinescu  
 Special thanks to Stanley Scott for the crosswords and the reverse cryptic, and Aim Kumpusiri for the Easter Eggs.

This will be the last Felix until the first week of term, so look out for answers when they publish on 29<sup>th</sup> April.

Hope you enjoy our puzzles in the meantime!

**Points**

- Easy, Normal, Difficult sudokus 2, 3, 4 pts each
- Cryptic Crossword 5 pts
- Regular crossword 4 pts
- Boxes 2 pts
- Reverse cryptic 1pt each
- Nonogram #1 3 pts
- Nonogram #2 2 pts
- Minesweeper 1 pt
- Easter Egg Hunt 1pt per egg



## THE HEADLINES THIS WEEK...

**It feels all kinds of wrong, but nation can kind of get behind what Michael Gove's been doing recently**

**Investment Society committee being made up mostly of amoral men is surprising to no one**

**Tens of millions in Afghanistan and Yemen in untold suffering - not white so doesn't matter as much**

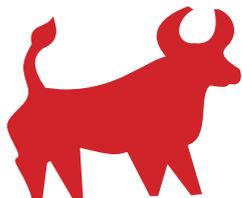
**NDA that prohibits discussion of said NDA leaves lawyers' heads spinning**

*Boris announces he prefers lat pull-downs over seated rows as they "build back better"*



### ARIES

This week you cover yourself in oil for a better tan, but keep sliding off the jetty



### TAURUS

This week you confuse the MEQ with Pornhub and accidentally praise your lecturer's 'milf feet gagball'



### GEMINI

This week "encouraging debate" doesn't fly as an excuse for calling your lecturer a "complete cunt" in front of your whole year



### CANCER

This week you perpetuate the Union's vice-like grip over the student population by voting in the Leadership Elections



### LEO

This week you did something for women



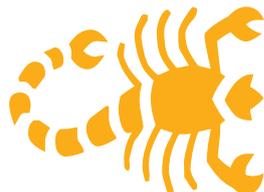
### VIRGO

This week you pledge hate speech in support of the war effort



### LIBRA

This week you realise that time when you didn't accept someone's friend request because you thought you were cooler than them actually just made you a prick



### SCORPIO

This week scientists decide to just add the ham, cheese and butter into the bread dough before baking, producing a loaf of sandwich



### SAGITTARIUS

This week your girlfriend compares your scrotum to a pelican's throat sac



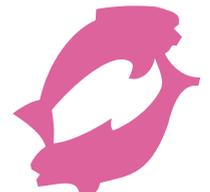
### CAPRICORN

This week you're stopped by security and they confiscate your powdered milk



### AQUARIUS

This week you kill two birds with one kidney stone



### PISCES

This week, what you lose in gravel you will make up in cheap dental fillings

CATNIP

# 'Make Imperial Imperial Again' movement sweeps through College

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NegaFelix Reporter

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The College community arrived at the South Kensington campus on Friday morning to find it adorned in red and white merchandise, heavily branded with the slogan 'Make Imperial Imperial Again'.

Students arriving for 9am lectures found crudely spray-painted, rotund figures plastered over the Queen's Tower; it was only later discovered that these were supposed to be flattering portraits of Queen Victoria and Prince Albert.

Manning a scarlet-emblazoned campaign stand was none other than the notorious Imperial Imperialist Winston Columbus.

"We've been sitting in the shadows for too long" frothed Winston, as our NegaFelix reported approached the stand.

"We used to be proud of our empire, and

all the glory it brought to the world. Nowadays you can't say nothing!"

"Not to mention this renaming nonsense. I swear, if they carry on with this farce, I will be writing the College out of my will".

It was quietly pointed out to Columbus that he was 21 years old, and currently had no will nor any assets worth assigning. He responded to this comment by slowly nodding his head and then squinting at some indistinct point in the sky, as if looking for something.

A glance towards Central Library told our reporter that this was bigger than he had assumed.

An almost impossibly big sign embossed with the words "The British East India Library" was hanging by baler twine over the main entrance.

Groups of MIIA supporters huddled around the Queen's Lawn, whispering at passers by to ask them whether they wanted to buy some spices.

The MIIA social secretary made no secret of her work in promoting the movement. Skipping down the stairs of the Sherfield Building, she tossed fliers into the air behind her. Picking one up, our reporter noted that they were advertising a number social events upcoming during the next week, each with the attached tagline "the empire on which the fun never sets".



## Ebony and Ivory: How I managed to incorporate my Ketamine addiction with my Buddhist Practice

There's a saying in the east: 'I think therefore I am, I ying therefore I yang'. I'm not sure who said it, but I heard it in a dream once and since then I knew that the purpose of my life was to relinquish all my attachments to this material world and follow the noble path of the Holy Buddha. Before this revelation I already had what could be considered a firm foundation in Buddhist practice; I had been going to Bikram yoga once a week for years, and Nirvana was my favourite band. But on a practical level this wasn't enough, my life was still too cluttered. For example, I decided to cancel my subscriptions to Netflix, Amazon Prime, and Hulu, and only keep HBO max and Crunchyroll. However, most people would expect these kinds of sacrifices from a typical Buddhist. What they may not expect is that a fervent monk like myself can still snort ketamine frequently without losing their clear mind. Ketamine is somewhat of a passion

of mine, and I knew if Buddha were alive today he would have tried it. He certainly wouldn't have wanted me to relinquish something so integral to my identity; Buddhism of course is about being yourself. But despite this likely receptiveness on the Buddha's part, I knew I couldn't keep doing it the same way I always had.

All my changes were in the mentality of a typical monk. I stopped using a rolled up £5 note to channel the substance into my nose, because monks aren't supposed to handle currency. Instead of doing it on a toilet seat while I kneel on the floor, I acquired a simple wooden table and always used a full lotus position. And now I make sure to do it in front of my precious Buddha statue.

I have received backlash from other Buddhists. They say things like "You aren't even complying with the most basic of maxims in the Dhammapada", or

"Ketamine is not even one of the healthy drugs", or "No, Buddha is not Jesus for Hindus, that's wrong on both factual and religious levels". But honestly? I think they're just jealous of my heightened understanding. We're all trying to reach the void, I just found it in a K-hole

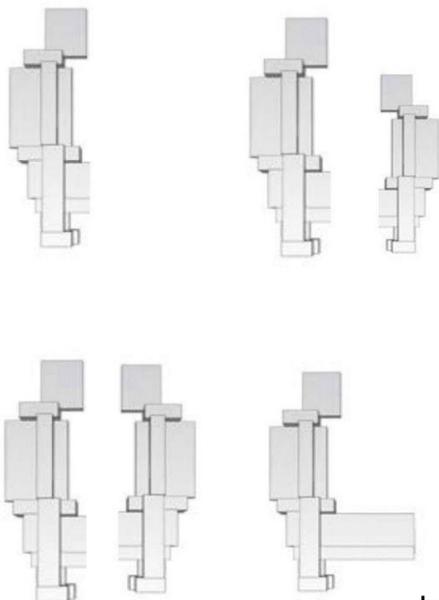


# 10 ways to tell someone you don't want to vote for them

With Union elections finishing up this week, many of us have never felt more popular. How nice of that person I was in halls with to message me to ask how I am. Yes, it has been a long time, thank you for asking. No, I will not vote for you.

We here at NegaFelix have leapt to your aid by providing you with the best ways to avoid having to promise to vote for someone.

1. Act enthusiastic and ask to see their manifesto. When they send it to you have a sudden change of heart and tell you have serious concerns about both their credibility and fitness for office. Bonus: send them extracts from their opponents' manifestos as suggestions
2. Pretend you can only make fish noises. NegaFelix research has found that herring and lionfish are the most effective fish noises, with flounder and sprat the least, as they can sometimes be understood
3. Ask them whether they have sufficiently aristocratic blood to consider taking on a position like that.
4. Tell them you will give them your vote if they provide you with six onions
5. Tell them you are actually running against them and that their actions amount to electoral intimidation. If bold you can then report them to the Union for wrong-think.
6. Pretend your grandmother just died and it was her dream to become RCSU Vice-Deputy Activities secretary (replace as needed) and that it is incredibly insensitive of them to send you a message at this time. Bonus, combine with 5 to produce maximum bad blood.
7. Thank them for their message and let them know you have kompromat on their opponent but can only share it in person. Ask to meet in a public location and get them to buy you dinner, wine and flowers. When they ask for the information, just put your finger on your lips and wink. When the meal is over, lean in for a kiss. (For the people who haven't been on a date in a while)
8. Buy enough badges and posters for that candidate to breach spending limits. Campaign on their behalf and rally all your friends and their friends to vote for that person. When they win (due to your amazing campaigning) leak the receipts for your purchases to the Union
9. Challenge them to a game of Facebook Messenger basketball, best of 79.
10. Actually get involved in the election process, learn who the candidates are, find out what they stand for, their experience and their merits. Watch the hustings to get a clearer picture of their values. Interview past holders of the role to get a clear idea of what it would entail. Forget to vote in the election, making all your work pointless.



The estates team when asked to do anything they're supposed to



Imperial Athletes charging everyone in the football team £65 for 13 individual socks and no coaching



**Never Ask A Woman Her Age**

**A Man, His Salary**

**Or Muir Sanderson why he resigned from Imperial in 2022**

\*stolen from DocSoc meme chat, thank you to whoever made it



# Leadership Elections'22

Join us tonight, 18 March,  
in Metric, from 18:30 at the

## Results Party

and celebrate next year's  
leaders & reps!



FRIDAY 18TH MARCH 2022

# FILM

Edited by: EVA BORRAS

Film review - sustainability themed for sustainability week!

## Weathering with You

Directed by: *Makoto Shinkai*

Starring: *Kotaro Daigo, Nana Mori, Tsubasa Honda, Sakura Kiryu, Sei Hiraizumi, Yūki Kaji*

Aurélia Bordes Film Writer

You may have heard of Makoto Shinkai's works before even without knowing it because he is the one who made *Your name* (2016) which became the highest-grossing (Japanese) anime of all time. *Weathering with you* was released three years after his biggest success and is his fifth film.

The story revolves around a teenage boy who ran away from home to settle in a rainy Tokyo. There, he meets a "sunshine girl" that can make the rain stop and call for the sun.

From reading the premises and knowing our current situation regarding climate change, it is quite surprising that the movie does not care a bit about the climate crisis. The fact that Tokyo is under such heavy rains is only treated as a prop for the plot to exist which I think is a missed opportunity to talk about bigger issues. Indeed, the film is very much more focused on the personal issues of its characters rather than the big picture.

However, one of the strongest suits of the movie is its visuals. The city of Tokyo has never been depicted so beautifully. Every drop of water glimmers in this movie from the dew to the close-up shots of rain; the

interaction of light and water is delightful and shows high-technical skills and an incredible attention to details. I enjoyed the overall atmosphere of the movie, which is exceptionally soft, melancholic, and poetic.

Some call *Weathering with you* the spiritual successor of *Your name*. If you have seen the latter, then you will see a lot of similarities which is one of the biggest complaints most people have about this movie: they are far too similar. Combined with the fact that *Weathering with you* is considered not to be on par with its predecessor, it has caused the movie to be a bit underwhelming.

Overall, the movie has a big under-exploited potential as the premises are good but as the story progresses it lacks consistency: the characters are not that memorable and, without the little twist of the sunshine girl, it is an average story about everyday life and falling in love for the first time. If you have never seen Shinkai's movies, then I would recommend you start with *Your name* instead of *Weathering with you*. If you like Makoto Shinkai's works or you like fluffy romance anime movie, you will enjoy *Weathering with you*.

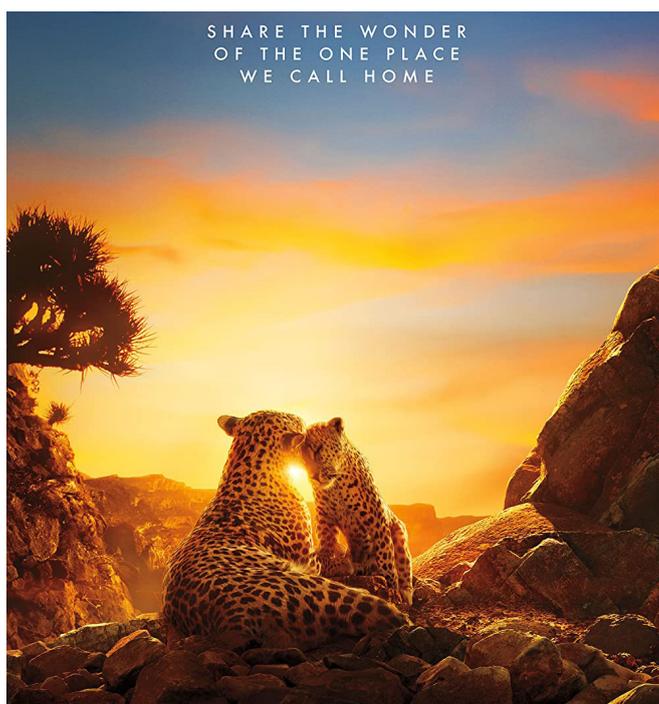


Documentary recommendation

## Our planet

Narrated by: *David Attenborough*

Eva Borrás Film Editor



This documentary series released in 2019 consists of eight episodes aiming to educate the viewer on various aspects of climate change and how the environment has been affected by humans. The first episode concentrates on the planet's diversity, more of a visually beautiful representation of the wildlife in both the ocean and the driest areas.

The rest of the seven episodes explain the life in every possible environmental condition on the planet, ranging from the frozen areas (where you can observe penguins and the whale population in their everyday life) to the jungles and rainforest which are home to an incredible number of species of birds.

Streaming on Netflix, *Our Planet* is a perfect watch if you are interested in understanding and learning about the climate change crisis. It very graphically explains how each ecosystem is being affected by the contamination caused by humans.

The fourth episode of the series takes the opportunity to explore the rationale behind why it is important to conserve sea life and should be prioritized instead of fishing without limits and dumping toxic liquids in the ocean - very eye opening. Whereas the sixth episode takes another perspective and explains the huge biodiversity in the ocean we are not very aware of as we cannot see from the land.

Personally what surprised me the most was the seventh episode, which narrated by Attenborough, explaining the importance of water being fresh and drinkable, and how it is at the moment very hard to obtain. Overall this series will definitely change your perspective on the urgent action that should be taken by the leaders of the planet to try to conserve it.

You might be aware that this week is Sustainability Week at Imperial, where events are going to take place, make sure to check them out!

# MUSIC

Edited by: TARA PAL CHAUDHURI  
JOE RIORDAN

## DON'T MISS THE GIG - MELON BAND @ METRIC, 25TH MARCH, 18:30

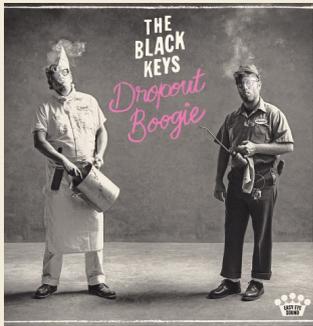
MELON BAND INVITES YOU TO THEIR SECOND PERFORMANCE OF THE YEAR - THE SPRING LIVE - SHARING 13 SONGS FROM VARIOUS ANIME, J-POP ARTISTS AND BANDS! THIS JAM-PACKED EVENING WILL BE AT METRIC ON THE 25TH OF MARCH STARTING AT 18:30. COME EXPERIENCE THE WONDERFUL WORLD OF J-POP BROUGHT TO YOU BY MELON BAND!



## Single of the Week

### 'Wild Child' by Black Keys

My favourite modern blues rock band has released 'Wild Child': a thumping, foot-tapping blues rock track that is insanely reminiscent of repetitive 80s



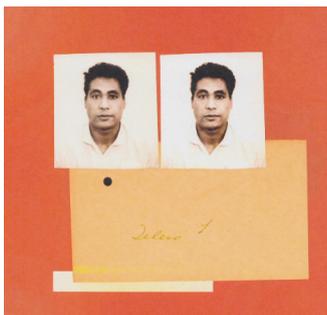
mainstream rock – and I genuinely mean this in the nicest way possible. Dan Auerbach's soft, yet almost always distorted voice in classic garage rock form, is more than welcome to my music library, especially along with Patrick Carney's lively drum sequences.

## ALBUM OF THE WEEK:

### ANGELS IN REALTIME BY GANG OF YOUTHS

ROUSING  
INSTRUMENTALS

PEPPER EVERY TRACK, COMPLIMENTING THE STREAM-OF-CONSCIOUSNESS LYRICISM, LITTERED WITH BIBLICAL REFERENCES THAT I'VE YET TO DECIPHER. THE HIGHLIGHTS OF THE ALBUM ARE 'THE ANGEL OF 8TH AVE.' AND 'YOU IN EVERYTHING'.



## Gig Review

# Tremolo Wins Battle of the Bands

*Tremolo takes the crown from Quadronaut, BOTB 2020 winner.*



View online here!

Written by Joe Riordan & Tara Pal Chaudhuri Music Editors

We travelled what seemed like the length of Exhibition Road to finally get to Metric. The snaking queue motivated us to finally ask Felix for a press pass. Whether that would mean anything was still uncertain, but it would definitely make it easier to report fairly. What can I say? We're committed journalists.

The lengthy wait to actually get inside Metric meant that the first sound of The Revelry that I heard was muffled through the windows as I waited outside in the cold like a little

Victorian orphan. Walking into the packed bar, the band are already halfway through their set and have managed to get a reasonably large crowd standing and dancing to their songs, averting my fears of awkward, seated audiences like those in some heats at Reynolds. While I waited for a drink, the band powered through some more Mandopop; in hindsight, a refreshing break from the

non-stop rock that came later in the night. The only let down of the set was not down to the band themselves but down to lacklustre sound mixing that resulted in a muddy mix. I wish I could have been there for the whole set because what I saw of The Revelry was like nothing I'd seen a band play before but something I definitely want to see again, especially after the last song (which Tara told me later was called 'Nunchucks'). The energy of the band was unrivalled (until Tremolo) with everyone bouncing around on stage during the final song which included one of my favourite parts of any performance all night - a piano breakdown that had perfect contrast to the hyped chorus that followed.

If you're all caught up with our articles, then you may have picked up on my admiration for Quadronaut. Exceptionally talented, passionate, grounded, and skilled, Quadronaut offers the audience a sound that isn't just defined by its timbre, but also by its emotion. While I've received a lot of, let's say, feedback for that opinion, I think it's definitely something I stand by. Not the idea that Quadronaut is worth the vote, but rather the extent to which the band's overall demeanour plays a part in experiencing the performance. Quadronaut mounted the stage to an impressive applause and began their set.

'Time' by Pink Floyd was played similarly to its premiere at the heats, beginning with an arhythmic percussion bound together by a foundational bass sequence. The band leaned into Pink Floyd's reverbed psychedelic sound without overpowering the vocals – which, although not their most prominent feature, are definitely elevated by the harmonies. 'Don't Bring Me Down' relied on these well-rehearsed harmonies, primarily sung by the pianist and lead vocalist. Although the falsetto when singing "grooss" wavered,



Photo: Alek Ziolkowski

the band definitely emphasised the elements of the song that make it so damn catchy. A new song on the setlist, The Rolling Stones' 'Sympathy for the Devil', was the first of their set that didn't have every element found in the song. Normally populated with the West African shekere, maracas (shakers in Latin music) and congas, Quadronaut brought out the '60s rock elements of the song. The characteristic "woos" were filled in by the audience which

was of particular interest to me – did they expect that gap to be filled? A risky, yet exciting decision. The set was finished up by Gabe's emotive rendition of 'Rocketman' and finally the Quadronaut special served at the end of the every performance: 'The Chain'.

Tremolo take to the stage next, bubbling with energy. Most of it coming from lead singer Ryo - I know his name because he enjoyed asking the crowd "who are we?", to replies of "TREMLO" and also "what's my name?", to replies of "RYO", almost all of these shouts coming from one group behind me. The energy is what I loved about this band. "You know where you are? You're in the jungle, baby!" Ryo screams as the band kick off their set with a double portion of Guns N' Roses. A lively 'Welcome To The Jungle' barrelled into a fiery 'Sweet Child O' Mine' that looked particularly taxing as the lead guitarist wiped his forehead after a high-octane solo. A mosh-pit started during the band's rendition of 'Back In Black' and was swiftly broken up by the security guard stood on the side of the stage. During 'Beat It' by Michael Jackson, the energy flowing off stage was finally accepted by the audience, when people started singing and dancing along. Another scream from Ryo - "Rock 'n' roll never dies!" - led us into Tremolo's final performance of 'Livin' On A Prayer'.

I am a sucker for coordination and choreography, and Happenstance came with both. The band came on stage all in white shirts, followed by lead singer Ana (who did not ask the crowd her own name but I'm friends with) in a black dress. With a 150% increase in practices for the final (3) from the heats (2), the band were just as tight and impressive as before. Again, the only trouble in the set arose from a less than perfect sound mix; the horns that formed a substantial backing for the band were usually inaudible. This was devastating because the horn section, for the parts we could hear, was incredible. With two lead singers, Happenstance offered the most diverse set ranging from rocky hits like *'Beggin'* to soft soul covers like

*'Easy'*. Even though the band admitted themselves that they had a lower energy than the other bands of the night, they still managed to get the crowd involved with everyone singing along to *'Ain't No Mountain High'* and *'Valerie'*: the final track that had the whole crowd on trampolines.

The new kid on the block (well, as far as I know because I've never seen them before) is a huge surprise. Winston The Cat has been plucked out of the '90s grunge era and the lead singer has the same pained but tired energy that Kurt Cobain had. Their set, which includes the Beatles, Kings of Leon, Red Hot Chili Peppers, and Foo Fighters, was incredibly varied, yet similar somehow. The lead vocalist's raw and rough-

on-the-edges vocals are bent and twisted to fit this setlist spanning the eras. From the dishevelled '60s blues that comes with *'Yer Blues'* by the Beatles, to the growing angst-y passion of *'Everlong'*, Winston the Cat's sound was dynamic, yet still maintaining a little something that was unmistakably theirs.

All in all, we were incredibly impressed with the bands, who showed impressive audience engagement, control of tone, and – as always – other-worldly instrumentalists. And a huge shout out to the DJs who made the waiting period for the results a funky disco. I never dance to anything a DJ produces, but best believe I forced all my friends to show off any moves I could remember from Saturday Night Fever.

## Podcast

# Tune into the Neutrinowatch – Reinventing Podcasts

*Take a dip into a parallel timeline - could your favourite song sound a bit different?*

Written by **Yunke Zhou** Music Writer

I stumbled across 'Neutrinowatch' one day - discovering it was based on an eye-opening concept that would forever change the way I view podcast episodes. Neutrinowatch offers the same nine episodes (at the moment), each based on a Python algorithm that generate different variations of the episodes automatically every day. This creates slight but noticeable differences in the same episodes from the day before.

*'The World Outside My Window'* is the name of the song that makes up the entirety of episode five - acoustic, pondering and beautiful. Inspired by the structure of operations constructed by quantum computing, each variation of this song maintains the exact first and final lines but each line in-between branches off from the previous line. For instance, line two may have two options, then for each of these options there would be two more options for how the third line would play. The branching pattern differs each verse, but totals to 2,048 lyrical variations. In addition to 280 possible musical variations, the algorithm could in total generate 573,440 versions of this one song – it would take you 1,571 years to listen once through each version, assuming no repeats.

The creators Martin Austwick and Jeff Emtman experiment with how far they can incorporate dynamism into podcasts. The closest to this concept to date has been just the geographic targeting of dynamic podcast advertising. Further enhancements to Neutrinowatch are bubbling behind the scenes: Austwick and Emtman work hard to enhance this unique listener experience, attempting to add geographic targeting into the mix, such as giving local weather reports.

Placed into a fascinating, AI-dominant and physics-themed fictional storyline that is further explored in other episodes, perhaps this approach offers an objective and distanced perspective on how our lives take their course.

Below are the lyrics for 15th March 2022 for reference – which version are you listening to today? Remember to stream the episodes for daily updates, and I thoroughly hope you will also enjoy the fun I have had with it this past month. Lyrics generated Tuesday, 15th March 2022 02:03 UTC/GMT:

There's only the world outside my window  
A movement in the branches caught my eye  
That concludes this morning's entertainment  
I still can't tell a starling from a magpie  
I'm not a librarian, I just look on in awe  
So I won't feel alone in this world anymore

I know the sun won't set the clouds on fire  
I think I saw my shadow walk away  
I'm lying if I tell you I'm a river  
Fingertips whose work is gentle play

Sometimes life's like staring at a novel  
A book that's far too complex for me to read  
But I'm aware of patterns in the water  
One day those waves will come right here to me  
I'm not saying it's not frightening  
As they're arriving at my door  
But I won't feel alone in this world anymore

## Felix Recommends

# Thirteen songs for just letting go

*Because you cannot sit and stare at your wounds forever*

Written by **Ambika Bharadwaj** Music Writer

Someone has to leave first - this is a very old story, and there is no other version to it. Every once in a while, some poorly suppressed memory rises to the surface and I am back in the graveyard in my head for relationships of the past, the tombstones are the proof that I paid the price. I find it fascinating that, person after person, they all converge at one moment, irrevocably changing the course of my life. As it is with accidents, so it is with love. I have seen my own sun darkened, and these are just some songs that allowed me to put my

pain into words.

*'when was it over?' - Sasha Alex Sloan (feat. Sam Hunt)*

Sasha Sloan paired with Sam Hunt for this vulnerable ballad that finds the two trying to pinpoint what precise moment led to the demise of their relationship. The song is about not being able to let go of someone even when you know there's nothing left.



*'are you okay?' - Winnetka Bowling League*

I haven't heard a song that's consistently moved me to tears the way this has. I think one of the reasons why the musical imagery stands out so much is that we have all tried to look back into the past and reach out to a failed relationship. For me in particular, I have struggled



## MUSIC

to articulate why there can be so much turmoil and ambivalence with wanting to reach out after something has ended. This song's essence is about 'do I want to know if they're okay or do I just want to leave the door open?', 'was that relationship really as good as I remember it, or have I changed some of the details in my mind to make the narrative more convenient?'

### 'Scott Street' - Phoebe Bridgers

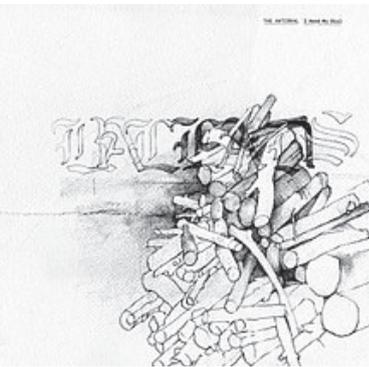
Like much of *Stranger*, 'Scott Street' tackles the theme of loneliness. It perfectly encapsulates the disconnect and isolation you feel when reconnecting with someone you were once close to and realising how much they (or both of you) have changed. As you make small talk, you realise the shared interests that brought you together as lovers no longer exist. The song ends with the line: "Anyway, don't be a stranger." It's Bridgers' way of saying, "We should catch up soon!" or "Let's get coffee sometime." It's more of a polite parting phrase than a serious suggestion. You'll go your separate ways and never text each other or meet for that cup of coffee. You'll eventually run into another old flame, and the cycle repeats.

### 'Stories' - Refs

The cluster of instrumentals in 'Stories' is a key component that adds intricacy to the track; the recast of drums, along with the atmospheric soundscapes, make it hard to distinguish if the song is meant to sound sad or happy - and one of the lyrics from the song, "we hold on to different things / to different stories," is a message that sticks.

### 'I Need My Girl' - The National

A ballad in ode to lost love, 'I Need My Girl' is a grief-filled lonesome, strummed heartbreak jam about losing someone. This song opens with a delicate lick that pulls the listener in and uses it as a foundation for a sombre tune about desperation and devotion.



### 'sucks to see you doing better' - Valley

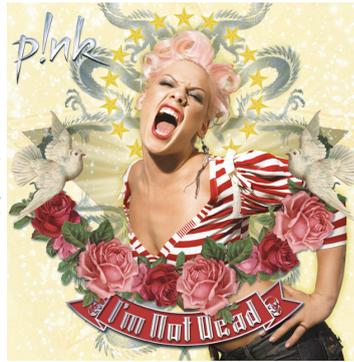
A single about thinking you are watching an ex do better than you following a breakup, the track explores the reality that neither party is ever as okay as they seem after a split, despite their public persona. Even if one party is doing better than the other- nothing is ever as simple or easy as it comes across. With a fun and almost poppy backdrop, the song reminisces on



the relationship prior to its turn south in an emotional way that leaves listeners feeling unsure about their emotions. Should they be sad with the narrator? Or be dancing to the catchy beats?

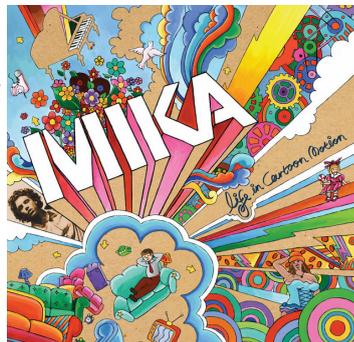
### 'Who Knew' - P!nk

Sometimes we accidentally take for granted that the best people we know will always be in our lives somehow - not in the "we-are-going-to-be-together-forever" way, but in the way that makes it impossible to fathom a person won't be part of your life. The story presented in this song is a romantic one, but the lyrics are vague and universal to squelch the emptiness clawing holes in your heart. I might never quite understand why I lose the people I do while I'm still standing, but music proves to be the comfort I always need, who knew.



### 'Happy Ending' - MIKA

I love MIKA. I love him like I love a bowl of Half Baked after a long day. If his songs came in a pint of Ben & Jerry's, I would eat them. Seriously. MIKA delivers a mesmerising dream sequence of a song that carries the singer above the Earth while he solemnly sings about "no hope, no love, no glory."



### 'Pablo The Blowfish' - Miley Cyrus

A child-like ballad about a dead fish, Miley sings from a place of vulnerability and sets the tone for a very trance-like psychedelic heartbreak song. At the end of the bridge, you can hear her jokingly mention "maybe you'll fall in love with a sea-horse named Sadie", but immediately break down at the idea that maybe Pablo is better off without her.



### 'Radio Silence' - Gretta Ray

Gretta's voice fluctuates from low and deep to stretching highs whilst keeping the soft tone she is known for. Light guitar riffs followed by low kick drums guide you through the song. 'Radio Silence' is a song of loss and regret laid out in the most approachable and



soothing manner.

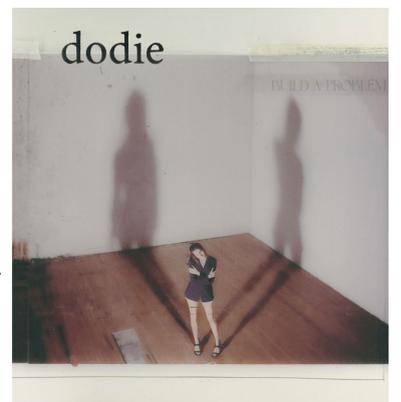
### 'Cut The String' - Jenny Yim

It's a song about cutting oneself from an unhealthy romance, and Jenny's soulful, earthy voice croons about coming to terms with the fact that love is not an everlasting performance in which you attempt to retain the attention of your significant other.



### 'When' - Dodie

'When' is about being hopelessly in love with a memory. It comprises cinematic compositions with ripples of strings, piano and guitar, echoes of clarinet, all topped with a mellifluous voice that recalls Regina Spektor without the bite. Dodie is unafraid to be messy and tender in candid lyrics that consider relationships with others and herself ("Am I the only one wishing life away? Never caught up in the moment, busy begging the past to stay").



### 'coney island' - Taylor Swift (feat. The National)

When it's cold, 'coney island's broken-down rollercoasters and abandoned boardwalk take on an ominous, almost post-apocalyptic feeling, which perhaps stems from the fact that 'coney island's theme parks have burned countless times, and the place has always been as connected to hedonism and waste as it is to joy. The simplicity of the production only enhances it. It's everything I could've hoped for in a song titled 'coney island' and featuring The National. Matt Berninger's vocals are absolutely astounding. What does it say about me that my favourite aspect of this song is the feeling of despair laced into its bloodstream?



It would be highly unethical of me to not mention that despite the abundance of grief in these songs, the fact remains that, despite the shit storm, it will all be okay. And if you're going through a heartbreak of your own, I wish you a kinder sea <3

## BOOKS

Edited by: ZANNA BUCKLAND

## Author Interview

# Proto Dagg: Purpose, Psychedelics, and New Novel *Terminus*

Zanna Buckland Books Editor

*Title: Terminus**Release Date: 7<sup>th</sup> March 2022*

**T**erminus is a newly published biopunk novel that delves into the underground psychedelic-clubbing cults and politics of a dystopian city. The story explores the distribution of hallucinogens around the city, how they can hold and bestow disproportionate amounts of power, and the revelatory experiences psychedelics can induce. This punk-fiction debut comes from Proto Dagg, who has previously authored other books under a different penname. We sent them a series of questions regarding the novel, its influences, and their opinions on psychedelics; read on for their responses:

A copy of *Terminus* is available for review; contact us at books.felix@imperial.ac.uk if you are interested in reading and re-viewing it.

*Feel free to email us any other submissions you might have - we're open to receiving reviews of all kinds of publications (books, journals, magazines, etc.), as well as suggestions for what else you'd like to see in the Books section.*

## *What were your primary inspirations for Terminus and the world that it's set in?*

It comes from a time in my life when I was going through some of the same thoughts and feelings expressed in the book – experiencing my first big setback and questioning my purpose in life. Seeking a transcendent experience (and a good time) in the clubs, I was meeting interesting characters in all aspects of the city's nightlife. It was a magical time, or so it seemed.

## *What led you to using the concept of psychedelics as a cure for mental illnesses, and how did you come to connect it to the allegory of 'a cure for a fragmented, modern world'?*

I'm not trying to say that psychedelics are a definitive cure for anything. They can be dangerous, especially to people with mental illnesses. That being said, it was Dr. Robin Carhart-Harris at Imperial College who first reported seeing a reduction in activity of the default mode network [the part of the brain activated when you lose focus on your surroundings] when under the influence of psychedelics, by doing fMRI scans on volunteers. This ego-dissolution can be akin to a

full-blown spiritual experience, especially when such drugs are taken in conducive conditions. New neural pathways are formed in the process, and it allows you to view yourself from a different perspective, which can potentially be utilised to break destructive patterns of behaviour.

It's true that 'psychedelics' in this book are also being used as an allegory for anything that helps individuals reach beyond their own ego and come away with a more complete view of life, death, and everything in-between.

## *Could the novel also be considered a commentary on the hierarchies and class divisions of society?*

We live in a highly stratified society, whether we realize it or not. That's fine...until it isn't. When a large enough segment of society feels disaffected, that's what leads to disruptions and conflict, and that state of being on the brink of chaos is the backdrop for this book. The city of 'Terminus' is also an allegory for an individual's desire to exert power over others, and the conflict that mindset creates, within and without.

## *Is the city 'Terminus' based on anywhere in particular?*

The city of Terminus is based on a metropolitan area where I once worked (and often indulged – recreationally – in mind-expanding substances). There are some specific locations and landmarks in the novel that are unique to that city.

## *Will Terminus have a sequel; will it be the first in a longer series of books?*

Yes, I'm working on a story that takes place in a different city with a new super-villain. A few of the characters from this story will come along for that ride too.

## *If you could choose any one drug, which would it be and why? What about a particular city – do you have a favourite city to visit?*

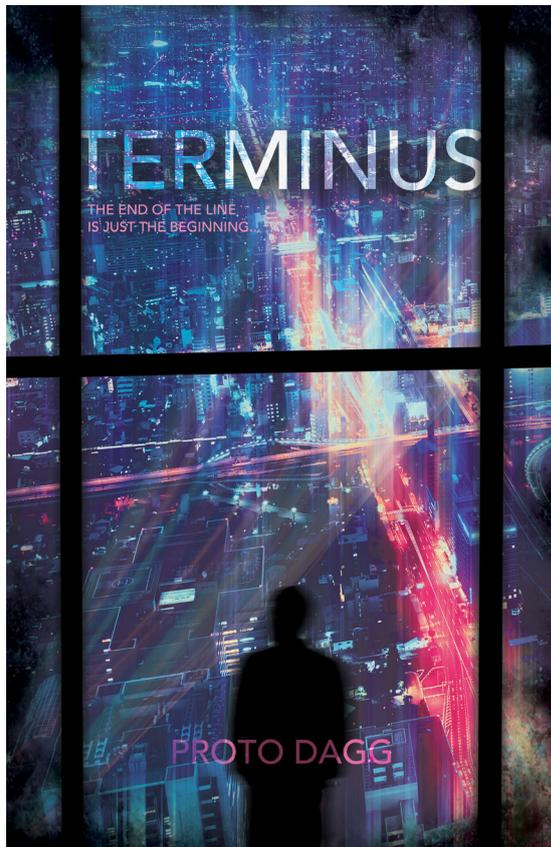
I've taken a variety of substances, and also travelled quite a bit, but I don't know if I could choose one favorite drug or place. I'm more interested in what is still undiscovered – my favorite trip is my next one.

## *Have you written any other books previously?*

Yes, I've tried my hand at writing for different genres under a different name.

## *What kinds of books do you enjoy reading? What are your top books and authors?*

Hermann Hesse – particularly *Steppenwolf* – made a big impression on me. The *Valis Trilogy* by Philip K. Dick because he so openly wrestled with mystical and spiritual questions, and Aldous Huxley's writing, for the same reasons.



## BOOKS

# Feral - George Monbiot

Sam Lovatt Editor-in-Chief

The concept of Rewilding was first refined as a term by conservation biologists Soulé and Noss in 1998, and has since grown into one of the tenets of conservationism, with the UN listing it as one of the cornerstones of ecological recovery in its 'Decade on Restoration'. Rewilding is, in essence, a system of minimal intervention that aims to allow parts of the world to return to their pre-anthropocene states, allowing food webs to build and change themselves as opposed to the intensive management championed by some conservationists in recent decades. George Monbiot has positioned himself at the head of this movement that calls for changes that almost everyone would agree with alongside some so obscure you may think they're a joke.

The book provides an enjoyable journey both through different biomes as well as different parts of Monbiot's life. Near the beginning we hear of his time living with tribesmen in South America, where an illegal mining community threatens to end their way of life; soon after we hear of his time living with the Maasai in Kenya, where a 30-mile barefoot run to a relative's house is all in a day's work. You are taken through the coasts, the countryside, the savannah and the oceans, seeing how different things used to be and how so many well-intentioned conservationists today get it so wrong.

George misses this feral life, and seeks to reclaim it at least somewhat by moving to a rural abode in Wales.

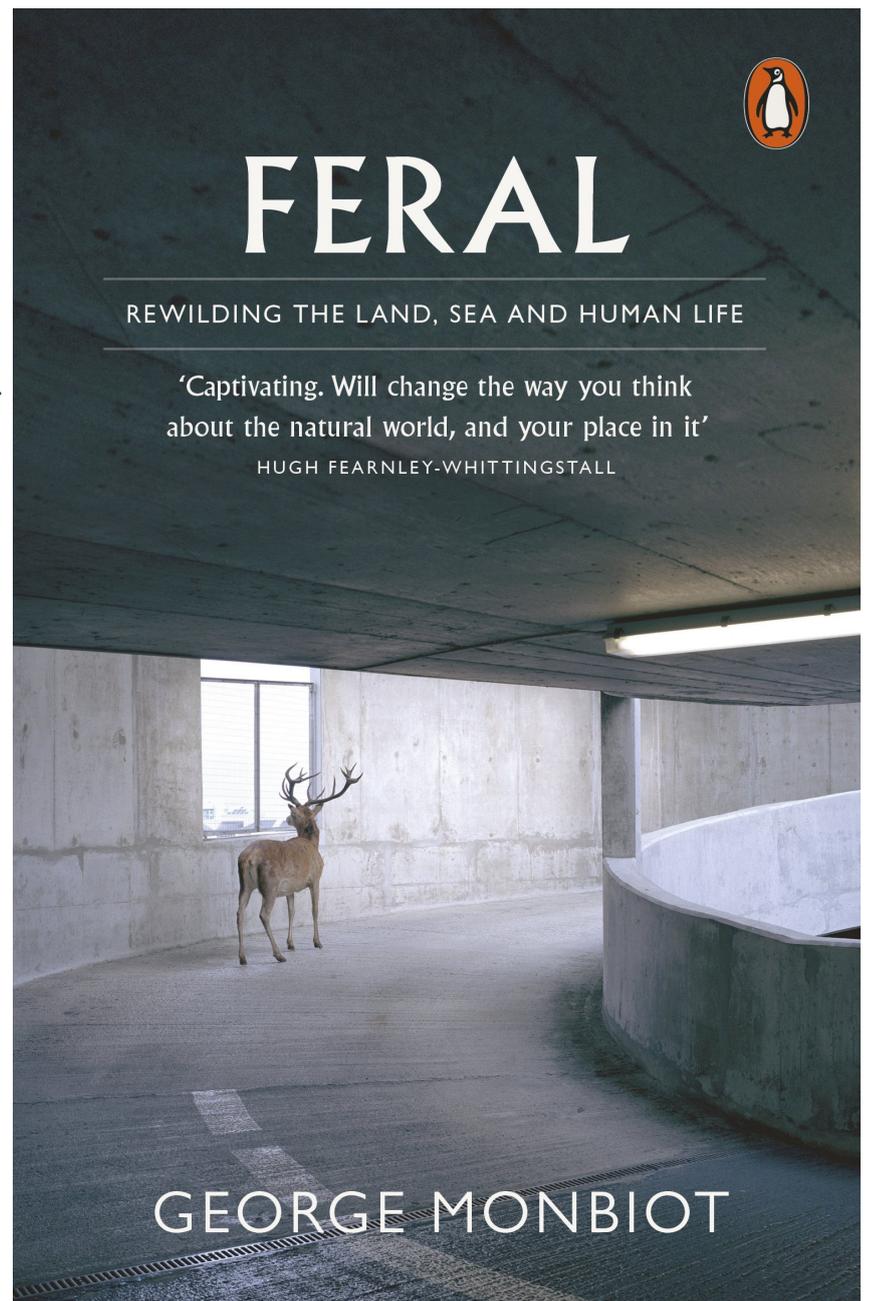
Reading *Feral* in 2022 offers an interesting insight into how the world has changed in the nine years since it was written. Peppared with references and allusions to EU environmental policy which used to bind us, but which we are now wriggling free of, it focuses heavily on Monbiot's homeland of Wales. The country barely makes it out of the ring alive; Monbiot is disdainful of the state of Glaslyn, what the

Montgomeryshire Wildlife Trust describe as 'the wildest and most regionally important site' that they manage. He also frequently refers to sheep as "the white plague", blaming them for causing more damage to the Welsh environment than all building that has ever taken place, describing the current state of the land as "sheepwrecked".

The book tells a story at the same time as providing volley after volley of facts relating to the decline of the wild and how things used to be. When what is now Trafalgar Square was excavated, to provide the foundations of what stands there today, builders found the bones of elephants, hippopotami and lions. Elephants are suspected to have dominated the British landscape until as recently as 113,000 years ago, with some of the remains found in excavations dated to as little as 11,000 years old. There were lions on Great Britain, a fact I think too few people realise.

Moreover, the presence of elephants did not just mean another dominant herbivore at the time, but it seems to have altered the way British vegetation has evolved. Trees such as limes, which we often coppice today (cut the branches off to encourage new growth), fare remarkably well after losing enough mass to kill many other species. Likewise, many can withstand the loss of a substantial amount of bark that would lead others to perish. Many British trees appear to have evolved to withstand the destructive behaviour of elephants, in a land where trees that were too small or fragile would simply have been wiped out by the herds.

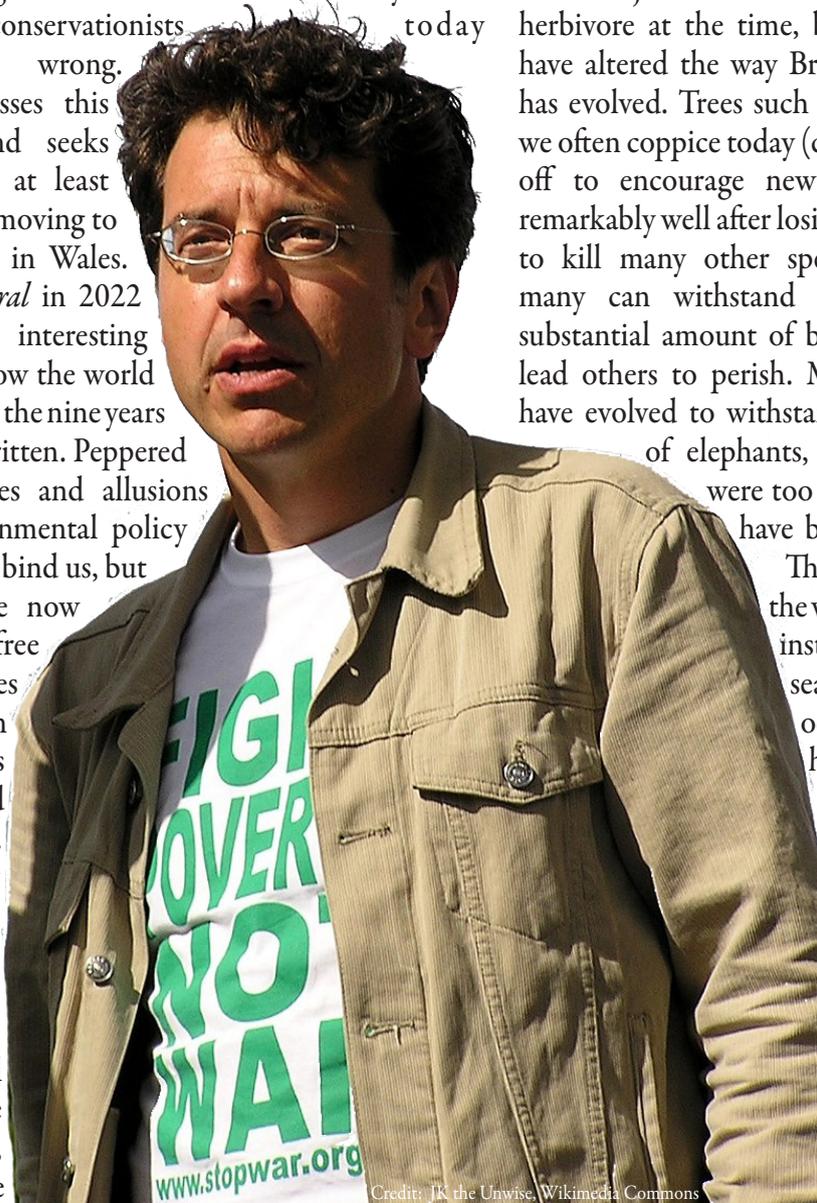
The most impactful chapter in the whole book was one of the final instalments, titled 'rewilding the sea'. The decline of the world's oceans over the centuries is truly heartbreaking to comprehend; nets, trawlers and rockhopper fishing equipment leave every inch of the oceans fishable, and populations of almost all species have plummeted as a result. The amount of catch that is unwanted and simply thrown back into the sea is staggering. Herring in the 20<sup>th</sup> century was so abundant that



fishermen ground up excess and used it as pig feed or for fertilizing lawns; when settlers first landed in the Americas they could pluck 10kg lobsters from the rockpools with such ease that they too ended up as pig feed; reports from those arriving in the Americas describe men in canoes being hardly able to paddle for all the giant salmon and sturgeon in the rivers there. What we're left with now is dwarf colonies clinging on for life, at fractions of a percent of their population size before humans began exploiting them.

There are some odd moments too; a bit too much time is given to quashing the myth of the Pembrokeshire Panther, only to bring it back to an obscure theory of our brains craving the wild world we used to live in. His activism certainly shines through on a number of occasions, where motivated reasoning clearly leads him to a conclusion different from where the reader might have arrived by themselves.

The few books I've read on rewilding before this one made no dent in the impact and entertainment it delivered. If you're at all interested in conservation and environmentalism, this is a must read.



Credit: JK the Unwise, Wikimedia Commons

# No Nuclear option

► *Peace will last for as long as it can be defended*

Farid Kaveh

Comment Writer



For the second time in our lives Russia has invaded Ukraine. This was to the surprise of only the naïve and the oblivious. As Joe Biden quipped on January 20<sup>th</sup>, with two-thirds of the Russian military machine surrounding Ukrainian territory from the North (Belarus), East, and South (Crimea), Vladimir Vladimirovich Putin “Has to do something”. His long list of untenable demands from Ukraine and NATO along with his uncompromising style of diplomacy in negotiating these demands could not be understood as anything but a pretext for war.

On February 9<sup>th</sup>, before the wailing of the sirens but after the Russian Tsar’s intentions were plainly shared for all to see, historian and anthropologist Yuval Noah Hariri wrote in an opinion piece for *The Economist* that “Unlike gravity, war isn’t a fundamental force of nature” and that the decline of war in the last seventy years has been the result of “Humans making better choices.” Unsurprisingly for anyone who has read his book ‘Sapiens’, Hariri believes that humanity can maintain its impressive streak of relative peace by continuing to make these “good choices”. Perhaps this state of relative peace could continue if the countries of the world agreed to abide by a set of international rules which bound them all with clear punishments and consequences for violators. Indeed, this has been the state of affairs since at least the closing of the Cold War, with institutions such as the United Nations and the World Trade Organisation acting as judicial bodies in disputes concerning international law. But some actors have now dubbed this international rules-based order ‘Western hegemony’ and have set themselves upon its destruction.

I do not claim to know whether the human condition will remain forever as it is today. Perhaps in some distant future all our kind will live together peacefully as part of some global body

political. Whether or not such a future is feasible cannot be known at this time. But what can be known is that if this future does exist, then it is distant. So distant in fact that it has no bearing on the reality of our lives today. As Hariri admits “To enjoy peace, we need almost everyone to make good choices. By contrast, a poor choice by just one side can lead to war.” But herein lies the ruin of his hopes for a peaceful world since, as Niccolò Machiavelli observed five-hundred years ago, “The way men live is so far removed from the way they ought to live that anyone who abandons what is for what should be pursues his downfall rather than his preservation; for a man who strives after goodness in all his acts is sure to come to ruin, since there are so many men who are not good.” That is to say, that the appearance of challengers to this peaceful and prosperous global order was inevitable, and the only way to preserve or restore it is by way of force.

Unfortunately, as the situation in Ukraine illustrates, the Western world is prohibitively limited in its recourse to force, due primarily to the threat of nuclear escalation. Nuclear weapons make use of the nuclear option impossible. To enable institutions such as NATO to preserve the global rules-based order, they must have the option of waging war on those powers which are large enough to challenge this hegemony. Since such entities will almost always be nuclear powers, a rules-based world order will not be possible for as long as the threat of nuclear strikes remains a realistic means of retribution in case of war. In other words, countermeasures must be developed to render intercontinental ballistic missiles and other methods of nuclear warhead delivery obsolete, and this is the one and only path towards lasting peace across the globe. This is so, not because such countermeasures would make the prospect of war somehow less terrible but because they would make war possible again.

The weapon of choice for the West against aggressive states has been economic sanctions. These have been effective



The Battle of Trafalgar - William Clarkson Stanfield

in a number of cases, as in when they brought Iran to the negotiating table over its nuclear program, leading to the Joint Plan of Action in 2013 and later to the Joint Comprehensive Plan of Action (JCPOA) in 2015 signed by Iran and the permanent members of the United Nations Security Council. In 2018 Donald Trump unilaterally pulled the United States out of the JCPOA, reimposing severe sanctions on Iran. This was an unforced blunder; not the only one President Trump made in office. However, what has unfolded since serves as an important case study of the limits of economic warfare.

Iran’s economy was in poor shape even before the renewed sanctions of 2018. Annual inflation stood at ten percent and the first few weeks of the year were marked by protests linked to poor economic conditions, including a sharp rise in the price of eggs (I am not joking). Once the sanctions hit, inflation quickly spiked to 40%, eventually peaking at 50%. Hyperinflation was predicted, of the kind that crippled Nicolas Maduro’s regime in Venezuela. But this did not come to pass. The economy has since stabilized. Inflation has been on a downward trend since the beginning of 2021. It now hovers around 35%. This would still be unacceptable for a developed economy, but the people of Iran are not used to the stability and security that we take for granted (nor for that matter, are the Russian people). Iran’s economy withstood the

Photo credits: Clarkson Frederick Stanfield from Wikimedia Commons

initial shock in 2018. So did its leaders. The sanctions have failed on two fronts. They have failed to weaken the political elite’s support of Iran’s supreme leader, Ali Khamenei. They have also failed in inspiring meaningful popular opposition towards the regime. Khamenei has installed Hussein Rouhani, a loyalist, as President. The parliament is also full of hardliners and sycophants. Not only has Khamenei’s position not been compromised since 2018, regionally he is more powerful today than he ever has been. Having decisively won its *Cold War* against Saudi Arabia (again, despite the sanctions), Iran backs several militant groups throughout the Middle East, including the Houthis in Yemen and Hezbollah in Lebanon. Worse, Iran is closer than it has ever been to developing an atomic weapon.

The situation in Russia will likely develop in much the same way. Putin will retain the loyalty of those he needs to stay in power. Popular dissent will only trouble him for a time before people come to terms with this war. Why will the people come to terms with the war? And why will they not continue in their activism and resort to civil disobedience as has happened in the past in that same country? This is a critical question, but one that we cannot tackle here. I ask the reader to be content for the moment with the justification provided by the analogy with Iran.

Once the shock of the initial affair has worn off, Vladimir Vladimirovich will

## COMMENT

be firmly in charge again. He will have a much weaker economy, but he had prepared for this. He has spent some time decoupling Russia's economy from the West, and he has had some success. The Russian treasury holds \$600 billion in foreign reserves. Although Russia has no suitable alternative to the SWIFT inter-bank payment system, it has successful alternatives to Western retail payment systems. History is also on Putin's side. The economic crisis of 1998, when the Russian Federation defaulted on its debt, was arguably an even more difficult moment financially, but the country endured. Moreover, having borne the brunt of Western sanctions, he will have a much easier time justifying further "Special military operations" since his country will have much less to lose. This will be especially true if the operation in Ukraine is a success. No one will want to invest in Russia for a very long time. But if that was the price to pay for unrestrained use of his military machine, then Putin will probably not regret his purchase. Indeed, if his ambition is to rebuild the USSR, then this was a purchase he had to make.

So, what are we, the West, to do? Surely, we cannot allow Putin or anyone else to break down the peaceful order that is the crowning jewel of human achievement in the twentieth century. But economic warfare is not enough. There are those who cannot be dissuaded from the dismantling of this order unless through force. But we cannot bring force to bear upon them as long as the threat of nuclear retaliation persists. Global peace can only be maintained if it can be defended by force, but use of force is not permitted if the adversary is armed with nukes. This makes clear the necessity of physical or diplomatic countermeasures to nuclear weapons. Physical countermeasures include missile shields, diplomatic countermeasures include nuclear disarmament. Any successful approach will probably include a mixture of these two approaches. These safeguards must be effective enough to bring the expected damage from a possible nuclear war to within acceptable bounds. Of course, what is acceptable must first be clarified. But as the Ukrainian people know far too well, wars are not won by righteousness, but by sacrifice.

# Science cannot justify immoral acts

► *The means never justify the final objectives because then we lose something even more important on the way, our own humanity.*

Wang Guo  
Comment Writer



Joseph Mengele, also known as the 'Angel of Death' was a Nazi physician who practised inhumane experiments with the prisoners of the Nazi concentration camps. He was particularly interested in twins; sewing them together, connecting their blood vessels and organs to see the results. Unsurprisingly the unfortunate victims would die hours after these operations. Mengele always claimed to perform these experiments in the name of 'scientific progress'. Yet it is undoubtable that Mengele's research did not yield any significant contribution to science, he simply caused suffering and tragic deaths. However, Mengele's actions force us to ask ourselves a simple question: to which extent can we consider breaking morality and harming others in the name of science?

CRISPR is a genetic engineering tool developed from the bacterial immune system. It has completely revolutionised our view of life. Now, we are not just mere observers of DNA, but we can manipulate it with ease and speed never seen before. This has created the impression that there are no limits to what CRISPR could achieve, from curing cancer to genetically modified babies. The latter turned into reality when a Chinese scientist called He Jiankui modified the genome of two babies – an action, he defended, to increase their resistance towards HIV as their father was HIV-positive. He Jiankui wanted to make a change in the world, to be a hero and, contrary to Mengele, he did not want to make the babies suffer, in fact the children are currently protected by anonymity. Despite his intentions, the reactions of the scientific community were of shock and rejection, with He Jiankui being labelled as 'greedy' and 'cold-blooded'. The Chinese gov-

ernment sentenced He Jiankui to a few years in prison but most importantly, he was strictly prohibited to step into any lab for the rest of his life. So, what are the limits of scientific ambition when it comes to achieving a greater good? Especially when such actions may harm some (or many) people on the way?

Niccolò Machiavelli wrote one of the most influential books of human history in 16<sup>th</sup> century Italy, *The Prince*. Aside from his writings on political affairs, a key argument of this book is that actions will be excused regardless of how immoral they are, provided that the results are positive enough to compensate for the actions. He Jiankui did something terribly wrong, he altered the DNA of babies without the permission of the scientific community. However, his results were not impactful because

(1) the mother was HIV negative, so the babies surely would not have inherited the disease with simple measures like regular HIV testing, and

(2) most importantly, he did not provide a definitive cure for HIV.

In my opinion, if he actually accomplished that, he would probably be exempted from prison or at least garnered him the support of the global population. The possible harm to the quality of life of the two babies would be considered as 'collateral damage' in exchange for saving millions of lives around the world. When we experiment with rabbits and rats to develop our drugs, these animals are suffering, but we just justify ourselves that their deaths are necessary for the wellbeing of humans, probably the same argument would be applied to the babies with many nuances though. If a scientist managed to find the cure of cancer but three people died unexpectedly on the way without their approval, he probably would be condemned to prison. However, the ten million people that would die from cancer every year and their

families would probably be grateful for such a cure. These people would likely think that killing people is not right, but the killed people would not cause any deep psychological trauma because they would not know these victims. There is no emotional connection, just numbers of people killed to get the cure. Unavoidably, despite the condemnation of the scientist, he will be remembered forever as the one who cured the worst diseases in humans.

The view of Machiavelli towards human nature is a simplistic one; characterising man as a selfish and cold being, which is not true at all. Some people give their lives for others without any hesitation, sacrificing the most valuable thing they have: their own lives. I, personally, have met people who have done me a huge favour without asking anything from me in exchange. I remember fondly the director of my high school, who wrote the recommendation letter for my UCAS application even though she did not know English. I am here partly because of her.

Another idea I want to touch on is the notion that "my freedom ends when it starts disturbing your freedom". This can be applied to scientific research. Every investigation should take into account the potential harm to people because these are the ones who are funding the scientific research, these are the ones who will be affected by the outcomes of the research. Scientists should not be cynical while conducting their research, they should be aware of the ethical implications and act in consequence. We, as leaders and scientists of the future, must take into account the general population. We must have strong ethics and avoid being corrupted by insane ambition and coldness. Otherwise, we will see the next He Jiankui or worse, the next Angel of Death.

FRIDAY 18TH MARCH 2022

## SPORT

Edited by: AMANDA BARDEN  
KONRAD HOHENDORF

## A Tribute to the King of Spin

Pranjal Mathur  
Environment Writer

It's January 5<sup>th</sup>, 2007, at the Sydney Cricket Ground. The final runs and wickets of a long Ashes are underway. Andrew Flintoff is on strike - a desperate captain attempting to prevent yet another clean sweep Down Under. A spinning delivery comes down the track and turns ever-so-slightly; it misses Flintoff's bat and Gilchrist is quick to stump. A review goes up and is ruled out as Flintoff is seen outside the popping crease. England are now 113/5. This moment in cricket, ordinary as it might seem, occurred at roughly 3:30 in the afternoon, Sydney time. It was the final wicket of Shane Warne's international career. A bow of the hat followed - a

“  
SHANE  
IS WHAT  
CRICKET IS  
ABOUT

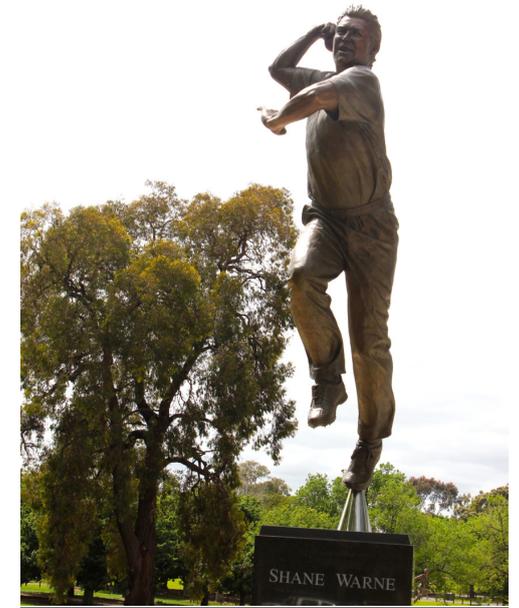
moment captured - that has since gone down in history and become the computer wallpaper of many aspiring leg spinners. The demise of Shane Warne at the young age of 52 has left the cricketing community indignant; shocked and despaired, no one knowing how to come to terms with what Shane meant to everyone around him.

Shane is what cricket is all about. He came into the sport at the autumn of the Borders and Gavaskars. He was trained with aegis of legends who had perfected rhythm of the sport. Shane, however, was unique - he brought forward a markedly unique energy to the game. Akin to the neoliberals of 1400's France, Shane carried the values and core competencies of a disciplined Australian team but added

his own flare to it - his own story of development. Throughout his journey, he was a man of psychological brutalism - he would trap batters with a plan of attack - one which they simply could not survive. Many would argue that playing Shane was as difficult as a 100mph bouncer. He had the ability of natural variation paired with reading surfaces to perfection. Every ball that came out of his hand had intent of pursuit - a chess like mindset to trap the opposition and leave them, quite literally, stumped.

As a leg spinner, he is by far the gold standard in the extent of spin and the ability to adapt to different batting styles, track conditions, and team dynamics. His 1000+ international wickets have been filled with class and rigor - very few instances of luck or fortune. By his own admission, he was a hard worker. He put his heart and soul into bringing a level of reliability into his performance. His ability to work with teammates in “setting-up” a batter was better than most sci-fi movies. A captain's favorite, Shane Warne warranted a popcorn and beer from most of his fans because of the way he would have viewers glued to the screen; because whenever he was bowling, something was about to happen. In many ways, Shane Warne redefined the role of a leg spinner, away from the loopy half-trackers and full tosses, Shane Warne showed that a leg spinner could be an astute and bold dynamitist. Following his career, leg spin became a populist mantra - players from around the world dreamt to be Shane Warne, mimicking his unique action, and maintaining a level of boisterousness on the field. Many of those players, today, lead as spearheads for their sides.

Shane's impact, however, goes beyond him being a bowler. As an analyst of the game, he was always a progressive. As a commentator or as a mentor, he worked with players from around the world to pass his knowledge and share unique ways of bringing out the best in a person. Many bowlers today credit mere conversations that they had with Shane as inspirations for their performance - a catalyst for their propensity and confidence. Shane was also a cogent critic of the game. He called out things as he saw them - seldom hesitating from fear of dispute. When Shane had an opinion, he made sure to say it. Even if



Statue of Shane Warne in MCG

they weren't as popular, he would have his thoughts out in the open. It may have even landed him in trouble, but he was sure to make it about the game - stepping away from pejoratives. Shane looked people in the eyes and told them of a vision he dreamt of for the game. His boldness was always complimented by kindness and apathy, making him someone everyone liked.

With Shane no-longer part of the cricketing establishment, the commentator's box will feel empty and void of a shrewd laughter. The pre-game chats will never have the same didactic persona. Upcoming leg spinners who want advice on wrist positions or mind games will never have the insight of their idol. Shane will leave behind a legacy which no one could possibly fathom to ever fill. Reflections on what he meant to players and fans at an individual level will outpour, stemming from a desire to hear what he has to say. The cricketing world mourns his passing and will wish to have one final beer and a smoke with their favorite Victorian.

Rest in peace, King Of Spin.



Shane Warne, bowling in 2009



# IS WATER POLO A PROBLEM FOR DRINKING?



By Miguel Armstrong, Nia Davies, Nicholas Lawson, Esther Cho, Lorenzo Verani, Laurie Edwards

Peer reviewed by Christian Oldfield

Please note all data collected and used in this study is real!

Reef did not sponsor this study

## Background

The present study aims to investigate the existence of a correlation between faster pint and reef times with better water polo performance. There has been increasing concern over the last 3 years that "The drinking club with a water polo problem" has been burdened by an ever-worsening "water polo problem". With the club having beaten IC at varsity last year, the 1st team having beaten IC 1st team in the water and only lost 1 match this season it is clear that these concerns are well justified. Hence, motivation behind the study is two-fold: investigating the existence of such a correlation could help the club curb the "water polo problem" and bragging rights for individual members with the best pint and reef times.

## Methods

This cross-sectional cohort study involved data collection between 01/02/22 and 23/02/22, most data was collected on 16/02/22 (now known as WP census day). In cases where data could not be collected prospectively (such as alumni), data was collected retrospectively. In almost all cases pint and reef times were measured by two suitably inebriated timekeepers and a mean was taken. Water polo ability was assessed according to team representation at matches and training attendance.

## Results

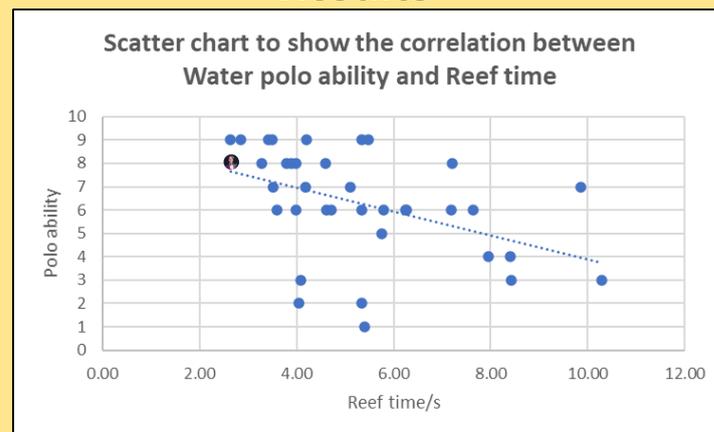


Fig 1. This scatter chart clearly shows the negative correlation between polo ability and reef time (Pearson correlation coefficient -0.4434).

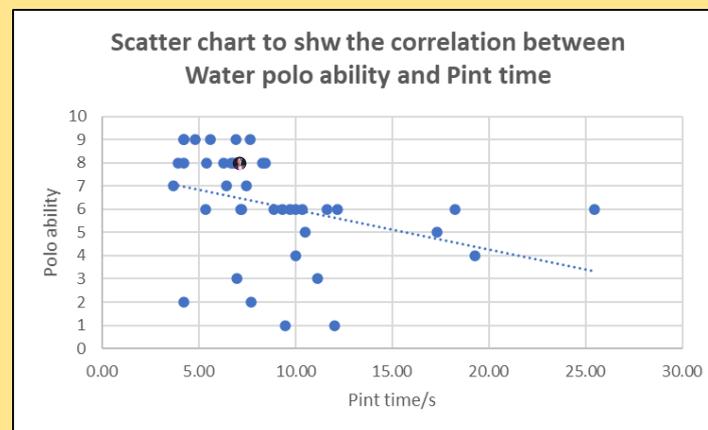


Fig 2. This scatter chart clearly shows the negative correlation between polo ability and pint time (Pearson correlation coefficient -0.3484).

For reference, the club had an average pint time of 8.85 and reef time of 5.26. Current literature does not indicate any clubs with faster pint or reef times.

## Discussion

The results clearly indicate that there is a correlation between both faster pint and reef times and increased water polo ability. This poses interesting ramifications for "The drinking club with a water polo problem" as it may be possible that by increasing an individual's drinking ability through means such as regular Sports Nights the club may be inadvertently worsening its "water polo problem". It is equally possible that increased water polo training has increased members drinking ability.

However, it is still unclear whether there is a causative link between the variables investigated in this study and hence there is room for further investigations. An interesting proposal would be for a future 1st team captain to increase compulsory attendance of post-training and match pints to see if this has a measurable effect on the team's success in the pool.

## Special mentions

Nicholas Lawson - Fastest pint 3.67  
Ludovico Buizza - Fastest Reef 2.64 (query...)  
Christian Oldfield - Fastest combined pint and Reef time 7.05  
GK - Happy Birthday!

## Conclusion

In conclusion, both faster reef and pint times correlate to an increased water polo ability. The maintenance of an up-to-date WP census database will aid any similar studies in the future. We would like to encourage other clubs and societies to investigate the existence of any similar correlations.

# Varsity Captains Set to Thrash Each Other

**Lia Trimarchi** IC Waterpolo

**Nicholas Soon** ICSM Waterpolo

**Dylan Hughes** IC Football

**Adam Moorcroft** ICSM Football

## Waterpolo IC

All of us at IC Swim Water Polo can't wait to experience the honour of headlining varsity. Fuelled on by the arrival of our new, not so baby-faced coach, IC Swim Water Polo had a tremendous BUCS season this year. Unfortunately, a catastrophic event that shook the world to its core more than a global pandemic befell our LUSL 1s in their match against the Medics 1s. Due to several notable absences and suspiciously old looking medics faces, the LUSL 1s suffered a historic defeat to the medics 1s. This defeat will never be forgotten and is the fire in our bellies that motivates us to obliterate them at varsity. The 2s, full of new faces, have had a fantastic season. Most notably, they had two great performances in narrow losses to the IC 1s and ICSM 1s. This puts them in a great position to dominate in their match against ICSM 2s.

Learning from the history of this tense fixture, our captains Angelo (the one that lost to the medics for the first time in a hundred years) and Ozan, are mentally preparing our players for any desperate tricks the medics may pull out

as a last resort. Varsity, unlike the medics, never disappoints, so come on down to the pool to watch two great matches and join in the fun at the union afterwards where the medics may finally perform well. A word of warning, we recommend going to the toilets well before varsity to avoid the queue of petrified medics.

## Waterpolo ICSM

Your reigning champs are back and they're here to two-peat Varsity.

ICSM Water Polo have reached their pinnacle of performance, currently sitting higher in the LUSL table than both IC teams. Having gone toe to toe with some of Europe's best water polo teams, IC stand no chance at winning - they'd be lucky to score. Having already played and won against IC on multiple occasions, we know what to expect. Our medics have also started training since September, a whole month earlier than the non-medics team. This just goes to show we are more dedicated, faster, and slicker in the pool.

We've had a lot of success outside the pool as well, accumulating over 100 members. We have organised additional matches, namely the alumni match and United Hospital Tournament, further providing everyone with an equal opportunity to partake in the sport no matter the playing ability. Who's going to win Varsity 21/22? Most



IC Waterpolo at Varsity 2020



ICSM Waterpolo at Varsity 2020



ICSM vs IC Football Varsity 2020

likely us, but come and support us anyway to watch one of the most anticipated matches of the year.

## Men's Football IC

The IC Men's Football Team enjoyed welcoming some superb freshers to our ranks this year, and they've been a crucial part of The Club's resurgence after weathering the height of the pandemic. As we broke record numbers in terms of members, we also experienced great successes across all of our teams. The 4s went on a great cup run, the 7s continued to beat the 6s, and the Futsal teams both went unbeaten before the Christmas break. The 1st XI took notes and rapidly started improving their own game, leaving

them at the top of the LUSL table by Christmas as well. The last time football headlined varsity was back in 2019. It was a brilliant game in which ICSM FC took an early lead but ICU FC came back to win 3-2 with a late free kick. In 2020 the Medics claimed back the Varsity trophy with a 4-2 Victory, setting up this encounter perfectly for a top quality game! Previous results show this fixture always delivers plenty of goals and with the teams as closely matched in BUCS as they ever have been in recent years, this year's game promises to be an eye-catching one for the fans.

## ICSM FC Club Captain

ICSM FC has had a record breaking season recruiting more members than ever before. Much of this is down to a brilliant intake of freshers who we have welcomed into all 4 of our squads.

Our excellent recruitment has led to the establishment of our new 5-a-side team marshalled by Magician Mo Memon, which currently sits top of the Imperial intra-mural league. Our new look 4th team are looking to finish in the top 4 in LUSL under the tutelage of captain Joao Felix; meanwhile our 3s sit top of their league with captain Harsha providing 9 goals and 6 assists at the time of writing.

Sam "the big cheese" Chuter looks to have steered the 2s away from relegation in BUCS and into the prestigious United Hospitals Cup Final. Ethan Losty's return to goalscoring form in recent weeks has helped the 1st team in their BUCS promotion push and another strong LUSL finish.

After winning 3 of the 4 matches at Varsity 2020, ICSM FC are confident going into this year's battle.

The headline fixture promises to be a high scoring game following a historic 4-2 victory for ICSM last time out. We are looking forward to 4 enthralling matches, and hopefully bringing the varsity trophies back to the Reynolds Bar.



ICSM VS IC Football Varsity 2020

IMPERIAL  
MEDICS



IMPERIAL  
COLLEGE

THE

IMPERIAL

VARSITY

2022



FRIDAY 18<sup>TH</sup> MARCH  
ETHOS TAKEOVER  
INDOOR SPORTS

SATURDAY 19<sup>TH</sup> MARCH  
HARLINGTON  
OUTDOOR SPORTS  
MAIN EVENT WITH OUR NEW MUGA