

Science	8	Music	21
Comment	13	Film	24
Hangman	16	Puzzles	28
Arts	18	Sustainability	30

## COVID WARNING

IF YOU PICK UP THE PAPER PLEASE TAKE IT AWAY

# Imperial Athletes launch: can one size fit all?



Sports society committees have expressed frustration this week about the failure of communication by Imperial Athletes. Designed as a way to simplify and reduce the administrative burden on sports society committees the launch of Imperial Athletes has been marred by confusion and anger.

Initiated 3 years ago by DPCS at the time, James Medler the proposal drew inspiration from other British universities' SU and sports organisation

and delivered a proposal for a Sports Hub. This would be a one-stop shop for sports clubs to manage their funding, training, travel, venue hire, competition entries and much more; full details of the proposal can be found on the Union website.

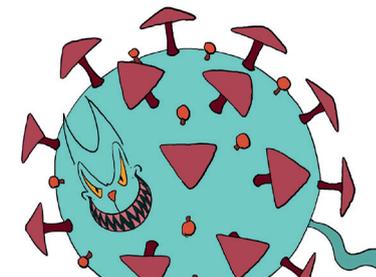
The details of how this Sports Hub would work had been in development for the past three years in consultation with students in an attempt to put club input and feedback is at the core of how the structure would work in the long term. A key goal for Imperial Athletes was also to create a more united sports community at Imperial:

many clubs have complained in the past about the lack of community feeling and awareness of what other clubs were up to.

The original plan was that the Sports Hub was supposed to be rolled out in two phases. In the 2019-2020 phase, most field and court

CONTINUED ON  
PAGE 6

## COMMENT



THE UK'S NORTH-SOUTH  
DIVIDE IN ADDRESSING THE  
COVID-19 PANDEMIC

PAGE 10

## SCIENCE



BLACKETT LAB FAMILY ON  
DIVERSIFYING PHYSICS AND  
ADDRESSING BLACK UNDER-  
REPRESENTATION

PAGE 10

## ARTS



HOW THE BLYTH CENTER  
IS WORKING THROUGH THE  
PANDEMIC

PAGE 20

## MUSIC



ALBUM REVIEW: BURDEN  
OF PROOF BY BENNY THE  
BUTCHER

PAGE 22

## WHAT IS FELIX?

Felix is the newspaper of Imperial College Student Union. We provide entertainment, information and news while also being a space that members of the Imperial College community can use to publish their views and respond to the views of others.

## CAN I WRITE FOR FELIX?

Yes. We welcome all submissions and aim to publish everything we are sent. An editor will work with you to make sure your article is in the best condition it can be for publication. We also produce video and audio content if that interests you more.

## HOW DO I SUBMIT AN ARTICLE TO FELIX?

- If you already have an article in mind or have written one already then send it to the section editors via email. These email addresses can be found at the top of each page in a section.
- If you want to write but don't have a topic in mind, check out or section specific writers Facebook groups that we update every week with topics we would like articles about or email the section editors

Send your article to us by 8 o'clock on Tuesday and we can then have it ready for publication that Friday!

*We are also always recruiting editors, copy editors, photographers, artists and more. If you would like to get involved in Felix in a regular capacity, email Felix@ic.ac.uk*

# Imperial publishes daily COVID statistics

**Nicolas Manrique** News reporter

In an effort to keep students and staff informed, Imperial College is publishing daily statistics on the prevalence of coronavirus within the university. The "College COVID-19 status and response" webpage displays the number of recorded positive tests on campus in both the past day and fortnight, as well as general guidance from both the Government and Faculty. At the time of writing the cumulative total for the past 2 weeks was at most 39, with the majority of those students and a quarter reported in the last day. Of course, these statistics only take into account the tests reported to the College's contact tracing hub, and so the true number may be far higher. A particular worry has been that the spread may be worse in halls of residence following multiple outbreaks in them up and down the country, most notably (for Imperial) at the RCM.

In order to gauge the veracity of these fears, we spoke to some of the residents. A hall senior in Eastside told us that she was "aware of one positive case" on her floor - as a result of which the floor is now self-isolating - but that it was asymptomatic, and was only discovered because of

her "heavy encouragement" to freshers to visit the Imperial clinic regardless of how they felt. She also expressed the worry that such encouragement was lacking from other seniors and feels that "College rules for living in halls aren't strict enough to prevent an outbreak". On the other hand, a senior in Kemp Porter said that while a few floors were currently self-isolating, things seemed OK otherwise, although the freshers were "frustrated" with the rules.

Everyone we spoke to also confirmed that despite some residents socialising and partying outside the allowed bounds, the majority seems to be adhering to the restrictions.

The College is seemingly aware that

a more targeted approach to managing outbreaks in halls may be useful. Last week, a pilot scheme of voluntary testing at Evelyn Gardens was run with the express purpose of "estimating the prevalence of asymptomatic cases" in students and staff on campus. Pending its success similar programs may be extended to the rest of Imperial's halls, potentially making future statistics more accurate.

“  
THE CUMULATIVE  
TOTAL FOR THE  
PAST 2 WEEKS WAS  
AT MOST 39

## Imperial UC team beat Exeter to advance

**Calum Drysdale** Editor in Chief

Imperial University Challenge team beat Exeter to go through into the next round of the competition.

Having lost to Strathclyde University in the first round Imperial was lucky to get a chance to redeem themselves, qualifying for a playoff as one of the "highest scoring losers".

In a very close competition on Monday, the match, which was filmed after the spring lockdown, saw Imperial emerge victorious. Their captain, Michael Kohn was the driving force of the team, answering questions correctly on topics as disparate

as Russian literature, German philosophers and ABBA. Kohn provoked controversy for his seemingly dismissive attitude to the hit song "Does your Mother know?"

In a nail biting conclusion, the teams were separated by only five points with each team buzzing to answer a 10 point-starter question. Exeter buzzed first but answered incorrectly followed by Imperial who also got the answer wrong. The gong then rang and Imperial squeaked through into the next round. You can watch Imperial next compete on 2<sup>nd</sup> November when they face St Andrews.

# Students evacuated from fire trap hall

Credits: Imperial College

**Calum Drysdale** Editor in Chief

Student residents of the Paragon complex in Brentford, west London were told on Monday 19th that they would have a week to move out.

Students were told that they had until Sunday 25th to leave as the building's fire prevention was substandard and they were in danger in the event of a fire breaking out in halls.

Located in Brentford, a 35 minute commute away from South Kensington, the Paragon complex is composed of around 1000 units in 6 towers that usually house students from the University of West London (UWL) as well as lease holders and key workers.

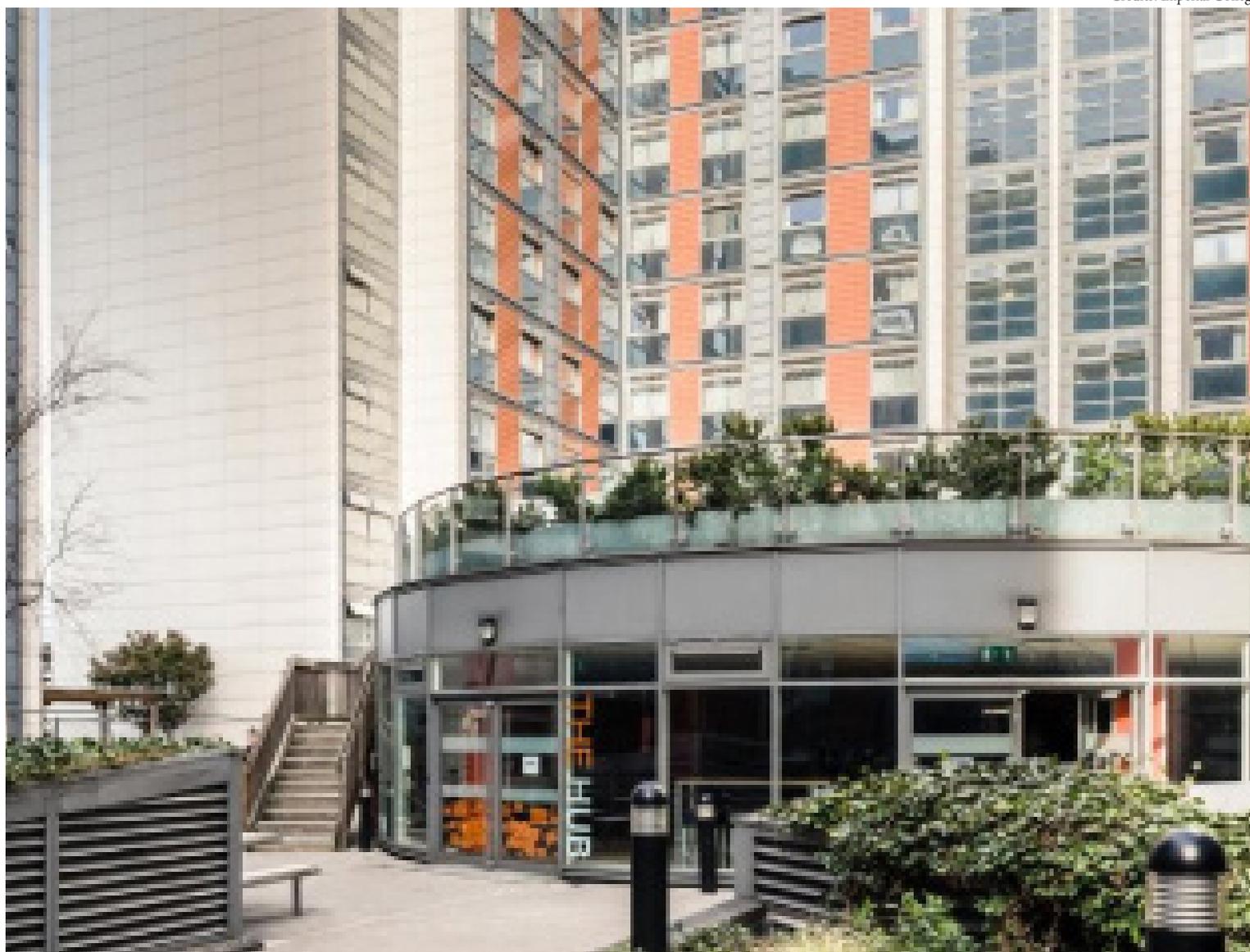
In response to oversubscribed courses Imperial rented space from UWL in order to be able to provide accommodation to every first-year student. Approximately 150 Imperial students have been affected by the news.

Imperial students will be moved to Chapter housing in Islington, from Thursday, using a professional removals company paid for by NHG and taxis provided by Imperial. They will, however, be separated from UWL students who will be moved to Wembley and residents that will be moved into hotels.

The building was completed in a mere 21 months in 2007 by the Berkeley First, part of the luxury developer Berkeley Homes group. The £100 million project won awards including the Major housing project of the year 2007 award for its innovative construction that saw a 6-story building be constructed in only 5 days.

## Editorial

**The evacuation of students from the Paragon complex made national newspapers and the College has reacted very quickly moving students to another halls. However, questions should be asked as to why the College was willing to place first year students in halls with a known safety problem. Students will also have formed connections with UWL students that they will now not be able to see. This should not have occurred.**



The exterior of the Paragon Complex in Brentford. Questions have been raised as the stability and safety of the building and why the College felt it was appropriate to house students in halls with known fire safety shortcomings

This was a major undertaking for the company that had previously never constructed a building taller than 9 stories. The Paragon complex incorporates a 17-story tower.

The construction process was also very rapid with a modular construction technique employed that shaved a whole year of the building process in comparison to traditional techniques. However, questions are raised as articles from the time recount how the company did not have time to let the concrete core of the building completely dry before bolting connecting steelwork to it. Additionally, at the time the 17-story tower was believed to be the tallest modular building in the world.

The complex is now owned by Notting Hill Genesis (NHG) a housing association whose stated purpose is "to provide decent and affordable homes for lower-income households".

Following the deaths of 72 people in

the Grenfell fire tragedy flaws in the design of the Paragon complex were identified and measures to bring the building back into fire compliance were begun in 2017. NHG also began legal action in 2018 against 4 companies involved in the construction of the building to recoup the cost of the £8 million cladding replacement and fire break installation job, including the architects.

Katie Bond, group director of sales and building safety at NHG, said: "This is not solely a cladding issue." The results of surveys, the most recent in the past two weeks, were "like peeling an onion" of layer upon layer of fire defects. She would not say which issue exactly had prompted the evacuation.

While defects were known about in 2017 more recent surveys and updated advice from consultants working with NHG stated that interim measures such as 'waking watches', a 24/7 fire warden, and special evacuation procedures were

no longer sufficient and that the problems in the building were so bad that evacuation was necessary.

A college spokesperson has told Felix that "We sought and received robust assurances about the building's safety before securing this student accommodation."

Felix has been told that evacuation will also allow the taking out of bathrooms, wall and appliances in order to identify the full extent of the problems and demolition has not been ruled out.

Students will remain in Islington for the foreseeable future with no plans to move back to Brentford.

UWL, Churchmore, Caledonian modular, CJCT have not responded to requests to comment.

## NEWS

# Union restructuring results in

Isabelle Zhang Deputy Editor in Chief

Credits: Imperial College

The Union recently underwent a strategic overhaul of its staff structure, resulting in the redundancy of 20 staff members. The restructuring was prompted by the uncertain and precarious COVID-19 pandemic that rendered the Union's commercial services inoperable, as well as the declining satisfaction of bar and kitchen services seen in the previous academic year.

Social distancing rules enforced since March have meant that the Union's commercial services could not operate. The Union's catering services, events, bars, and shops have been closed since the pandemic reached the UK, with only FiveSixEight being able to operate in the foreseeable future, under tighter restrictions. The vast majority of commercial services staff have since been placed on furlough, with the Union relying on the government's Coronavirus Job Retention Scheme to help cover their monthly wages. The Job Scheme ends in October; with the projected 50% drop in retail revenue for this academic year and without any staffing changes, the Union forecasted that it would have a loss of £1.3M for 2020/21.

The Union has been performing below its financial expectations for the past two years. Unsuccessful operational decisions such as Union breakfast and cutting Freshers' fortnight events, as well as the health and safety issues near the start of the 2019/20 academic year that forced kitchens to close for around 10 weeks, have resulted in cost issues that were only exacerbated by the pandemic. A staff consultation was thereby initiated on August 4th 2020, concluding on September 18th, to consider the proposed changes on its staff restructuring with the end goal of achieving financial sustainability and better delivering the services that students want.

The Union originally had 64.9 FTE, including sabbatical officers with a total salary bill of £2.726M, including the averaged 28% add-ons of taxes and pensions. The restructuring involved rethinking the Union's entire staffing model and shifting the salary balance from one with a higher proportion spent on management and oversight roles, to

one that spends more on roles delivering the services.

Following the conclusion of the consultation, some staff members have been moved to different roles, some were made redundant, and some with Suitable Alternative Employment opportunities were assessed in and offered new roles. Overall, 20 staff members have been made redundant, most coming from Commercial Services.

The restructuring will save the Union around £1.1m a year in salary costs, with £846K from the removal of posts that were filled, and £254K from the removal of posts that were vacant. Positions that have been abolished in the new structure include: all Bars and Catering roles other than the Operations Manager role; the Head of Communications and Systems role; the Administration Support Manager role; the Senior Designer and Marketing and Communications Coordinator roles, which have been combined into one post; reducing the number of Retail Assistant roles from 5 to 2 FTE; reducing the number of Retail Supervisors/Shift Leaders from 3 to 1 FTE.

Some of the staff who have been made redundant were furloughed when they were given notice and unable to return to the workplace before their notice period ends. Whilst furloughed Union staff members' monthly wages were 80% covered by the government Job Reten-



Following the pandemic and social distancing rules, the Union's catering services, events, bars, and shops have been closed. Only FiveSixEight is able to operate for the foreseeable future.

tion Scheme, the Union committed to paying the remaining 20%, including for casual bar staff.

The new staffing structure would also fulfil the objective of transforming the student union for the better. Other than changes in the staff positions available, changes were also made in line management to "streamline" the team. In the previous structure the 3 main Directorates reporting to the Managing Director were Membership Services (student opportunities, advice and representation); Communications and Systems; Commercial Services and Facilities (licensed trade, catering, bars, events, conferencing). Under the new staffing model, the responsibilities of the three main Directorates have been redistributed under different line managers and management groups.

Tom Flynn, Managing Director of the Union, noted that "colleagues have

## What is FTE?

FTE (full-time equivalent) is a way for employers to measure how many equivalents of a full-time employee work for them, based on the workload of a full-time employee. This allows employers with both full-time and part-time employees to compare employee numbers.

## Suitable Alternative Employment

Employers are legally required to offer employees suitable alternative employment opportunities if making their position redundant. Suitable opportunities depend on the similarity of the alternative position to their current job, the skills and abilities required, the terms of the job offered, and the payment

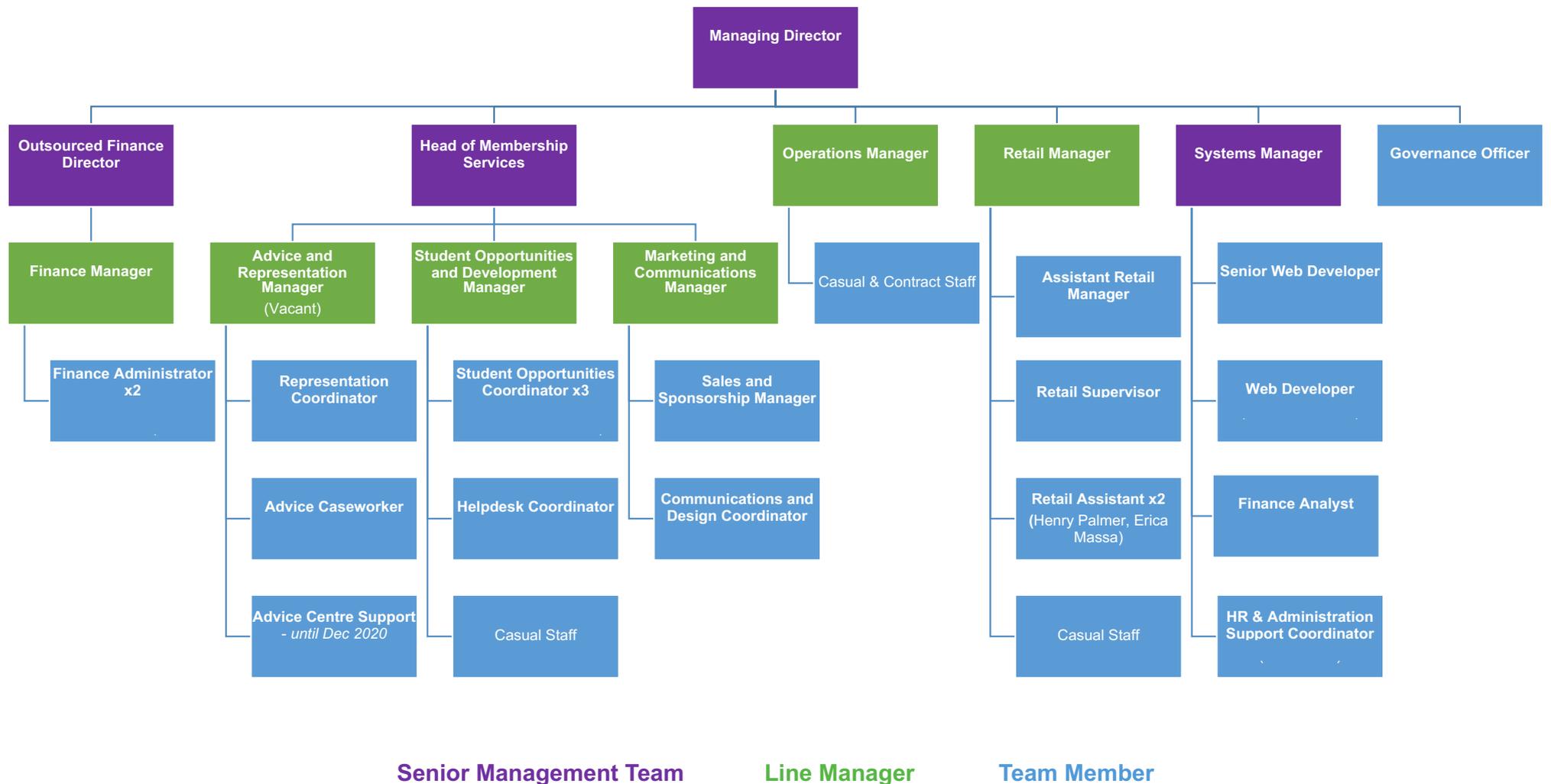
# 20 staff made redundant

engaged thoughtfully and professionally throughout the process” but that the unfortunate challenges faced by the organisation compel the proposed restructuring. Flynn joined the Union as Managing Director in June as a part-time role, and began working full-time as Managing Director in September. He oversaw the staff consultation, which was initiated by the Union Board of Trustees.

Over the next six months the Union will be conducting a strategic review of itself in the aims of becoming a more efficient organisation. Emphasis has been placed on two key areas. Firstly, transforming commercial services to delivering services that better align with what students want. Secondly, increasing the opportunities for students to be staffed. In comparison with other student unions, Imperial College Union has relatively little student employment opportunities. The proportion of staff salary spent on student staff in

other students unions is close to 50% whereas at Imperial, before the pandemic, it was closer to 20%. Having increased student employment opportunities enhances student development and employability, as well as allows the Union to give money back to the pockets of its members.

“A strategic overhaul, and consequent staff change, would have been necessary in the Union almost irrespective of external circumstances,” Union President Abhijay Sood spoke with Felix. “The changes we’ve made this year will help us remain financially sustainable, giving us the space to do the things students want us to do. They also mean we can hire more student staff, who generally have a good understanding of other students’ needs, and whose terms of employment we’re currently working to improve following various officer manifesto commitments (including mine).”



# Imperial Athletes launch: can one size fit all?

CONTINUED FROM PAGE 1

sports were supposed to integrate the structure.

Once this phase had been completed the Sports Hub (now Imperial Athletes) would expand and would be open to other clubs, namely Individual and Martial Arts clubs in 2020-2021. Due to the pandemic and a reorganising of the ICU team, the transition fell behind schedule last academic year. With staff being furloughed and many activities at a standstill, less progress was achieved than desired towards the end of the academic year meaning that Imperial Athletes was not ready to launch and had to be postponed.

Out of concern for some clubs' ability to cope financially and deliver activities to their members in this period, Imperial Athletes decided to disregard the initial timeline and include additional clubs in the structure with very little notice and guidance. This has put clubs under a lot of stress and has created a void between the two parties, which is the opposite of what was hoped to be achieved by all the hard work from both sides over the past years and months. Talking to DPCS Ross Unwin, the main considerations were that BUCS might not be running and that in-person sports activities would look very different due to restrictions. As government guidelines are likely to change frequently, Imperial Athletes wanted to be able to offer all students the best sports experience attainable during this period. Unwin admitted that the scheme was not yet ready but told Felix that he felt it was the best to launch the incomplete version and to jump in with "both feet".

Imperial athletes have had some successes with the launch of intramural leagues led by Will Hollyer's team at Move Imperial. With matches on Wednesdays this replaces BUCS and LUSL league matches for the time being, providing a competitive and sports atmosphere for students.

However, the policy that has drawn criticism from students is the change to how club membership is purchased. In previous years, clubs were free to set the

price of their own membership and to spend membership income as they wished. Clubs also received a Union grant to support core activities.

Smaller clubs also do not have regular fixtures or expensive and distant training sessions meaning that they feel they will lose out under the new model as

their normal membership price is far below the £25 of Imperial Athletes. They feel in effect that this acts as a subsidy of the larger team sports by smaller individual clubs and will dissuade students from joining their clubs.

Another frustration with the new system is that some committees feel that the new model takes power out of their hands. Ross Unwin and Imperial Athletes have argued, however, that the structure is there to support the clubs in their activities and contribute to the development of the clubs. The sports executive, ie. club committees, ACC committee, the DPCS and DPFS are still there to decide how activities are run and overall the Imperial Athletes structure is there to make the managing of the finances and organisation of these activities easier.

Unwin told Felix that even though Imperial Athletes might not have got the behind the scenes correct, they want to work with everyone, they want the project to work and most importantly they want clubs to want it to work.

Unwin also promised that he would meet in person with all dissatisfied clubs and would make them see how the new model benefited them.

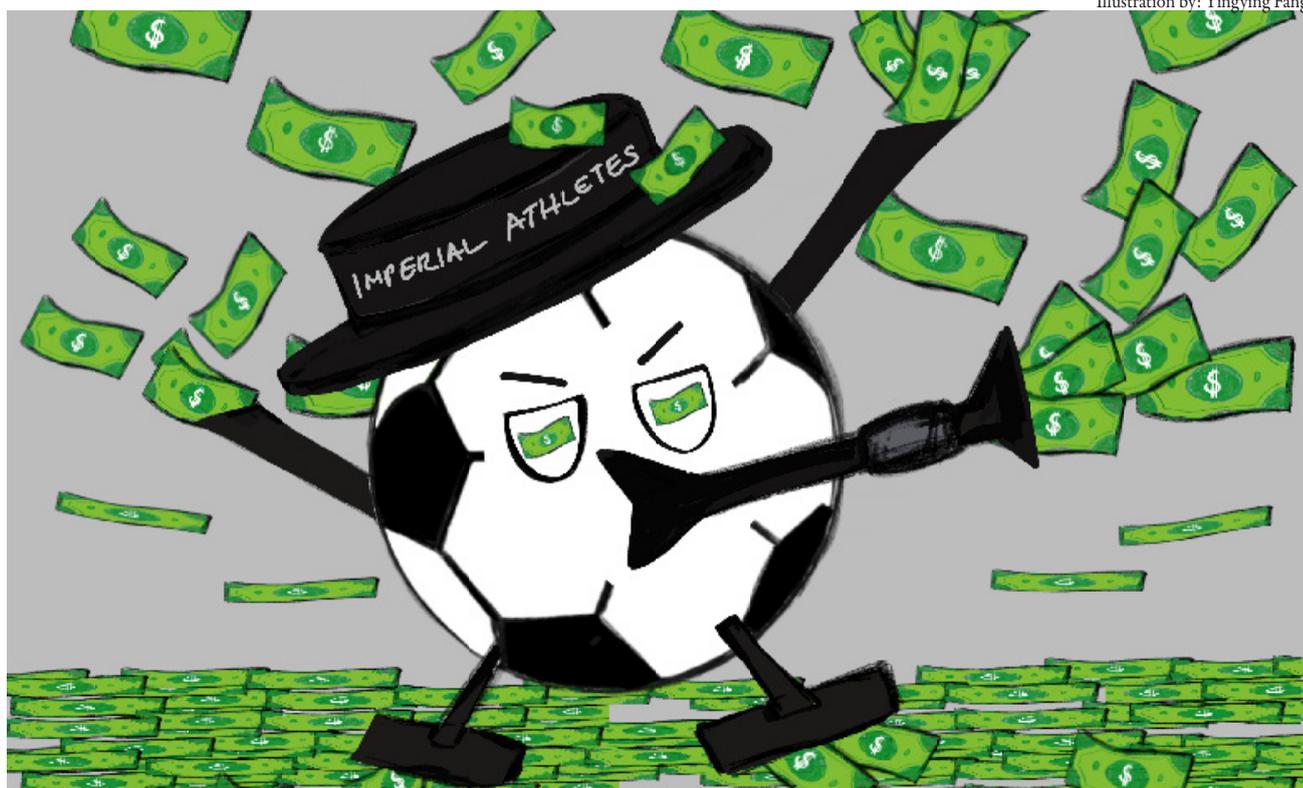


Illustration by: Yingying Fang

## What are your clubs saying?

Speaking to different clubs has shown that there are huge differences between the way different clubs have received support to adapt to the new structure that they were all enrolled in.

### IC Hockey

**Harry Reynolds** Hockey Chair

**Caitlin Edgar** Hockey Honorary Secretary

### Were you prepared for the transition into the Imperial Athletes system?

Yes, we'd been aware of the work done over the past few years concerning the launch and knew it would come at some point. It was confirmed during last year that we would move into IA this term and we were given confirmation during the summer, so we had time to prepare our activities to run within the IA structure.

### Does the Imperial Athletes structure appeal to you in the long term?

Definitely, even though the transition hasn't been perfectly smooth and we are still learning about the details and these are updated regularly, we are optimistic that in the long term this will provide

a one-stop shop to get support to deal with club finances, club admin and to talk to staff or sport executives that can give us more advice when we need it. The exact details of how finances will work this term aren't perfectly clear yet but we're confident that in the long term the Imperial Athletes structure will provide a cheaper overall experience for our members and will make it easier to run the club throughout the year.

### Has Imperial Athletes provided valuable support to your teams?

Imperial Athletes so far have been great at supporting our teams. We've had transport for our team trainings sorted and training has been running smoothly. The launch of Imperial Leagues is also very beneficial for our members as it will keep our members active and the matches will promote the club for anyone wishing to join Hockey. Getting people training together was a concern for us, especially for our Mens' 1st team: we're glad Imperial Athletes have made it possible for them to train together as a team with their coach. Whilst we're hoping their competitions resume in Winter term we're currently focused on ensuring the team remains bonded.

## IC Riding and Polo

**Lily Rietbergen** Riding and Polo Chair  
**Vita Welcome** Riding and Polo VC

### How aware were you before September that the launch of Imperial Athletes was taking place this term?

We had heard of the Sports Hub during the year but had received no indication we were going to be included in it this year until the week before the start of term and the Virtual Fair. No one reached out to us from IA to help us understand how we fit in, how to organise our activities for this term and promote them to new members so we weren't quite sure what the term would look like. After reaching out to IA we were able to clarify how the club would fit in within the scheme and after this delay we have been able to run our sessions with limited disruptions due to this transition.

### Do you feel like the IA structure benefits your club financially?

Our membership used to be higher than what is currently a flat fee of £25. Following an increase in riding lesson prices and a reduction in membership cost we've had to reduce our subsidy per lesson. However in the long term, by working with IA to optimise the running of training and competitions, we believe we can get to a point where the overall student experience is cheaper.

### Do you think IA can work in the long term for Riding and Polo?

Discussions still need to happen to know how we are going to work with IA. Things that are still unclear include the sources of income: as this is something IA is going to tackle to make the running of clubs easier, we're hoping this gets resolved quickly. As a club that has a lot of admin work throughout the year, we're also hoping the IA structure will alleviate this stress from the committee and make the experience of running the club less demanding. IA has made substantial promises to us and other clubs, and while we are enthusiastic about the new opportunities it offers it remains to be seen whether they will deliver on these.

Photo by Harry Reynolds



Tom Nottingham scoring in the Intramural Leagues

## IC Pole and Aerial

**Georgie Foot** P&A Competitions Officer

### When preparations for the Sport Hub launch were taking place, were you looking forward to being a part of it?

We joined the Sport sector from Arts & Ents a few years ago and as the launch was supposed to take place over 2 years, we weren't expecting to be impacted by it before another year. However we had doubts about what it could bring to our club and still cannot see exactly what support Imperial Athletes can bring us as we simply don't have the same requirements to run our training and competitions as other clubs.

**When you were informed you would be part of IA at the beginning of term, how much support did you receive to find your place within the structure?**

We were informed very close to the start of term that we had been moved to IA

and weren't contacted to help us understand what it meant for us specifically. When trying to find a way to fit within the scheme we were given two options: committing to the Imperial Athletes structure and receiving some support down the line or claiming back the membership fees and managing our own finances. No middle-ground solution seemed to be possible so we decided to go for the second option and redistribute the £25 as lessons subsidy.

### What were your main concerns for this term and what are you hoping will happen in Winter Term?

Having completed our financial planning during the summer we were surprised when we learnt the membership system had changed. We felt uneasy charging upfront £25 to members to only be able to take part in online classes. This contributed to our choice of opting out of the scheme for the time being.

We're hoping we can run our activities and local competitions next term as closely as possible to previous years, with little influence from Imperial Athletes.

“  
**NO ONE REACHED OUT TO US FROM IMPERIAL ATHLETES TO HELP US UNDERSTAND HOW WE FIT IN**

Speaking to Sport Development Manager James Perry about the launch has given us more insight on how Imperial Athletes is planning on enhancing the sports experience for students.

### Prior to the launch of Imperial Athletes, what was a key obstacle to joining sports at Imperial?

There are a wide range of clubs that are advertised to freshers from the start of term with varying memberships fees offering different activities. With the high costs of university and living in London, spending up to the order of £100 on a sports club membership is a big commitment and can be daunting, especially for individuals who aren't yet certain which club they want to dedicate most of their time outside

of their degree to. Furthermore, the list of different memberships and fee systems from one club to another can be off-putting. A key long-term goal for Imperial Athletes is to make sports cheaper and more accessible throughout the entirety of what Imperial has to offer.

### How will the launch of Imperial Athletes affect the support for performance athletes?

At the moment, College is running a scheme to support performance athletes with scholarships, from Bronze to Gold in accordance with the athlete's competition level. These scholarships provide athlete support, mentoring, Strength & Conditioning, financial and training support. This scheme is led by the College so will not be

changing. Until now however there was very little support for performance teams and their entries would usually be capped. With Imperial Athletes the aim is to support performance teams, enter all teams competing at BUCS Premier, Tier 1 or National championships and fund transport and accommodation for those teams.

### Some clubs have managed to find their place in the structure but others haven't. How do you feel the incorporation of these clubs will progress in the future?

Imperial Athletes is there as a structure to support sports clubs. With the extension of Imperial Athletes to individual and martial arts clubs there has been more work to be done to support all clubs of the Sports Hub equally.

While we may have underestimated the variance of functioning across the range of sports clubs, we appreciate the challenge that this variety of required solutions presents and are actively working on helping all clubs find their place within Imperial Athletes. A positive outcome of this transition is that it has brought many clubs who felt isolated in the past to feel included in the sports community and to enter discussions with Imperial Athletes. The student activities development team is motivated to support such clubs and sees this as an opportunity to help them take part in development plans.

We know that change is always difficult, but we are hoping that this can be a change for the better.

## SCIENCE

# NASA probe successfully collects asteroid sample for Earth return

Photo credits: NASA

Ansh Bhatnagar Science Editor

On Tuesday evening at 23:12 BST, NASA's OSIRIS-REx probe made brief contact with the near-Earth asteroid Bennu to successfully collect a sample of rocks and dust for study upon its return to Earth.

Launched in 2016, OSIRIS-REx reached Bennu in late 2018 and has spent the last couple years orbiting and surveying the 490m diameter asteroid. The probe identified suitable sampling sites that would cause the least difficulty for the probe, while also providing a sample rich with information for scientists to study. Four of these were identified and named, with sample site Nightingale being designated the primary site and the one that the probe made contact with this week.

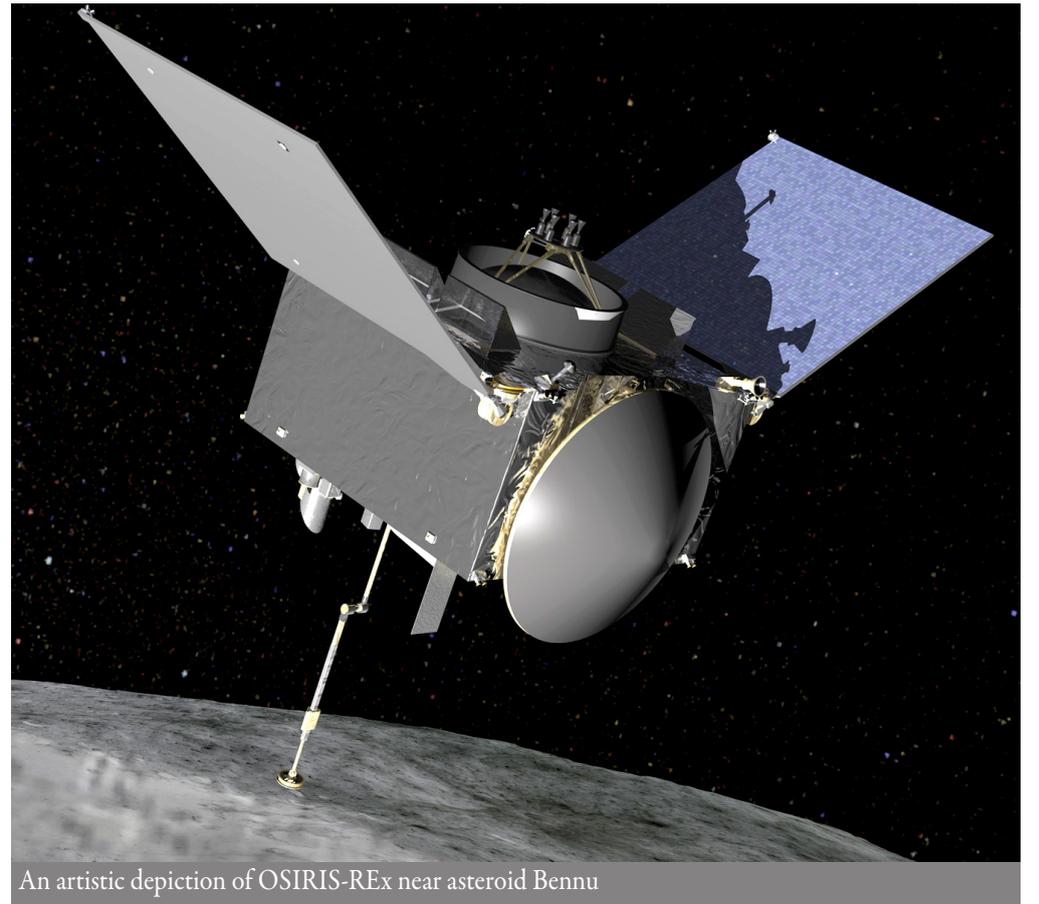
Using a 3.3-metre-long arm, the probe released a burst of pressured nitrogen gas to kick up and capture loose regolith at the sample site. Nitrogen was chosen as it is relatively inert and thus unlikely to react with and affect the sample. Currently, the exact details of the sample are yet to be communicated to the researchers, however they hope that around 60g of material was scooped up. If substantially less material was collected, the probe will be sent to backup site Osprey in a few months' time in order to collect more material.

It is hoped that the sample will reveal the story of the infant Solar System;

many asteroids are remnants from the planet formation phase and could reveal a great amount of information about the formation of our own planet. They could also enlighten us about the origin of life; organic molecules such as amino acids, the building blocks of proteins, have been found in meteorite samples from Earth. However, meteorites that crash onto our planet are subject to extreme temperatures as well as additional reactions with gases in our atmosphere, so a sample taken directly from an asteroid may be able to shed more light on the answers we are looking for.

This isn't the first time that humanity has managed to scoop up an asteroid sample for return to Earth; Japan's Aerospace Exploration Agency (JAXA) beat NASA to it by a year. Hayabusa2 launched in 2014 and last year it grabbed a sample of a different near-Earth asteroid, Ryugu. It is scheduled to arrive back on Earth at the end of this year, meaning there is not long left until scientists can study a pristine asteroid sample.

OSIRIS-REx, meanwhile, is scheduled to depart Bennu's orbit in March 2021 and will return with its sample in 2023. After Tuesday's successful sampling, NASA Administrator Jim Bridenstine said "we are on the way to returning the largest sample brought home from space since Apollo. If all goes well, this sample will be studied by scientists for generations to come."



An artistic depiction of OSIRIS-REx near asteroid Bennu

An additional objective of this mission is to study the Yarkovsky effect on Bennu. The Yarkovsky effect is the name given to the effect of thermal radiation on a body's orbit. As photons carry momentum, when heat is radiated away from a body anisotropically, it can alter the trajectory of the body due to the imbalance of force imparted on the object. Scientists are particularly interested to study this effect on Bennu, an asteroid that has a very low chance of cataclysmically impacting Earth in

around 150 years' time. This means that the research could allow us to figure out the best methods for diverting any asteroids heading our way, thereby ensuring humanity's continued survival.

OSIRIS-REx is part of NASA's *New Frontiers* programme, which includes Pluto probe New Horizons, Jupiter probe Juno, and Dragonfly, an upcoming project to explore Saturn's moon Titan.

## European Space Agency gets on board with NASA's exploration of the moon

► *The ESA has announced almost €3 billion of investment into "the robotic and human exploration of the Solar System"*

Lily Shepherd Science Writer

The European Space Agency and NASA signed a historic agreement on Tuesday 13th October, which includes a large expansion of the contribution that Europe is already making

to NASA's Artemis programme. The agreement also contains longer-term plans for exploration of Mars.

Project Artemis is aptly named after the Greek goddess Artemis, twin sister of Apollo and goddess of the Moon. The Apollo programme sent the first man to

the moon in 1969, and the Artemis programme similarly plans to send the first woman to the moon by 2024 (along with the next man). The programme was authorised in 2017, when President Donald Trump signed the Space Policy Directive 1.

The plans for Project Artemis are broken down into three stages. The first phase, Artemis-I, will be an unmanned test flight around the moon in autumn 2021. The second, Artemis-II, will repeat this trip with a crew onboard in 2023. Finally, Artemis-III will land

## CONTINUED

astronauts at the lunar south pole of the Moon in 2024. This is an ambitious target, and many have questioned the viability of the project, with the ESA acknowledging in their announcement that “it will be a close-run thing to have it ready, tested, and working by 2024”. This is not where the ambition ends – NASA Administrator, Jim Bridenstine, has said that after this mission, the plan is to establish “a long-term presence on the Moon by the end of the decade”.

The ESA will be initially involved with the “Lunar Gateway”, a space

**2024** goal to get the first woman on the moon

station that will orbit around the moon and allow for more frequent lunar exploration. The ESA will supply service modules that provide the crew with air, water and electricity on their journey to the Gateway on NASA’s Orion spacecraft. They will also deliver modules to

the Gateway itself, including a pressurised living area called the I-Hab and a module for refuelling and communications with Earth.

During the Artemis Programme, the ESA and other international partners will land robotic equipment on the moon’s surface to take samples and conduct experiments, in preparation for the arrival of astronauts at the lunar south pole. Once Artemis-III is underway, the ESA will support the astronauts landing on the moon by providing com-

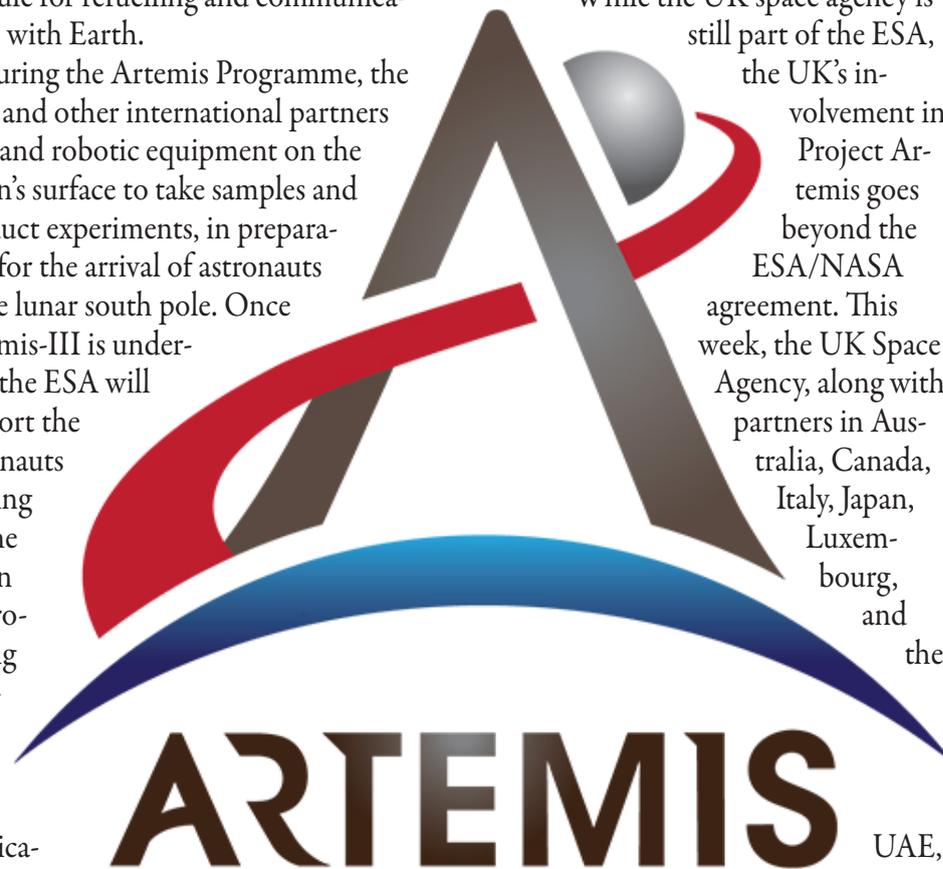
munications with the Lunar Pathfinder satellite. The contract for the building of this satellite has been award-

ed to the UK company, Surrey Satellites Technology.

While the UK space agency is still part of the ESA, the UK’s involvement in Project Artemis goes beyond the ESA/NASA agreement. This week, the UK Space Agency, along with partners in Australia, Canada, Italy, Japan, Luxembourg, and the UAE, also announced the signing of the “Artemis Accords”. These are a set of principles

which will guide future exploration of space. Science Minister Amanda Solloway said that the agreement “underlines our commitment to strengthening the UK’s role in the global space sector”. Given the current political climate and the ongoing negotiations about the UK’s exit from the European Union, it is not surprising to see the UK Space Agency attempting to separate itself from the ESA and establish itself as its own global power in space exploration.

The Artemis programme, though ambitious and expensive, is an exciting prospect for the future of space exploration. If the programme succeeds in landing the first woman on the moon, it will no doubt inspire a generation of young women to become interested in outer space and science. The project will involve more international collaboration than NASA has seen since the construction of the International Space Station. If it succeeds, it could be the gateway for humanity’s exploration of space, further than we have ever gone before.



## Further evidence that oil company ExxonMobil misled the public on climate change

Lily Shepherd Science Writer

Harvard University researchers have responded to the oil and gas giant’s criticism of their 2017 peer-reviewed analysis, which showed that ExxonMobil has misled the public about the severity of climate change.

In 2017, Geoffrey Supran and Naomi Oreskes from the Department of the History of Science at Harvard University published their analysis of ExxonMobil’s climate change communications between 1977 and 2014. They performed “empirical document-by-document textual content analysis of 187 climate change communications from ExxonMobil”. Their analysis found that the publicly available communications produced by the company, and in particular, the editorial-style advertisements they released (referred to as “advertorials” in their research), contained expressions of doubt about climate change being real and caused by human activity.

While 83% of peer-reviewed papers and 80% of internal documents produced by ExxonMobil acknowledged that climate change is “real and human-caused”, just 12% of advertorials acknowledged this. In fact, 81% of these advertisements expressed doubt about anthropogenic global warming. The researchers concluded that, while ExxonMobil was contributing to advancing climate science, they were simultaneously promoting doubt in the public mind about the existence of climate change.

In the same academic journal where this study was published, ExxonMobil President Vijay Swarup published a criticism of Supran and Oreskes’s research. Swarup claimed

that the analysis only assessed a small subset of the available advertorials in the *New York Times*, and that the original publication “obscured the separateness of... Exxon and Mobil”, who are technically two corporations.

Supran and Oreskes have now published a response to these criticisms, and have in fact showed that the ExxonMobil’s communications were even more misleading than they initially thought. They have rebutted both of Supran’s key criticisms, noting that only 4% or less of all advertorials published by Mobil and ExxonMobil Corp in the *New York Times* had any discussion

of anthropogenic climate change, and explaining that the original study explicitly attributed each of the advertorials assessed to Exxon, Mobil or ExxonMobil Corp. The new research shows that Exxon and Mobil both separately misled the public, and continued to do so following their merger into ExxonMobil Corp.

Supran and Oreske also note that following the publication of their initial study, they became aware of additional relevant articles (which were highlighted by Swarup in his criticisms). Their new research shows that these additional materials actually strengthen the argument that Exxon, Mobil and ExxonMobil Corp misled the public, and provide greater evidence that all three companies published communications expressing doubt about anthropogenic climate change.

“

**81% OF EXXONMOBIL’S ADS EXPRESSED DOUBT ABOUT ANTHROPOGENIC GLOBAL WARMING.**

# Representation matters: The Blackett Lab Family on creating a sense of belonging

Photo credits: The Blackett Lab Family

**Jon Lansley-Gordon** Blackett Lab Family

We – The Blackett Lab Family – are a growing collective of UK based Black physicists. Some 15 years ago, physics teaching fellow, Dr Mark Richards, and two physics undergraduates formed a friendship that became a foundation for mentoring and support of future Black physicists following in their footsteps through the famed Blackett Laboratory. Year after year, as our group grew in numbers, we became acutely aware of our unique identity: a group of Black people with a passion for physics and positive representations of the Black community – and with this awareness came a recognition of our potential to have real social impact. We grew from the need for a safe space in which the handful of Black students in the physics department could share a sense of belonging and feel supported in what is – for many Black students generally – a profoundly challenging academic and social environment.

In the US, a similar story transpired when a group of Black physicists convened in response to inaction by the American Physical Society against discrimination and underrepresentation. Founded in 1977 at Morgan State University, the National Society of

Black Physicists (NSBP) today promotes the professional wellbeing of African American physicists within the scientific community. It seeks to develop and support efforts to increase opportunities for African Americans in physics – and to increase their numbers. In the UK, The Blackett Lab Family are uniquely placed to work towards a similar end. Our mission is to diversify perceptions of physics and address underrepresentation of Black people at all levels in the field. The three pillars supporting this

mission are: to represent – giving voice to an underrepresented group of Black individuals; to connect – bringing UK based Black physicists together to form a community of talent and passion; and to inspire – ourselves, and others, regardless of gender, ethnicity, age or occupation – but particularly the future generation of Black physicists.

When we came together in a more official capacity, the potential for The

Blackett Lab Family to have a much broader impact was clear. We had a model of social togetherness that worked successfully at Imperial; scaling this up to become a national community just felt right. As our student and professional lives

diverged over the years, it became more difficult to arrange link-ups for so many busy people.

As the country went into national lockdown, we quickly realised it gifted us a unique opportunity to hang out together virtually – and in doing so, we

stumbled upon the mechanism to enact the national reach we always wanted to have. Our influence and visibility on social media quickly took off – and global events that followed only made our presence and mission all the more vital. Racial injustice made its way once again to the forefront of public consciousness, impelled by the tragic deaths of Breonna Taylor and George Floyd, and the global uproar decrying systemic racism

swelled to fever pitch. It magnified the urgency of our work, and the need to create a platform to celebrate Black positivity at a time of acute pressure on the mental wellbeing of Black people.

To date, in just under six months, we are immensely proud to have con-

nected with Black physicists at multiple universities across the UK, including Nottingham, Warwick, Glasgow, and Edinburgh, and to have inspired allies in other physics departments to pursue similar projects that foster and nurture their Black student population. Our projects have enabled both social and educational discourse – online discussion panels have focused on topics like Why Representation Matters, and our Instagram page has facilitated the recognition and celebration of the work of UK based Black physicists at Imperial and beyond. Indeed, the physics department at Imperial have recognised our work and have set up a page on its website dedicated to celebrating the contributions of its Black alumni to science, education and industry.

We are working on developing further partnerships and programs that nurture and support more Black physicists in the UK, and on continuing to connect and support the wellbeing of current students and professionals. In doing so, we hope to fundamentally diversify the perception of physics and physicists within the Black community and the wider scientific community: such grand ambitions start with The Blackett Lab Family simply existing. Seeing and interacting with other people that look like you, and who share similar experiences to you, is so powerful in fostering that crucial sense of belonging, and ultimately, a sense of personal validity – that “if they can, I can.”

To find out more, follow us on Instagram/Twitter @blackettlabfam, check out our website [www.theblackettlabfamily.com](http://www.theblackettlabfamily.com), check out some of our alumni at the Department of Physics [www.imperial.ac.uk/physics/about/black-physicists-at-imperial](http://www.imperial.ac.uk/physics/about/black-physicists-at-imperial) or for enquiries contact [connect@theblackettlabfamily.com](mailto:connect@theblackettlabfamily.com).

“  
**OUR MISSION IS TO DIVERSIFY PERCEPTIONS OF PHYSICS AND ADDRESS BLACK UNDERREPRESENTATION**”



# This year's female Nobel laureates – leading a paradigm shift?

Photo credits: Wikimedia Commons

Shirin Ermis Science Writer

A couple of years ago when I started studying Physics, I felt bold enough to try and predict what the Nobel prizes would be for in that year. This autumn, as I was reminded that the announcement days were right before me, my first thought was “I hope there will be some women winning the prize this year.” Growing up with Marie Skłodowska-Curie as an absolute role model, as well as reading about Maria Goeppert-Mayer in my teenage years, I've always been rooting for more female Nobel laureates in Physics. I realised very quickly into my degree that female role models are sparse – a fact that almost got me to the point of quitting the subject altogether. Seeing that reflected in the lack of diversity of Nobel laureates year after year was frankly exhausting.

Then in 2018 came Donna Strickland winning the Physics prize for her work on chirped pulse amplification in laser physics, a mere 55 years after Maria Goeppert-Mayer. And, in the same year there was Frances Arnold who was awarded a prize in Chemistry (after Physics, the science in which female laureates are rarest). But this year was different. Three women won science prizes, almost half of all the science prizes awarded this year.

Andrea Ghez won a share of the Physics prize for her work on black holes and “the discovery of a super-massive compact object at the centre of our galaxy”. In Chemistry, Emmanuelle Charpentier and Jennifer

Doudna were the first female-only pair in history to win a science Nobel prize for their truly revolutionary development of the genome editing method CRISPR. During their interviews, all women stated that they hoped that



Emmanuelle Charpentier and Jennifer Doudna, recipients of the Nobel Prize in Chemistry 2020

their achievements in science would inspire more girls and young women to go into research. “My wish is that this will provide a positive message to the young girls who would like to follow the path of science, and to show them that women in science can also have an impact through the research that they are performing,” Charpentier told interviewers.

Göran Hanson, the secretary-general of the Royal Swedish Academy of Science, rightly pointed out last year that the Nobel committees already make an effort to diversify the prizes by reaching out to a large number of universities,

or by hosting Nobel Symposia on other continents. In 2019, they also explicitly started to call for nominations taking into account diversity in gender, geography, and topic. However, Hanson's position that it is the responsibility of

others to encourage women to go into science is arguable, considering the reach of the Nobel prizes extends far beyond research labs and university campuses. For many girls, the Nobel prizes are the biggest piece of science news that they hear in a year. Seeing that they are overwhelmingly awarded to men from Europe and North America can be detrimental not just to how these girls view science, but also to the general perception of science in society.

Moreover, a study published last year by Lunnemann and others clearly revealed that even the underrepresentation of women in the natural sciences does not fully explain the gender inequality that we see in the recognitions of the Royal Swedish Academy of Sciences. Quite literally, the labs are more diverse than the Nobel prizes.

Particularly in the light of the recent Black Lives Matter protests in the US and worldwide, it becomes evident that even with this year's evolution in the recognition of women's achievements, the Nobel prizes are still a bastion of inequality. Exactly zero of the over 600 science prize laureates have been Black researchers, and they have been only marginally more recognised with the literature, peace, and economics priz-

es where a total of 13 Black laureates were awarded. Unless this does not undergo drastic change, the claims of the Royal Academy to be striving towards diversity are only empty words.

Finally, while science may be more diverse than the prizes, it should not be overlooked that women and researchers with ethnic minority backgrounds still face considerable hardships in their career. Women make up less than 15% of authors who publish in Nature, and less than 2% of authors are from Africa, South America or Western Asia. With citations and published papers as key metrics for career advancement in research, this puts women and people of colour at an immense disadvantage. They earn less, their papers don't get accepted as easily and they are less likely to hold positions of power. Science has a systemic diversity problem, and while this year's Nobels for Ghez, Charpentier and Doudna are a step in the right direction, there remains a lot to be done – by all of us.

“

**DESPITE RECENT IMPROVEMENTS, THE NOBEL PRIZES ARE STILL A BASTION OF INEQUALITY**

## SCIENCE

# COVID-19 VACCINE TRACKER: Felix Edition

**Julia Dabrowska** Science Editor

In order to put an end to the global coronavirus pandemic, researchers around the world are working tirelessly to develop a vaccine to protect against COVID-19. While vaccine production usually takes multiple

years, a coronavirus vaccine is hoped to be developed within 12-18 months.

Vaccine testing can be split into 5 stages:

Pre-clinical – animal testing to see whether the vaccine elicits an immune

response.

Phase I – healthy human volunteers to determine safety and evaluate immune response.

Phase II – hundreds of volunteers to identify correct dosage.

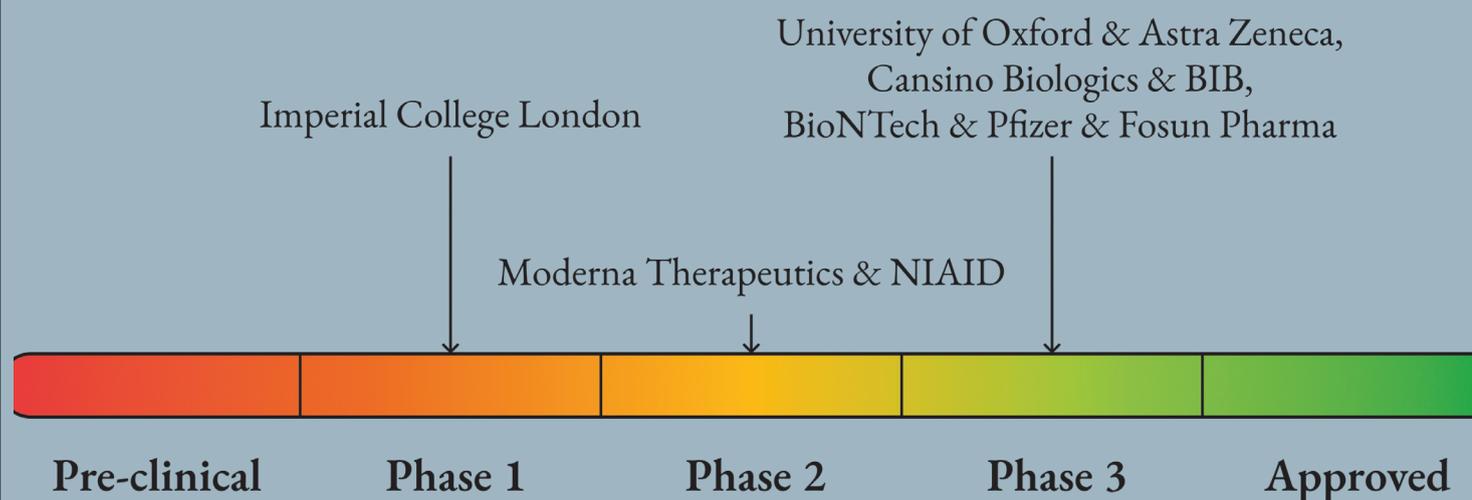
Phase III – thousands of volunteers

to confirm safety and efficacy vs. a placebo.

Phase IV – studies on adverse effects, long-term immunity and vaccine usage following the approval and licensing of the vaccine.

The WHO is currently tracking the progress of over 170 candidate vaccines; at Felix, we've chosen 5 of the most promising candidates to follow, so watch this space!

**New Update:** In January, Imperial College London will be starting human challenge trials, in which young, healthy volunteers are deliberately infected with COVID-19 in order to assist with the vaccine discovery process. AstraZeneca are getting ready to restart their US Phase III trial.



## The logistics of vaccine distribution

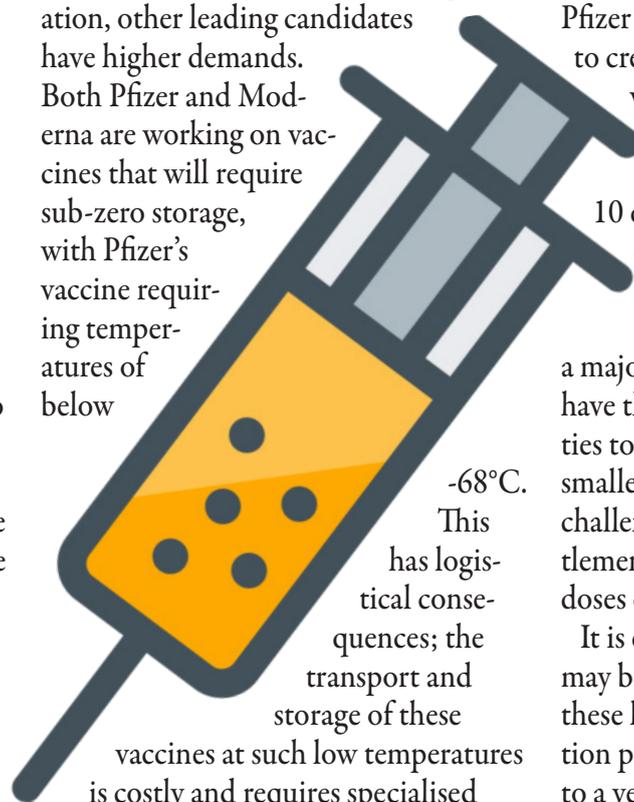
**Ansh Bhatnagar** Science Editor

The world waits with bated breath for a return to normality, with many hopes hinged on a coronavirus vaccine. However, despite current estimates of a vaccine being approved by early 2021, distribution can take months meaning restrictions may not end until late next year. So why exactly are we in it for the long haul?

The goal of vaccination is to achieve a state of herd immunity: where enough people have gained immunity to a disease that the disease cannot spread anymore, and it will eventually die off. Herd immunity also protects those who can't get vaccinated by making it difficult for a disease to even reach them in the first place. The proportion of people that require immunisation for the entire population to have herd immunity depends on how effectively a disease spreads; with COVID-19, this threshold is estimated to be around 60%.

60% of the world's population is almost 5 billion people. Getting this many people vaccinated takes time and is made even more difficult with many planes grounded due to lack of passenger air travel, which is one of the main networks utilised for pharmaceutical distribution. This is complicated further

by the requirement for the 'cold chain': the logistics network for items that require refrigeration or freezing. While the leading vaccine candidate from the University of Oxford and AstraZeneca is expected to require simple refrigeration, other leading candidates have higher demands. Both Pfizer and Moderna are working on vaccines that will require sub-zero storage, with Pfizer's vaccine requiring temperatures of below



This has logistical consequences; the transport and storage of these vaccines at such low temperatures is costly and requires specialised equipment and facilities. Capacity is lacking not just in the global south, but also in developed countries like the US and UK - which are ironically faring worse in response to the disease than many countries in the global south.

To this end, private logistics companies such as DHL and UPS have been investing in their cold chain capacity, building high capacity freezer farms in major cities around the world to house vaccines for distribution. Meanwhile, Pfizer have taken it upon themselves to create a custom transport solution with cold storage boxes that can keep up to 5,000 vaccine doses at the required temperature for 10 days without requiring external cooling, meaning that regular distribution networks can be utilised. This custom solution has a major advantage: while big cities may have the necessary cold storage facilities to store tens of thousands of doses, smaller towns and villages do not. The challenge then is for those smaller settlements to be able to make use of the doses quickly before the timer runs out. It is estimated that while a vaccine may be approved by early 2021, due to these logistical challenges the vaccination program could take several months to a year. Further investments need to be made in order to ensure we have the capability to quickly and safely vaccinate the population so we can finally put this pandemic behind us.

## Police given access to test & trace data

**Sudarshan Sreeram** Tech Editor

The effectiveness of contact tracing apps is starting to show, and it isn't looking positive. Each week, the percentage of individuals notified about a confirmed positive contact has decreased, which brings into question the accuracy of the test and trace system. This failure to reach notifications causes a risk of further transmission due to a lack of self-isolation. Further, it defeats the purpose of maintaining an automated contact tracing scheme in the first place.

To this end, test and trace information has been (on a case-by-case basis) provided to the police. The belief is that they would help ensure that those legally required to self-isolate are indeed doing so. Failure to meet this legal obligation may see an individual charged anywhere from £1000 to £10,000. Some suggest that this move to hand data over to the Police might discourage those looking to take a test, with MPs raising concerns over how police have access to the data while local councils do not.

# COVID-19 and the North-South divide

*The Vice President and Regalia Officer of the new Imperial College Northern Society talks about why the North feels like it is being neglected during the pandemic*

**Manish Mandal**

Northern Soc Regalia Officer



Many of us will have heard of 'the North-South divide' in casual banter and passing conversation, usually between a Mancunian with no personality and an Essex boy. This includes but is not limited to: 'Reading is way better than Leeds', 'why does everyone get offended in the South?' or 'mate, why are you drinking a mug of gravy?'

Despite its superficial appearance, there is an overwhelming amount of evidence to suggest the North-South divide cuts deep into the UK's health, social and economic systems, putting northerners at a significant disadvantage. This may be best exemplified through the government's management of COVID-19.

As you have probably heard by now, London has been moved to Tier 2 on BoJo's 3-Tier system. This news probably came to your dismay; no more gatherings of six indoors? Restaurants closed at 10pm? No meeting anybody outside your house or support bubble? It's a nightmare!

What you may not know is that Manchester has been fighting to remain in this tier, with the government imposing Tier 3 on its Merseyside neighbour Liverpool with threats of similar fates for the football capital. Tier 3 means no mingling with anybody outside your house or bubble at all, be it in your gran's tea room or the beautiful (and very safe) parks that Liverpool has to offer; conversely, you can still get a carvery dinner and a pint in your local harvesters surrounded by 100s of strangers provided that your table of 6 is within your support bubble or household.

The ramifications of a Tier 3 lockdown are quite dire. On a social level a lot of people will be locked back up in their tiny claustrophobic houses – many without gardens - unable to

socialise with their friends, work out in the gym or have a pint in the pub (the last option a fair sacrifice in my opinion). Economically, Liverpool will trundle to a halt with most of the service sector out of business and it may not recover causing the loss of many independent stores, restaurants and venues.

One may argue that the reason Liverpool has been put into Tier 3 is because COVID-19 transmission is higher there and as a result, restrictions must be tighter; of course, this is true but the root cause for this high transmission rate isn't Liverpool's fault. When Eat Out to Help Out (EOTHO) started, us Londoners were ecstatic; on the first day I got a starter, ramen and a large

juice from Waga's for under a tenner, my life may have peaked there to be honest. It was a great time for everybody in the UK, we basked in the 30-degree summer heat, people were out and about, restaurants and pubs were open, lockdown must have ended right? If the government are literally paying for us to eat out then surely we must be in the clear? This may have been true for London; by its nature, London had a high peak at the start of the pandemic and quickly dropped to a more manageable level but this wasn't the case for smaller cities though; these had a smaller initial peak, but the drop wasn't as rapid and cases were sustained for longer.

The government decided to implement EOTHO to bring money back into the economy and get the service sector moving again because the

faster this happened, the faster the UK could recover from the pandemic; in principle this is a good idea, we can't exactly stay in lockdown until we have a vaccine, then expect the economy to be unaffected in the system we operate in. The reason this scheme may have set the UK back, according to the Mayor of Greater Manchester, Andy Burnham, is that it operated strictly on a London timeline. As soon as London got to a manageable death rate, they implemented EOTHO but the smaller cities like Manchester, Liverpool and Leeds still didn't have a stable death rate so were in a much more precarious position than London. As a result, the citizens of these cities ventured out to pubs and to restaurants and since the

government told them they were safe, they slowly let their COVID guards down. People mingled and the virus slowly but surely started working its way through the population, leading us to where we are now.

There is no hiding the fact that the North is being disproportionately affected by the pandemic; the North East and West have the highest hospital admissions per 100,000 and positive/negative test ratio of anywhere in the UK and it isn't just the London-centric management plan that caused this. If you look at the variables dictating whether a region will handle a pandemic such as COVID-19's well, the North has definitely drawn the short straw; the North is poorer, its demographics are more vulnerable, its people are more likely to live in urban areas than in rural and according to the ONS (Office for

National Statistics), its industries force more people to go out and work as opposed to working from home. This cocktail of risk factors predisposes the North to vulnerability and when the government doesn't prioritise this, it is easy to see why places like Liverpool have been shoved into Tier 3. It is also clear that this isn't a sustainable management plan.

Two main factors affecting regional burden of COVID-19 are how urban the area is and how deprived the area is. If we look at London, it is almost 100% urban (hence the huge initial rise in cases) but according to the ONS, "jobs based in workplaces in London and the South East are much more likely to be possible to do from home compared with the rest of the UK, probably due to a higher proportion of professional occupations in the region", (hence the rapid, early decline in cases).

If we look at the rest of the South as a whole, it is more rural and less deprived meaning that the burden will be lower. If we look at the North there is definitely more deprivation, but this is okay in rural areas since transmission is lower but in cities and towns where the population is urban, COVID-19 can spread rapidly without adequate intervention, infrastructure and management to stop it.

If the North-South divide isn't addressed, there will always be health, social and economic inequality and a large proportion of the population will not reach their true potential due to the area they were born in. There are a lot of problems in the UK and these are definitely exacerbated by COVID-19 but maybe the silver lining of this pandemic is that we can highlight and address the massive inequalities present in the UK which include but are by no means limited to the North-South Divide.



**IF THE NORTH-SOUTH DIVIDE ISN'T ADDRESSED, THERE WILL ALWAYS BE HEALTH, SOCIAL AND ECONOMIC INEQUALITY**

## COMMENT

# Thoughts on the 2020 Felix Sex Survey

► *Nobody asked, but Khama Gunde has shared her opinions regardless*

**Khama Gunde**  
Comment Editor



Another year gone, another Felix sex survey. Another opportunity to find out how many people have had sex in the library or to check if your department is getting it on the most.

One thing that impresses me each year is the variety of experiences, which consistently serves as a reminder that This year, it was interesting to see that 67% of the 24.67% of virgins who took the survey were asexual. To be asexual does not mean to concretely abstain from sex; some asexual people just have little to no interest in sex and some may have more interest. Emphasising that the idea of virgins as people who 'just can't get laid', fails to capture the autonomy and diverse preferences that many have. Whilst I hope that people are losing their virginity when they feel comfortable to do so, there has always

been societal pressures to have 'the right amount of sex'. Couple this with a very myopic view on those who choose to deviate from that narrow standard and it becomes clear that the first time may not be a good time for many. Furthermore, I think it's important to note that while there has slowly been more understanding over time about the problematic nature and consequences of slut-shaming (judging women for having 'too much' sex), there is a lot of ignorance around virginity, especially for university students. We should be mindful that the pendulum doesn't swing from one extreme to the other.

Student relationships among Imperial students were surprisingly high to me. Logistically, it makes sense but I have heard discussions about how one should under no circumstance date another Imperial student. Let alone someone in the same course or, heaven forbid, someone in the same halls. Yet the survey has revealed 66.3% of those

in relationships are with somebody who is either a current student or an alumnus. It doesn't stop there though, it seems that inter-department dating is the most likely option for many, and the likelihood of that love story beginning in student halls is very high (for heterosexual couples specifically). So, despite the cautionary proverb to not soil in your own nest, it seems Imperial students are willing to risk potential future awkwardness for someone who may be 'The One', which is quite sweet to me.

I would like to emphasise that regardless of how you view sex, it is something that can affect and connect people in positive ways, but certain experiences can also do the opposite. It is concerning to see that only 8.88% of sexual harassment cases are reported. With 2.42% of males, 11.08% of females and 6.67% of non-binary individuals saying they had been sexually harassed at least once. Sexual harassment is something that only the perpetrator is at blame for, and

the emotional weight the experience may leave on a student is not a burden that has to be carried alone. Being mindful of sexual health is also important for wellbeing, so the fact that 51.45% of respondents have never tested themselves for STIs is quite worrying. Information on STIs and sexual health services are widely available to students, NHS and SHL (Sexual Health London) are good sites to visit.

Finally, it may be tempting to look at all the data and compare yourself to others in a negative way, but I think that this survey provides a unique opportunity to see that you may not be the only one who likes things the way you do.

**For help in different scenarios:**

<https://www.imperial.ac.uk/human-resources/procedures/sexual-harassment-sexual-misconduct-and-sexual-violence/>

## Imperial Athletes

► *Sports Chair Geoffrey Sheir gives his opinions on Imperial Athletes: the new one-stop shop for sport for Imperial students*

**Geoffrey Sheir**  
Sports Chair



Let me preface this by saying that I want as much as anyone for Imperial Athletes (IA) to succeed. And by that, I mean that IA needs to work for every single club, in its own unique way, so that everyone reaps the long-term benefits. Sport at Imperial has operated in a pretty weird way for as long as anyone can remember, with committee members bearing the brunt of the work managing teams, sessions and competition entries. Having the Union and Move Imperial as two separate entities dealing with club sport is confusing, and there isn't a centralised athletics union that just 'sorts it' unlike other universities.

IA aims to solve this and be a one-stop shop for enabling sport to happen. The key word here is 'enabling' – IA should never be a barrier to entry for

sport, or an obstacle preventing activities from happening. Ideally, a club should just be able to say, "We have 4 teams, train twice a week, have games every week – we need umpires, pitches and equipment", and it will all be sorted by IA. Committee members won't have to sacrifice their degrees to run their clubs, and the workload would be transferred to full-time staff members who would be running the operational side of sport.

This vision is set out in James Medler's document submitted to Council in 2018, searchable with "Imperial College Union Sports Hub", and has been ratified by clubs and students over the years. However, the launch not been smooth, to say the least – the rollout to Team Field and Team Court was delayed last year, and the rollout to all clubs this year has been fraught with issues. Part of this stems from poor communication between Move Imperial, the Union and

students, something that is still a huge issue now. I have personally been frustrated when decisions have been made that have not been communicated to students in a timely manner, leading to everyone having a ton of questions and not knowing why their membership has suddenly been fixed at £25, for example. This is something that has been highlighted in meetings and is something that staff have acknowledged that needs improving.

The other main problem that has arisen is that while IA is great for sports that fit into the training-matches-competitions model, using Move Imperial facilities and having a predictable schedule, making it work for other clubs like Surf, Polo and Sailing, to name a few, requires detailed conversations between all parties involved. Many of these have frankly just not happened, leading to committees not knowing how to administer their cash flow, or knowing what to tell

their casual members, or just knowing why IA should even be for them.

I appreciate that I haven't gone into the details of why there should be a tiered system, or how £25 will fund the activities that clubs want to run, or anything about Imperial Leagues, and if anyone wants more clarity, they're more than welcome to reach out. I want to make it clear that we know there are issues, and it hasn't been good enough so far, but we are working to rectify it. I have seen the amount of work that Move Imperial and the Union have put into it, and with proper communication with everyone involved, it's going to be a success.

If you want to share your club's opinions on Imperial Athletes, get in touch at: [fcomment@ic.ac.uk](mailto:fcomment@ic.ac.uk).

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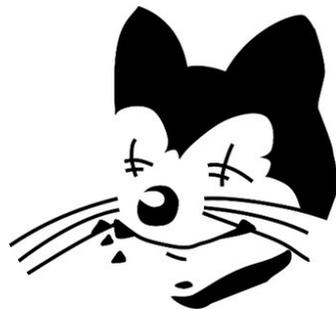
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The Felix Editor on

## The new Felix website is ready and beautiful

An editorial is where the editor may abandon objectivity and revel in opinions pure and simple. The new Felix website has launched and I would be remiss not to tell all readers that it is a beauty. Felix has long had issues with its website. We have stumbled from one interim home to another, a sofa surfer of the internet and have always then had to move on. Finally, Felix has a home that will last it long into the future. It is a lovely website. I fell like a tiger parent who after taking their child to endless early morning squash practices has just



watched lovely Agatha beat the kid from down the street in straight sets. Bliss. My thanks this week must be divided in three. Going from strength to strength the science section have built a team of writers over one hundred strong and are putting out beautiful pages week after week. Another honourable mention goes to Isabelle Zhang. She is the heart of this newspaper and keeps us all honest. But top thanks go to the copyeditors this week. Often behind the scenes they make the paper get out on time. Thank you

## IA: Doing anything is not the same as doing something

Imperial Athletes should not have gone ahead. Everything that I have seen and heard tells me that the Union was not ready to introduce such a major change and their stubbornness will not endear them to the student body. Despite the promises being made eventual functionality, we call on Imperial to halt the roll out of Imperial Athletes and return purchased membership fees to the clubs that attracted them.

The actions of the Union betray their attitudes to student sport. In interview with DPCS Ross Unwin he spoke with great feeling and conviction about the savings in time and effort that the new scheme would bring students, allowing them to focus on playing their sport and not waste time on admin. This is patronising and should be flagged up. People join the committees of societies not only because they want to play more sport but also because they value the community and the activity of the society so much that they are willing to spend time and effort on making that club activity available to other members. The belief that students should

not assume these positions of responsibility is a kick in the teeth to all the highly impressive committee members at Imperial who throw themselves into their societies in order to give their members the best time possible. Time after time the Union forgets that student led activities are what students want and top down impositions will be resented. The independence of sports clubs is of vital importance and once lost will be very difficult to get back. Furthermore, why should large clubs be the beneficiaries of subsidy, support and intramural leagues that allow them to continue playing their sport while smaller clubs must handle disappearing membership revenue and being sidelined. This is rank inequality and the Union should apologise for it. Accepting this new scheme is the same as accepting mediocrity. Time savings accrued now will be paid back in frustration and bureaucratic inefficiency once lockdowns begin to ease and clubs begin stretching their muscles and wanting to do their own thing.

## Statement of Intent

We here at Felix believe that it is always in the interests of the students to know. That cover-up and paternalistic obfuscation is never right and that as intelligent people students should be treated with respect and given the ability to make up their own minds. 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 both at the College and elsewhere.

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 it in our pages.

Signed by Calum Drysdale  
Editor-in Chief

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# CoughSoc Committee Manifestos

Coughs McGee Cough Writer

In support of the disproportionate wheeze for survival faced by the oft-maligned Cough Society, Hangman has this week offered to assist with a peaceful regime change by printing the manifestos of committee hopefuls.

Last week, Cough Soc faced a sharp blow to their finances when their flagship event was suddenly cancelled. The event was expected to be the largest yet due to the recent craze sweeping the nation, seeing many take up the hobby for perhaps the first time.

CoughSoc's membership has exploded in part due to a new policy which grants membership to anyone who has spent more than 15 minutes in close contact with an existing member. The society's AGM will be held next week, so be sure to read the manifestos before casting a vote.

## President

Cofin Malungsup: *As president I would move to recognise throat clearing as a valid form of coughing, and look to strengthen relations with FeverSoc, whose membership has significant overlap with our own. Further to this, I would table a motion to collaborate with IC Radio on a new 'CoughCast', where each week we highlight a different sub-genre of coughs. In this manner I hope to repair our recent poor public relations.*

## Head of Lung Capacity

Callum 'Cal' Pol: *Having played deputy to last year's Head of LC, I am already familiar with the ventricles of the society. As Head I would aim to expand the lung*

*capacity of all members by at least 20% by next AGM. As a result, this society could challenge as a forerunner of coughs in the UK.*

## Assistant Phlegm Director

L. Em Sipp: *As well as continuing the progress I made last year in my role as Assistant Phlegm Director, I am running to increase the diversity of phlegm colours and types available to CoughSoc members. While coughing classics such as "Autumnal Mist" and "Gobshite Gold" have served many a couger well, more exotic phlegms are needed to ensure coughing remains a competitive sport. That is why I will introduce 'Spring Splutter' and 'Is That Blood?' as two new phlegm candidates for CoughSoc coughing staples.*

## 'Cough in My Mouth' Events Manager

John Splutterman: *Despite the disappointing Health and Safety ruling by the overly cautious Union last week,*

*the annual 'Cough in my Mouth' social has become a mainstay of our members' calendars. I would therefore capitalise on the recent explosion in popularity and allow the Cough Craze to spread indiscriminantly. Additionally, I would organise a sister event entitled 'Spit Down my Ears' to be held biannually. I believe that this additional revenue stream will more than cover the deficit created by Hot-Toddy spending.*

## Treasurer

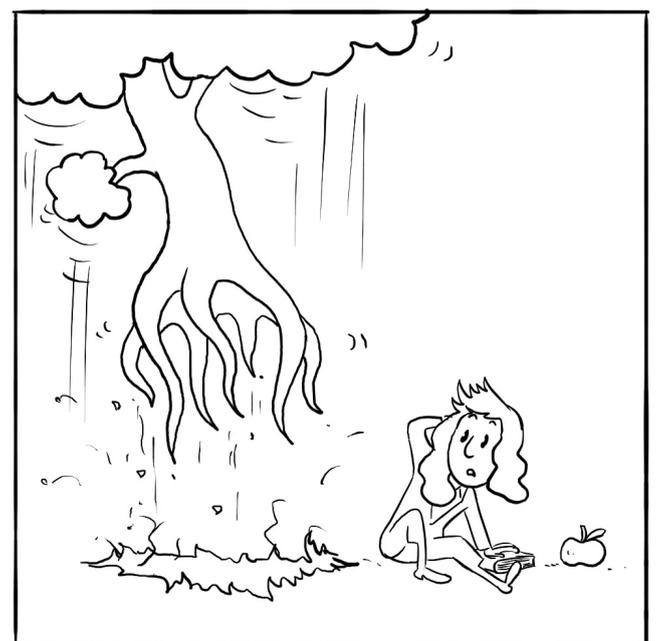
Lauren 'Loz' Inge: *CoughSoc is in dire need of a budget review. Last year's extravagant Hot-Toddy expenditure left us with far too little cash for chicken soup. As Treasurer I would reorganise the structure of the society and introduce a new committee position, 'Head of Soothing', to take charge on all throat lubricant acquisitions.*

In accordance with the society's constitution, any and all ties will be decided by a Cough-Off.

Credits: Pixnio / James Gathany, Brian Judd



Last year's runner up for "Wettest Cough"



HOW NEWTON DISCOVERED HIS 3<sup>rd</sup> LAW OF MOTION

-NIC G-T

# Is it a wine or a small child? Take our quiz now!

Mulum Calac NegaFelix Reporter

Ever walked into an Oddbins and wandered off with a new son? Not sure? Take our quiz now to find out!

- Wine or Child:** "This fruity, full-bodied Chilean will keep you on your toes. Pairs well with chicken or other children."
- Wine or Child:** "Lingers wistfully on the tongue before leaving a bitter aftertaste. Has a stupid French name and stains carpet when dropped."
- Wine or Child:** "A great conversation starter, and helps with cooking. Might just save your marriage!"
- Wine or Child:** "This fucking thing caused my divorce."

- Wine or Child:** "Spritely, bright, and full of youth. This 2014 Californian is blonde, dense, and called Chardonnay."
- Wine or Child:** "Charming and cheerful. Will be the highlight of your day when you return from a long slog at the office."
- Wine or Child:** "This stunning pair of fine South Africans comes from the Western Cape. Taking a hands-off approach, they're fermented naturally resulting in a smooth experience"
- Wine or Child:** "Offered at high class parties by Royal appointment."

Please send your answers on a postcard to The Editor, Felix Office, Beit Quadrangle, SW7 2BB for the chance to win what we *think* is a bottle of wine.

Credits: Flickr / theirhistory

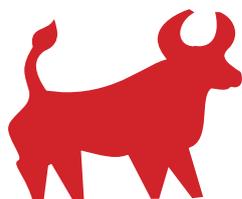


Okay, we're like 80% sure that this one is a kid.



**ARIES**

This week your new lecturer wears a long trenchcoat, has a wobbly torso, and takes a nap halfway through.  
-  
Nothing's changed.



**TAURUS**

This week you finally get your grubby little hands on some hand sanitiser.



**GEMINI**

This week your incompetent flatmate takes up breadmaking.  
-  
Who knows what he's trying to prove.



**CANCER**

This week you discover that your girlfriend is cheating on you through the track and trace app.



**LEO**

This week what starts as a light drizzle will end with you upset that there aren't any big Tescos in Islington.



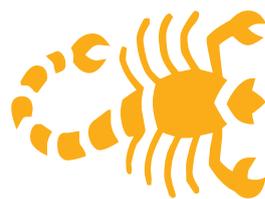
**VIRGO**

This week you find out our that in a pinch, your sleep mask can double up as a passable condom.



**LIBRA**

This week you have imposter syndrome.  
-  
You keep killing everyone over in electrical.



**SCORPIO**

This week you are disappointed to find that there is a £5 minimum on haunted Aztec gold down at your local.



**SAGITTARIUS**

This week despite your insistence that it was just a gaffe, your housemate demands you leave over last week's goof.



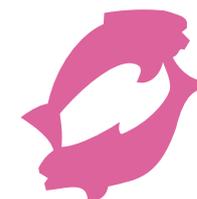
**CAPRICORN**

This week they come for the trade unionists.  
-  
They did have it coming.



**AQUARIUS**

This week you come across the 4th and 5th Corbyn brothers guarding the Sherfield walkway.  
-  
One only lies, the other also always lies.



**PISCES**

This week you succeed in maintaining a stiff upper lip.  
-  
If it lasts more than 4 hours, seek medical advice.

## ARTS

## Exhibition

## Confess and you may enter

Sin

★★★★★

**Where?** *The National Gallery***When?** *Until 3rd Jan 2021***How much?** *Free*Reviewed by **Vaidhiswaran** Arts Editor

Not all exhibitions allow the curator to... well, 'curate'. Often a curator's vision is encumbered by financial decisions, logistics, and, as in most cases with an exhibition of an artist's work, his/her repertoire. In that sense — exhibitions focusing on a theme as opposed to an artist, particularly one that sources from different eras, artists, and mediums, are truly a curator's playground.

'Sin', The National Gallery's latest exhibition, is one such attempt to tackle the highly philosophical subject. Theological interpretations of sin and penance, to a considerable extent, shape our customs and traditions. Western Judaeo-Christian theology is scattered with definitions and examples of sin; and Art, uncomfortably married with religion for most its life since Grecian times, has broadly aimed to espouse this.

The exhibition brings forth a diverse sampling of exhibits to structure this narrative. We see works by Agnolo Bronzino, Lucas Cranach the Elder, Andy Warhol, and Tracy Emin... indeed the whole spectrum, and they all ask one question - what is your sin?

Andy Warhol greets us with his canvases crying out — 'Repent and sin no more'. And indeed, before you get to claim innocence, Cranach's 'Adam and Eve' reminds us of our eternal guilt, with the first sin. There are also multiple versions of this in the exhibition lest we forget.

What follows is an unrelenting exposition of the hypocrisy of theological judgement manifested through art within this tiny room. Lust as sin — check. Gate passes to heaven handed out by clergy in return for confessions — check. However, the exhibition is scant

of any sort of judgement, leaving that to us, and traces the outlines of evolving morality through these selective exhibits.

The centre piece of the exhibition is a 'strange' juxtaposition of Tracy Emin's 'It was just a kiss', and Bronzino's 'Venus and Cupid' (inset). The latter, a masterpiece of the mannerism school, is the highlight of the exhibition. The mosaic painting depicts the mother-son duo, Venus and Cupid. In stunning and 'explicit' detail, it shows the two in a lovers' embrace, and is a commentary in itself about the morality of the ages. This contrast with the contextual suggestiveness of Tracy Emin's artwork really does work.

But it is tough reconciliation to witness Tracy Emin's work hang beside Bronzino's, or even share the same halls as Velazquez's 'The Immaculate Conception'. Maybe to judge the former's work as lesser is my sin. On second thoughts, I will stand by that judgement and live with it.

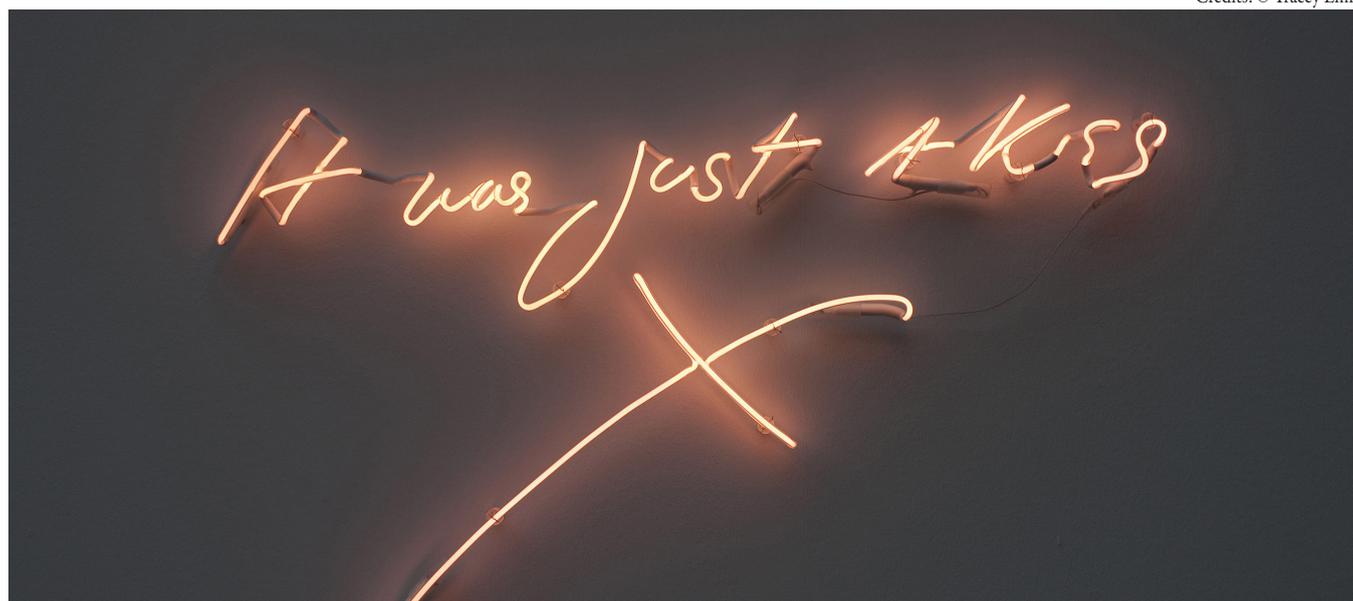
It is interesting to note the prevalence of Roman-Grecian mythology in Art, despite it fundamentally subverting any notion of Judaeo-Christian conservatives or notions of sin, with its ubiquitous promiscuity of gods, rapes, and incest.



An Allegory with Venus and Cupid, Bronzino, about 1545

But amidst all this, the message is clear; through the years, Art strived as much to be a medium of message as it was craft. At the end of the day, sin, or one's personal definition of it is, ahem... personal. And that is truly what the exhibition seeks to convey. Whether it presented the best case for that? Well, I would not be doing justice if I imposed my opinion on you, would I? After all, it's a free exhibition. So, give it a try, confess to these tableaux, and you just might come out the other side — sin free.

Credits: © Tracey Emin



Tell us the truth... Is it ever really?

## While you are there

## Titian: Love, Desire Death @ The National Gallery

The Old Masters  
Poesies are reunited  
after over 400 years  
in this once in a life-  
time exhibition that  
shouldn't be missed.  
Read our review in  
Issue 1749.

Until 17th Jan, 2021



## Ballet

# Back without missing a beat

**Royal Ballet: Back on Stage** ★★★★★

**Where?** Royal Opera House

**When?** Until 8th Nov, 2020

**How much?** £16

Reviewed by **Beatrice Matteo** Arts Editor

The curtain opens, revealing a dark stage, and from the shadows, five rows of dancers appear, brought slowly into focus by a foggy cold light in typical theatrical fashion. The show has finally begun in Covent Garden. Or, better yet, re-begun. This ballet is the first reunion of the whole Company of the Royal Ballet and the Orchestra of the Royal Opera House after a seven months break brought upon by the pandemic. Owing to current restrictions, the live show was streamed online and is on demand on their website. Featuring the entire company and principal dancers, the performance showcases highlights of several top billings including Swan Lake, Don Quixote, La Fille mal gardee, Medusa, and Romeo and Juliet.

Right from the get go, it is quite clear that even though this is designed primarily for an online audience, this is a professional performance. There is no expense spared, and the subtle aspects that make up the ballet, such as the omnipresent lighting, stage design,

and coordination are as good as ever. The lockdown and furlough don't seem to have fazed the artists much. The movements are confident and precise, the choreographies brilliant and engaging.

Natalina Osipova particularly shines as Medusa, but again it is tough to pick favourites in such a celebrated line-up. Each performance by itself would be reason enough during normal times. The assorted performances and highlights serve as a taster for ballet, offering snippets of some of the most well-known pieces, brought forth by a company that shows no sign of lockdown fatigue, and is at the top of their craft.

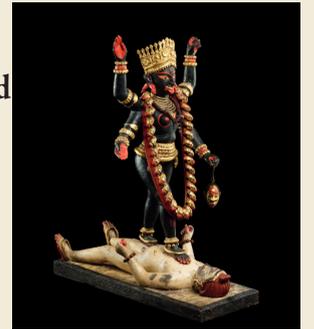
Nevertheless, I won't lie. It doesn't entirely recreate the experience of physically witnessing a ballet. A ballet is not just watching people dancing gracefully to the rhythm of an orchestra. The experience is more nuanced - It is also catching glances of the decoration of the theatre, and slowly have our eyes and minds accustomed to the dimmed lights and backdrop, without the distractions of modern-day technology, and finally finding coherence with the reactions of a live audience to the performance. However, this is not possible during these times. So, until then, "The Royal Ballet: Back on Stage" online show is a great alternative, offering the next best thing, Amazing talent, unfazed by the pandemic, eager to entertain you. This is a show not to be missed.

## Currently On...

### Tantra @ British Museum

Explore the mystical philosophy of Tantra, one that we have all heard about and vaguely associate with sex, through a series of well curated exhibits which delve deep into its genesis and permeance through the years in the subcontinents' many religions and customs. Read our review in Issue 1750.

Until 24th Jan, 2021



## Coming Soon...

### Turner's Modern World @ Tate Britain

The upcoming exhibition brings together much of the celebrated British artist's work, including highlights such as the 'The Fighting Temeraire', seeking to shine light on the impact of the turbulence of the artist's milieu, social and technological, on his work.

Find our review in next week's issue.

From 28th Oct, 2020 - 7th Mar, 2021

Credits: © The Royal Opera House



It's all in the footwork, isn't it?

## ARTS

# The Blyth centre - Imperial arts oasis

Credits: Mindy Lee and Imperial College

**Calum Drysdale** Editor in Chief

**T**he Blyth Centre is a creative hub for Music and Visual Arts. Comprising both gallery space and teaching rooms the centre runs both classes and exhibitions.

Felix spoke to Mindy Lee, the curator and artist in residence at the Blyth centre to discuss the role of the centre at Imperial.

Lee told Felix that she believed that the Blyth Centre was here to inspire and to support via exploring creativity. She told us that “We are an oasis; offer[ing] precious time away from the everyday demands, which is vital for well-being. Especially in this strange time, art and music are medicine for the soul. It can be used as a tool for self-expression and or bring you together with other like-minded people for a collective, stress releasing experience. This is enormously beneficial and nourishing for both students and staff.”

Lee told Felix about the changes that had had to occur to allow the Blyth centre to continue to function whilst still following social distancing requirements. While normally The Blyth Centre would see exhibitions in the Blyth Gallery and Art events in the Blyth Art Studio these areas have had to remain closed. However, the Visual Arts education and exhibition programme has been moved and continued robustly online. In addition, The Blyth Art Fellowships and Arts Awards are still taking place with remote support. Music practice rooms can be booked, allowing students to practice in peace and quiet and lunchtime concerts are still going ahead, which students can attend in person.

Lee told Felix that one of the upsides of responding to the pandemic was that the Blyth Centre now has its own You Tube channel, meaning that if you miss a class, or concert you can access their archive at a time to suit you. Not only can the archive be accessed online. Art classes themselves have also moved online and are going ahead via Teams and Zoom. According to Lee, the best way to join them is to sign up to the Blyth centre mailing list to receive a weekly update with all the web-links to take part. The mailing list can be signed up to at: <https://mailman.ic.ac.uk/mailman/listinfo/blyth-art-centre>

Lee also explained why the Blyth centre was relevant to non-artistic people as well as those that are more experienced. She explained that art is for everyone to explore, enjoy and respond to. Just as you do not have to be a musician to listen to a concert, or an artist to see an exhibition, you can enjoy watching an artist make.

She went on to say “In terms of creatively doing, I think we can be overly self-critical. You do not have to label yourself as a singer to enjoy singing in the shower or label yourself as an artist to enjoy doodling on a page. I say give it a go, try something different, you might just surprise yourself and find something new for you.”

## Who is Mindy Lee?

Head of Art in the Blyth centre, Mindy Lee is a tutor and curator, running workshops, classes and tutorials to students. However, few students realise the talent and pedigree of Imperial’s own artist in residence. Having graduated from the Royal College of Art in 2004 with a Masters in Painting she now exhibits and curates projects regularly in London, nationally and internationally with shows at Danielle Arnaud Gallery, London, the Jerwood Project Space, London, Pump House Gallery, London, GaleriaOFF Piotrwska, Łódź, Poland and the Sichuan Academy of Fine Arts Museum, China.

Lee has also been featured in recent publications including *Women in the Arts* and *Assemblage Magazine*, *Ghost Changing Room Catalogue* by Matt Price, Mindy Lee & J.A.L-B by Joanne Morra for the *Journal of Contemporary Painting and On Innards*, a collaborative artist’s book/multidisciplinary project, published by bookRoom Press.

## Timetable

Open art classes/ drop in 12-2

28<sup>th</sup> October  
11<sup>th</sup> November  
25<sup>th</sup> November  
9<sup>th</sup> December

Art classes/workshops 12:30-1:30

4 <sup>th</sup> Nov	Watercolour	Mindy Lee
18 <sup>th</sup> Nov	Collage	Sarah Gillham
2 <sup>nd</sup> Dec	Sgraffito	Thomas Hylander

Open art classes/ drop in 1:40-3

28<sup>th</sup> October  
11<sup>th</sup> November  
25<sup>th</sup> November  
9<sup>th</sup> December



To get involved with any of the events run by the Blyth Centre, sign up to the Blyth mailing list at <https://mailman.ic.ac.uk/mailman/listinfo/blyth-art-centre>

## Album Review

## Disclosure... Guys... What Happened?

## ENERGY

Artist: *Disclosure*Top track: *ENERGY; Lavender; My High*For fans of: *Flume, KAYTRANADA, Rudimental*Run time: *43 minutes*

Guthrie Ruby Music Editor



**E**NERGY is a mess, a simultaneously enjoyable and frustrating experience. To explain why we're going back to 2013.

Long ago, in a time when listening to dance music didn't seem so depressing, Disclosure released an absolute slaperoooney of a dance album, an instant classic. *Settle* launched onto the scene seven years ago and in one fell swoop the Lawrence brothers (Guy and Howard) landed themselves into the dance record hall of fame. Whether they wanted it or not, *Settle* was a double-edged sword; setting the bar unbelievably high. The high bar ended up being bad for both the brothers and their fans.

While they didn't shit the bed with their second project, *Caracal*, it left a

bitter taste in the mouths of many fans. *Caracal* was a pop record, unexpected to most. We should have seen it coming I suppose, but I guess that's easier to say in hindsight. The Lawrence brothers had long admitted a love for pop music, often telling of their affection for artists like Jamie Woon. After all, it was their signature sound mixed with traditional pop song writing that gave many of the major hits on *Settle* their widespread appeal and accessibility ("Latch", "F For You", "Help Me Lose My Mind"). Unfortunately, their breach into pop territory was not met with overwhelming praise from critics.

I mention all of this for two reasons. One – the Lawrence brothers are actually fantastic at making pop music (if you ignore their worst ever song "Magnets") and I don't think they get the credit they deserve from critics. Two – it helps explain Disclosure's very clear return to

their dance style, for better or for worse.

Let's start off on a positive note. *ENERGY* has some absolute killer tracks. "Lavender" is sexy and chique. When it becomes safe to, you're going to want this to get on the dancefloor and engage in some consensual grinding.

"My High" is Disclosure's slowthai banger. Similar to slowthai tracks like "Doorman" and "Deal Wiv It", but with the unique Disclosure sound. This track is full of tongue'n'cheek lines and has an infectious aggressive, on-edge atmosphere.

The title track "ENERGY" is the crown jewel of this album. Layers of percussive rhythms build until there are no breaks, the space around begins to vibrate, and the air becomes saturated with energy (seriously couldn't think of a better word). This is a dance track through-and-through, *ENERGY* needed so much

more of what this track has to offer. Why did we only get one track like this??

Besides these top tunes, there are only two other stand-out tracks that are worth anyone's time: "Douha (Mali Mali)" and "ce n'est pas". Both are interesting because they are legitimate developments of Disclosure's signature style by using the influence of different cultures. However, they lack the momentum and presence of the best tracks to really draw attention.

Sadly, the remainder of the tracks on the album are mediocre. To be fair it's probably more accurate to describe them as underwhelming rather than mediocre. I'll let you decide which is worse.

I'm not saying that Disclosure haven't tried to develop. All I'm saying is, you can't put an extra layer of frosting on a seven-year-old cake and convince me it's not stale. So many tracks on *ENERGY* have the same sound as those on *Settle* except with added bells and whistles (both metaphorical and literal in this

case). To name a few: "Watch Your Step", "Who Knew?", "Reverie", and "Birthday".

Actually, "Birthday" is in a class of its own, and not a good one. "Birthday" is their new worst song. On first listen, I legitimately questioned whether or not I was still a fan of Disclosure. Harsh criticism, but one that I now levy at Kehlani and Syd. Guys... the lyrics on "Birthday" are hot garbage.

All I have to say about the two interludes in the album is this: if you're going to include an interlude in your

album make sure it's both a good palate cleanser for the following track and make it an interesting tangent that appears to develop ideas or themes you're using. Don't use it as an opportunity to flex your producing skills by wedging in a genre that has no reason being in your album \*cough\* Thinking 'Bout You \*cough\*, and don't make it as boring as a lo-fi beat compilation \*cough\* Fractal \*cough\*.

**“ YOU COULD LOOK AT THE POORER ELEMENTS AS EITHER MEDIOCRE OR UNDERWHELMING, AND THERE'S A BIG DIFFERENCE BETWEEN THE TWO**

your album \*cough\* Thinking 'Bout You \*cough\*, and don't make it as boring as a lo-fi beat compilation \*cough\* Fractal \*cough\*.

Despite the criticisms I've hurled at this album it cannot be said that it is bad. There are some great highs amongst the lows, and even the lows can be viewed differently. As stated before, you could look at the poorer elements as either mediocre or underwhelming, and there's a big difference between the two. The critical reception to this album has been reasonably varied, most landing it in a range from 3-5 stars, which is pretty inconsistent. If this is your first Disclosure album or you're not a regular listener, I'm sure you're having a blast, you should be. *ENERGY* is a fun album to listen to. This album makes me want to throw some shapes and get back to the dancefloor (excluding "Birthday" of course). Though when I do return, I can say with certainty that I'll be reaching for a lot of other albums and not this one.



## MUSIC

## Album Review

## Hit-Boy Scopes, The Butcher Slices

## Burden of Proof

**Album by:** *Benny the Butcher*  
**Top tracks:** *Burden Of Proof; Thank God I Made It; Legend*  
**For fans of:** *Freddie Gibbs; Pusha T*  
**Run time:** 38 minutes

Reviewed by **Asad Raja** Music Editor

Honestly, before this year, I had only heard a few Griselda cuts (I blame Westside Gunn's adlibs, which still grate on me a little). Though I've been aware of the trio's trap-per-turned-rapper, kings of Buffalo status, it was only after hearing their scorching *Fire in the Booth* earlier this year that I began to explore their discography. Considering they've released eight albums between them so far this year, I figured the group was probably putting in extra work to capitalise on the attention the freestyle had garnered.

But taking a closer look at their discography, brothers Conway the Machine and Westside Gunn released 3 albums in 2019 and 6(!) albums in 2018 respectively, and cousin

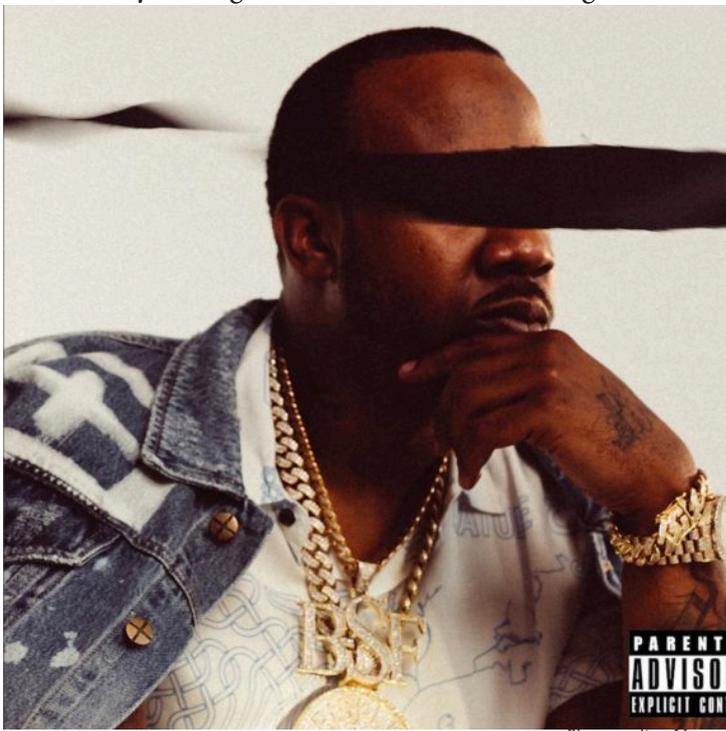


Photo credits: Uproxx

Benny the Butcher also put out 3 albums in 2018 – a consistently crazy work rate clearly runs in their blood. As Benny conveys throughout this new album, *Burden of Proof*, their street lifestyle has clearly instilled a level of rigour, discipline, and ambition that can be transferred to hip hop.

The opening line of the album on the titular intro track conveys just that: “Last year was about branding, this

one about expanding”. The track is immediately head-bobbing: an electric guitar refrain begins the instrumental before being swept away by regal horns and drums. Benny comes with steady, in-your-face bars before slipping into a poly-syllabic flow: “...prison phases...decision making...frige-rator...killers waitin...reno-vatin”. The dynamic between Hit-Boy's production and Benny's flow on this track and others throughout the album is reminiscent of the chemistry Kanye and Pusha T had on 2018's *DAYTONA* – a gold standard when it comes to modern gangster rap albums. Across the track list, Hit Boy effectively blends grandiose drums, ear-catching synths and dramatic vocal samples in just the right ratios to paint an appropriate backdrop for Benny's bars. On ‘Sly Green’, where Benny rhymes about his authenticity compared to trend-riding rappers claiming street experience, the drums are larger than life and the

synths are effer- vescent. Faster, thumping drums complement skipping, pensive synth taps on ‘Over the Limit’, a track that goes more biographical as Benny references the bond

he has with his day ones, ducking the FBI and the strife that drug dealing put on his marriage and livelihood. The mellower instrumentals in the second half of the album are impressive too and blend with Benny's reflective wisdom to make for great tracks – on ‘New Streets’, sober drums, synths and piano keys layer a sweet blues vocal sample as Benny contests the glorification of a “game [that] come with way more

consequences than jail”. He stresses to those unfamiliar with the lifestyle that there's “two sides, one glamorous, other scandalous” where finding lessons in the losses is routine. He reflects further on his losses, particularly that of his brother, on ‘Trade it All’. Over gooeey synths, stuttering drums and anguished vocal samples, he lets us know what keeps him grounded when surrounded by material wealth: “...so you can have it all / If it mean I get my brother back tomorrow”.

‘Famous’ is a track that comes short – the looped hollering vocal sample quickly gets annoying as Benny expresses, through pretty forgettable bars, how fame isn't what he expected. ‘Timeless’ is also disappointing – the instrumental, which sounds like *Street Fighter* character selection menu music, is looped to the point of boring and Lil Wayne and Big Sean's verses are generic. ‘Where Would I Go’ earlier in the album which features Rick Ross is a track I'm still unsure on. The beat starts with a slow, dreamy vocal sample that goes distorted and psychedelic as it gets submerged by a lumbering drum and then a weird synth jingle, while Benny reminisces on how he made it from “the concrete”. A better feature appears on ‘One Way Flight’ where Freddie Gibbs delivers a short but witty verse and a hilarious hook that sums up the predica-

bility of masculine toxicity regardless of wealth: “You gon' cry in that Toyota or this Maybach?”.

The last few tracks of the album close it on a high. On ‘Thank God I Made It’, a piano-led, pitched up vocal sample and distorted drum creates a mellow, *Late Registration*-like vibe. Benny starts his verse with an homage to his mother and matured reflections on the debt he owes her for making the job of being a single parent even more difficult. Through his experiences and losses, he's come upon a new level of connection and devotion to family: “I look in my nephew eyes and I see my brother / Sometimes I gotta look away ‘cause it hurt so much”.

The other two thirds of Griselda join Benny on ‘War Paint’, where off-kilter strings and dreamy wailing make the instrumental sound like something off an Earl Sweatshirt project. The final track, ‘Legend’, is one of the best of the album. Melodic keys over a shuffling drum make for a warm but striding backdrop to Benny's four tight verses that effectively combine the braggadocious and reflective vibes of the album, with a trap drum layer coming in for alternate verses. “Checks overgrown, neck boulder stones / Ever since they said I'm goin' pro, they said I'm the next so-and-so” is a catchy pair of bars if I ever heard one. It's the combined quality of Benny's flow, lyrical attention and raw wisdom – not just on this track, but across the album – that make undeniable justification for his assertion on the hook: “Said I'ma be a legend soon, I'm a legend now”. A legend in current day hip hop mind you, not just Buffalo.

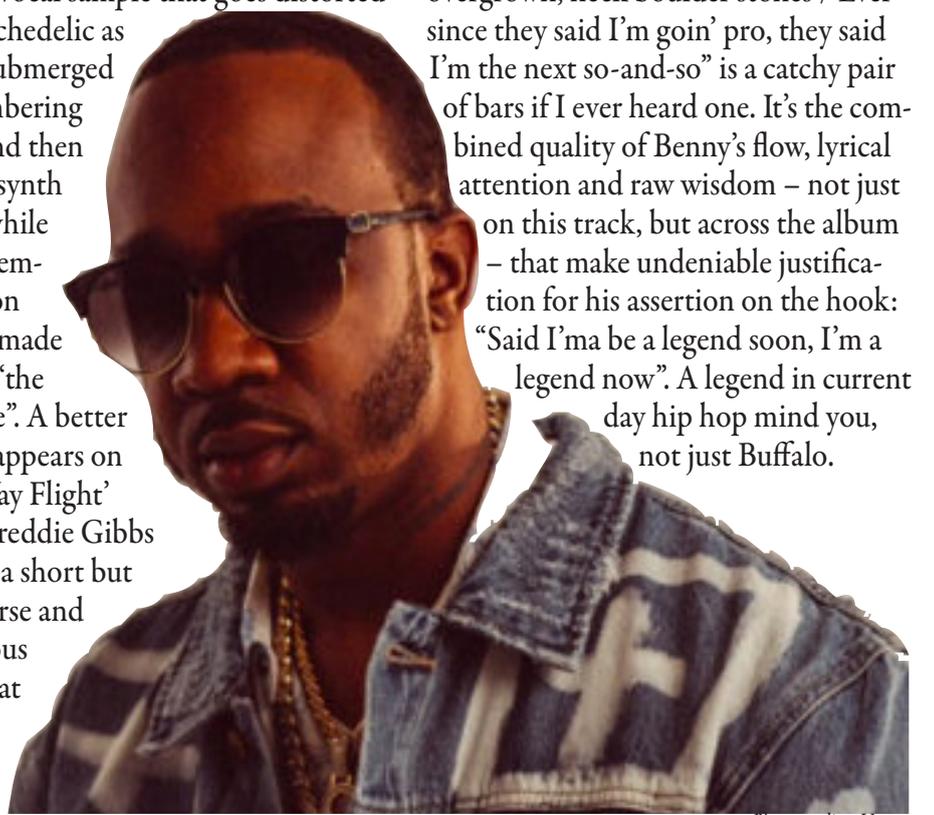


Photo credits: Uproxx

## Album Review

## Hard-hitting EP from Hamburg duo

## Little We Know

Album by: *Extrawelt*Top track: *Little We Know*For fans of: *Max Cooper, Dominik Eulberg, Minilogue*Run time: *20 minutes*Reviewed by **Martin Flerin** Music Editor

Extrawelt are surely one of the good memories of the minimal era. The genre's rise to the zenith of the club scene was rapid – it was everywhere from Ibiza to Tokyo. Reading about it now, the evolution of this throbbing, clicking artery of club music of the mid-2000s was quite divergent. Some of it tried to stay true to the minimal form that was fighting to stay relevant, while some tended towards early tech house

and rode the wave of its popularity for the next decade. In a sense, Extrawelt sometimes exist somewhere between the two. In the more uplifting corners of their discography, the production tends to be quite progressive, whereas the essence of their hooks stays quite minimalist.

There are varying degrees to which you can strip down a groove for it to still sound coherent. Still, there are three main aspects that a good minimal track needs to obtain that propulsive feeling. The first is a bass that oozes funk and needs little to no variation, the second are percussion samples which sound like you fed your grandmother's china collection through a woodchipper. Lastly, and most importantly, the producer needs a knack for pushing the progression forward so seamlessly, that only when the eventual breather just before the drop comes, you are able to see the mountain of sound.

The most recent release by Extrawelt comes on Traum Schallplatten, the minimal goliath that now mainly dabbles in



Photo credits: Traum Schallplatten

sweet German melodic techno. It kicks off with Mr. Wednesday, a thumping bassline which flashes its razory teeth to varying degrees, always smoothly foreshadowing a switch-up in the percussion. The production is excellent, with the beautiful use of effects being backed up by the frightening industrial sounds that the producer duo are known for. Unfortunately, despite being bouncy as hell, perfect for some peak time shape

cutting, it could be perceived as lacking subtlety.

The title track of the EP is rhythmically more interesting. Its stumbling bassline segues wonderfully into the percussive backbone of the track, which keeps up with the pace of scene changes set by the opener. The breakdown is especially rewarding,

with the bass suddenly disappearing and leaving the aftertaste of an early morning at a warehouse rave.

Finally, we have SEM, which is the most minimal of all the tracks. It's fast, decisive, with some unusually delicate, glassy perc sounds filling the void left by the oppressive machinegun high hats in moments of downtime. An output worthy of the duo's otherworldly moniker.

## Felix Recommends

## Shrines

Album by: *Armand Hammer*For fans of: *Earl Sweatshirt, Milo*Run Time: *43 minutes 20 seconds*By **Miles Gulliford** Music Editor

Armand Hammer are an experimental hip-hop duo made up of E L U C I D (rapper/producer) and Billy Woods (rapper). Despite taking a year off from releases in 2019 as a duo, Billy Woods was working harder than ever, delivering not one but two conceptually and lyrically tight records. Concerns would be well founded therefore, as to the ability and stamina of the pair to come through with a record as polished as 2018's *Par-*

*affin*. Shrines however delivers a unique – if unnerving – experience.

Built on saturated, off-kilter drum loops, grainy samples and a seemingly unending barrage of cultural references, the duo conjure apocalyptic worlds on each of Shrine's 14 tracks. E L U C I D and Billy seem to hold musical convention and listenability in contempt, or at least take pleasure in perverting them throughout the LP. On 'Charms' metallic percussion drops in and out of the mix over an overblown flute sample while the pair deliver their intricate rhyme schemes which blur street smarts and spirituality "Stark phenomenon, faith starts when shit stops addin' up/ Charge it to the game, plus tax just when you had enough" raps E L U C I D, later referencing early Christian mysticism and a strange theory that Eve (Of Genesis) had a sister. The pair's fascination with Judeo-Christian mysticism permeates the record, with references to obscure philosophies on wealth, time and rap culture popping up on tracks

like 'Flava Flav' and 'Eucharist' where the line "Christianity is cultural appropriation" alone is mind blowing, and gives the album as a whole more substance for listeners who enjoy through analyses and obscure theologies.

Elsewhere a range of guest features including Earl Sweatshirt, R.A.P Ferreira (formerly Milo), Akai Solo and more do well to break up the pairs focused but cryptic and dark themes, steering their tracks onto (relatively) more conventional themes. R.A.P Ferreira's feature on 'Dead Cars' is a particular highlight, where a more traditional instrumental ornamented by childish synth chords provides a pensive backdrop for meditations a decaying culture, which seems less distant with each passing day.

Shrines is an alienating listen, but this is precisely what experimental hip-hop fans will love it for, with poetic lyrics and abstract instrumentals, it comes on like a collage from some meta-cultural junkyard, a challenge, but a rewarding one.

Photo credits: Bandcamp



## FILM

## Editor Recommends

## Free Film of the Week: The Deer Hunter

## The Deer Hunter

Oliver Weir Film Editor

Directed by: Michael Cimino

Year of Release: 1978

Starring: Robert De Niro; Christopher Walken; John Cazale; John Savage; Meryl Streep

Credit: Universal Pictures



After hunting, five friends head to Welshy's Bar in the steel-mill town of Clairton, Pennsylvania, to celebrate the imminent deployment of two of them to Vietnam—Mike and Nick. Another member of the group, John, begins to play Chopin's Nocturne No. 6 on a piano in the corner of the room. Nobody speaks, nobody looks at anything in particular. As the piece ends, there is a momentary silence. The camera pans to Mike: in his face there is a sobriety, a gratitude for his little town and for his friends—an appreciation for the relative banality of his life. Then the regular beat of a helicopter sounds, and the film cuts to carpet bombs obliterating a Vietnamese village. Civilians are massacred. An injured woman is gunned down by the Viet Cong, along with her child. Mike is drenched in blood. We are a long way from Chopin now.

*The Deer Hunter's* successes are all present in this exquisite transition. Life and death, and war and peace, are presented in the most undecorated manner, and the starkness of their contrast is made apparent by the tenuity of the membrane separating them. Indeed the larger plot—of Mike (Robert De Niro), Nick (Christopher Walken), and Steven (John

Savage) integrating back into society—exhibits the very same interplay of opposites. Dualities are present throughout. For example, when Mike goes on his first hunt since coming home, he hikes up into the clouds, and as he ascends some rock formation, gun in-hand, a reflection follows him in the placid lake below.

These scenes, as impeccable as they may be, are surrounded by unending gristle. I don't know how Cimino would justify the 40 minute long wedding sequence. Perhaps he'd say to the detractors that the film 'just wouldn't be the same without it'—I suspect many would reply: 'good'. A long movie is not, a priori, a good movie, and it can be easy for directors to mistake self-indulgence or ill-discipline for vision. So what unites all the great long movies? Well, it is an encompassing quality; they entirely arrest a time, emotion or idea. I'm not convinced *The Deer Hunter* fully succeeds in that regard. While the game of Russian roulette serves as an effective symbol for the nature of killing in war, and the final scene serves as a nice ironic jab at the nature of war, the soul of the movie is missing, and it doesn't give you a whole lot to chew on as the great epics of cinema do.

*The Deer Hunter's* problems by no means lessen the scenes I lauded before. On top of those scenes, Vilmos Zsigmond's cinematography is faultless, and the Cavatina theme by Stanley Myers is beautifully apt. Then there are the performances—all coalescing into effectively one character: the common man from Clairton. Each performance feeds into the next: Christopher Walken's Academy Award winning performance being complemented by the equally engaging Robert De Niro, who is in turn made better by Meryl Streep's enigmatic presence as Linda and John

Classic of the Week...  
Three Colours: Blue

The first of Kieślowski's *Three Colours* trilogy. It is the story of a woman's grief following the death of her husband and child in a car accident. Juliette Binoche's acting is like the film's cinematography: effortless and sublime. A true masterpiece.

Savage's emotional performance as Steven. The greatness of the performances are certainly not limited by the screen time of the actors; you need only watch John Cazale as Stan. Cazale filmed while he was living with terminal cancer, and never got to see the work in its final form. In the few scenes he has, as the runt of the group—never fully fitting in, always chasing girls, often being the butt of a joke or the target of a slap—his acting is spellbinding, the work of a man who knows it will be his last. Is *The Deer Hunter* without faults? No. Is it one of the great American epics? I'd say no. But if you can withstand these flaws, along with the film's obvious bloatedness, *The Deer Hunter* will be sure to reward you with flashes of sheer magnificence.



Watch on MUBI

## A Captivating Courtroom Drama

## The Trial of the Chicago 7 ★★★★★

Reviewed by Oliver Weir

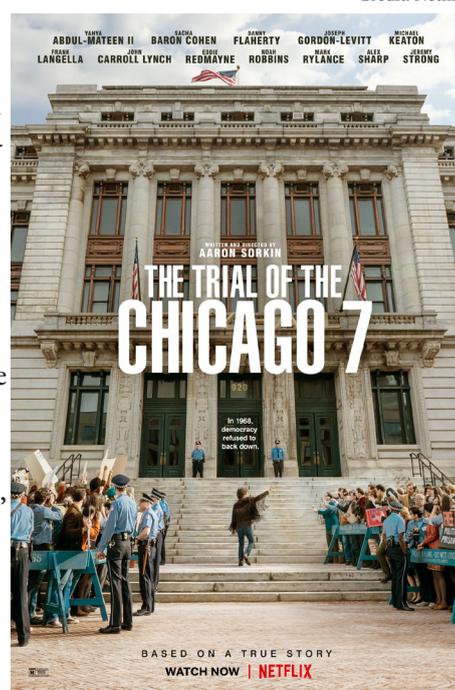
Directed by: Aaron Sorkin

Starring: Eddie Redmayne; Sacha Baron Cohen; Mark Rylance; Yahya Abdul-Mateen II; Joseph Gordon-Levitt

With a cast as talented as this, and a screenwriter as experienced as Sorkin (the progenitor of "You can't handle the truth" in *A Few Good Men*), I went in expecting good things from this movie. Despite the hiccups caused by COVID-19—which prevented it having a large cinema release, causing Netflix to step in to distribute—the film is thoroughly entertaining. It tells the story of the Chicago 7, a group of anti-Vietnam War protestors charged with crossing state lines and inciting violence at the 1968 Democratic National Convention. Eddie Redmayne as Tom Hayden (leader of the SDS), Mark Rylance and

Joseph Gordon-Levitt as the heads of the defence and prosecution respectively, and Yahya Abdul-Mateen II as Bobby Seale were enthralling—bringing even more colour to an already colourful trial. (Sacha Baron Cohen's performance often took me out of the action. His role as Yippie leader, Abbie Hoffman, appeared to amount to saying very cliched hippie things, making him come off as a bit humdrum.)

Sorkin lets the trial unfold in flashes, utilising both jumps ahead in time and flashbacks narrated by members of the Chicago 7. This gives us an all-access look at the cracks in the legal system—from particular



Credit: Netflix

jurors being suspiciously discharged (much to the convenience of the prosecution), to the defence counsel squabbling with the Chicago 7 (when they were not busy squabbling with themselves). As the trial's publicity builds, the politics and temperament of each participant becomes less extractable from what is seen as right and wrong. The nature of protest and the fallibility of the justice system are shown at their extremes; and, up until the very end, we sit questioning what rewards are worth contending for if they have to be collected through violence.

## IMPERIAL'S BEST DRESSED

Credits: Original Photo/Calum D



## LUCY HAMER

wearing:

### NONCHALANCE IS THE NEW BLACK

Spotted by [Calum Drysdale](#) Felix Editor-in-chief[Calum Drysdale](#) Felix Editor-in-chief

Caught outside Beit and heading to the library, Lucy was killing it on Monday when we snapped her. We here at Felix Fashion appreciate a confident look and Lucy was putting it out in spades with an alternating print block colour look. She told us that she "couldn't tell" us who her style icon was, which only made us want to know even more!

Despite term having started a week ago, this was her first time going into the library and she freely admitted that she might only "look around and see how it is". She also said that she didn't know "if she was allowed into the library" but that couldn't stop her - her chosen power outfit adding the confidence to cross boundaries and break some rules!

Having been here for two years already, Lucy is a major figure at Imperial, a third year Medical Bioscience student, she is even better known on the rugby pitch. President of the Women's Rugby team she is packing serious punch. Avoid making her angry!

Her jumper was from Goose and Gander, a small indie fashion label set up by two primary school friends that specialises in unisex hoodies, shirts, and sweatshirts, and was a birthday present. Clearly we all need friends and relatives like Lucy's to buy us presents!

Her trousers are from Urban Outfitters, a neat straight leg trouser, easy to look smart in with a nice top or stylishly casual when paired with a jumper.

Her bag contained a laptop "in case [she] get[s] into the library" and her rugby kit. Her shoes were classic New Balance, well-worn and fun.

Her blonde hair was scrapped back into a fun mid ponytail that gave her a casual yet chic look that the average Imperial student struggles to embody.

### *How to look like me*

#### The brands:

**Sweater:** Goose and Gander

**Trousers:** Urban Outfitters

**Shoes:** New Balance

## Future – Mask ON

[Elizabeth Tong](#) Fashion Editor

It's become apparent that protective face masks are staying with us for the long run. Could they become the new must-have fashion accessory? Face masks are now an everyday essential, in addition to your phone, keys and wallet. You can never leave the house without the all-important face mask. Giving us access to enter shops and use public transport, face masks are there to protect ourselves and others. However, there is perhaps potential to express ourselves beyond conventional clothing items. Designer brands such as Off-White, Tory Burch, and Missoni have all released their latest face mask designs. Not to mention the appearance of Billie Eilish in a Gucci face covering at the



Grammy Awards earlier this year.

(It is important to add that these masks are probably not CDC approved! So always check before you buy!)

Where does this lead us? Could it become the norm to start matching your face mask to your outfit? Or even base your entire outfit off the initial face mask? I'd like to think that the anti-maskers out there will stop viewing face masks as an inconvenience, and rather view them with the potential they have. It may feel unimaginable, but masks may become the next functional fashion accessory. There is, however, a fine line that the 'fashion mask' treads on. Should luxury brands be able to make a profit from what is deemed a necessity to survival?

Earlier this year, the fast fashion brand Boohoo was slammed by NHS staff for selling

£5 'useless' fashion masks, and the Union of Shop, Distributive and Allied Workers (Usdaw) deemed the masks as 'scandalous'. In response, Boohoo donated thousands of scrubs, masks and gowns to NHS staff.

There are independent retailers selling masks with a more conscious approach. For example, London-based Florence Bridge is donating her profits to the Fuel Our Frontline charity, and British brand, Lavender Hill Clothing, donates masks to the Katherine Low Settlement charity, helping those vulnerable in Battersea. Both brands have made it clear that they do not wish to profit from the COVID pandemic and have instead taken a charitable approach. I'd like to think that many other brands will follow this initiative, in order to contribute to those affected and help provide affordable but also protective face masks.

Credits: Wikimedia Commons

# Your Union Events

twitch  
presents

28 October

TWITCH  
OR  
TREAT

[imperialcollegeunion.org/twitchortreat](https://imperialcollegeunion.org/twitchortreat)

FiveSixEight.

f [beitbars](#)

🕒 16:00 – 22:00    🕒 16:00 – 20:30

**Saturdays**

**Live Music at FiveSixEight**

**Sundays**

**Beer & Burger Deal**

**Tuesdays**

**The Great British Bake Off**

**Thursdays**

**Super Quiz**

More details at: [imperialcollegeunion.org/whatson](https://imperialcollegeunion.org/whatson)

# Union Page



shop

53,474  
POSSIBLE MEAL DEAL  
COMBINATIONS

## Grab a Meal Deal from the Shop

Sad Shop Extra's gone? Don't you worry, we just moved our fridges into the Shop, so you can still get your delicious, sustainable and cheap meal deals. Simply Lunch have a great sustainability policy, and we want to let you know we're doing our best to ensure our products are ethically sourced and sustainable. Someone (cool) from our team did the math, and you've got about 53,474 possible meal deal combinations to try out, so we suggest starting soon!

If you don't know where the Shop is - we're just in front of the Senior Common Room, on the Sherfield Walkway. Next to bringing you tasty food, we also offer a wide range of Imperial branded apparel, accessories, stationery and even sustainable products like reusable cups.

Shop also takes online orders: [imperialcollegeunion.org/shop](https://imperialcollegeunion.org/shop)



## Union Bake Off

Wow! Who knew Imperial had so many talented bakers? It's incredibly hard to choose our favourites each week, you all are creating some amazing bakes.

We're still meeting up in FiveSixEight every Tuesday, to watch The Great British Bake off together, so please join us!

Haven't showed off your baking skills yet? Our very own Union Bake Off is in full swing and we're really enjoying it. Send us a photo of your bake via direct message to our Instagram (@icunion) for a chance to win a voucher worth £10, to redeem at FiveSixEight. Every week we choose our favourite and in the end you get to vote for the winner! Ready, set... bake!

#icubakeoff

twitch  
presents

TWITCH  
OR  
TREAT

## Twitch or Treat: Halloween Special

It's (supposedly) that spooky time of the year, and this time we feel slightly more scared of reality than ghosts... Fear not, TWITCH has the perfect event on Wednesday 28 October, from 21:00 to 22:00, to send all our worries back where they came from: **Twitch or Treat!** Hosted by Max Fosh, the king of StreetSmart, Twitch or Treat is the lockdown quiz you don't want to invite your family to (sorry mum!).

Enjoy live interactive games and quiz (time to brush up on your Halloween trivia); win live prize tricks and treats delivered to your door on livestream; watch your friends compete in Trick and Treat challenges from your university.

More info and how to join the live event:  
[imperialcollegeunion.org/twitchortreat](https://imperialcollegeunion.org/twitchortreat)

Earn the Imperial Award  
Reflect upon the  
transformative impact  
of your experiences

Find out more and register  
[imperial.ac.uk/imperial-award](https://imperial.ac.uk/imperial-award)

**PUZZLES**

**Mild cZeus**

					7 <sup>+</sup>		
27 <sup>x</sup>	216 <sup>x</sup>		224 <sup>x</sup>			24 <sup>x</sup>	
			14 <sup>x</sup>				
						40 <sup>x</sup>	
	48 <sup>x</sup>	48 <sup>x</sup>		10 <sup>x</sup>			
		8 <sup>x</sup>				18 <sup>x</sup>	

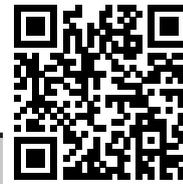
**Medium cZeus**

		24 <sup>x</sup>					
		26 <sup>+</sup>					
27 <sup>x</sup>			192 <sup>x</sup>			16 <sup>x</sup>	
			18 <sup>+</sup>				
						80 <sup>x</sup>	
18 <sup>x</sup>	90 <sup>x</sup>		75 <sup>x</sup>			240 <sup>x</sup>	
						12 <sup>x</sup>	

**Hot cZeus**

		45 <sup>x</sup>					16 <sup>x</sup>
							768 <sup>x</sup>
		168 <sup>x</sup>					576 <sup>x</sup>
		108 <sup>x</sup>		864 <sup>x</sup>			96 <sup>x</sup>

Felix is proud to announce a new type of puzzle. Never before seen in a newspaper in the world, cZeus was developed by the Mathematical Games company and provided to Felix.



**RULES**

cZeus is a mathematical puzzle formed of four simple rules - follow this QR code for an explanation of how it works.

**Last Week's Answers**

1		6 <sup>x</sup>	6		6		30 <sup>x</sup>	5
		210 <sup>x</sup>	42 <sup>x</sup>				360 <sup>x</sup>	15 <sup>x</sup>
5		7	28 <sup>x</sup>	4				3
							48 <sup>x</sup>	6 <sup>x</sup>
5		8		2				2
45 <sup>x</sup>		8 <sup>x</sup>	32 <sup>x</sup>			16 <sup>x</sup>		
9		1	2 <sup>x</sup>					2

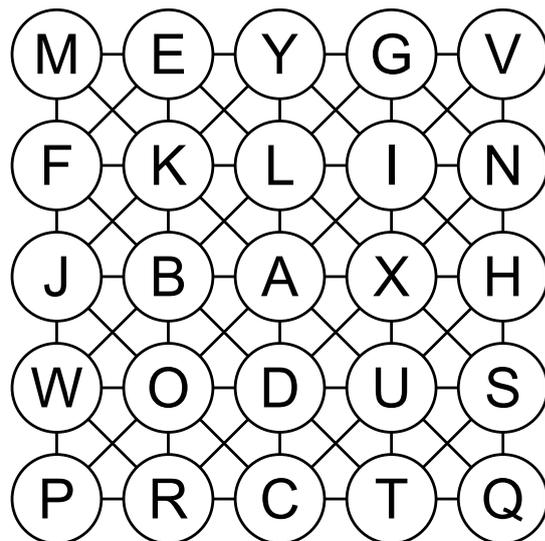
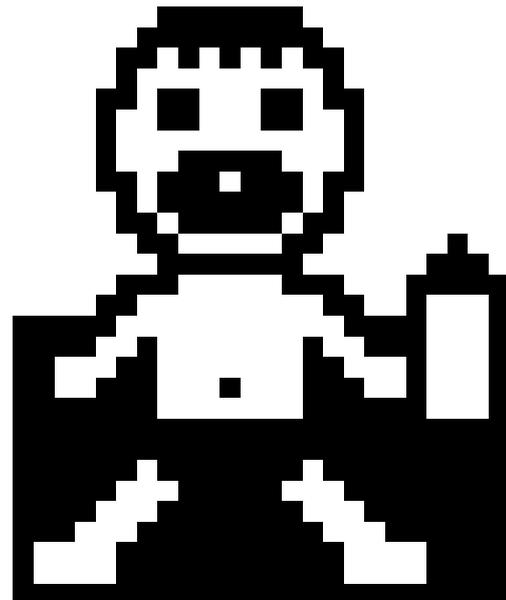
2		18 <sup>x</sup>	9		3			1
		288 <sup>x</sup>					36 <sup>x</sup>	
2		8		6				2
							36 <sup>x</sup>	360 <sup>x</sup>
4		7		6				5
36 <sup>x</sup>			63 <sup>x</sup>	378 <sup>x</sup>		150 <sup>x</sup>		
9		9		1				5

8		16 <sup>+</sup>	8		2			1
							720 <sup>x</sup>	72 <sup>x</sup>
4		5		9				4
							840 <sup>x</sup>	504 <sup>x</sup>
6		7		7				2
							294 <sup>x</sup>	2401 <sup>x</sup>
1		7		7				3

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

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

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



**Word Pyramid**

**RULES**

Every row is an anagram of the previous word with one more or less letters.

Geordie way of saying 'me'(2) S

Take legal action against(3) S

Condition of an item on ebay(4) S

Firemen do this to flames(5) S

Removed from power(6) S

Tiresome(7) S

Opposite of internal organs(8) S

One of Imperial's South Kensington halls(9) S

Places for undiscovered criminals(8) S

Exclaimed(7) S

All freshers are \_ by the university(6) S

Firemen did this to flames(5) S

Foot protection(4) S

Rude garden implement(3) O

One third of santa's catchphrase(2) S

**Concise Crossword**

1		2		3		4		5		6		
												7
8								9				
10						11						
12				13		14				15		
						16						
17		18						19				
20						21						
	22											

**ACROSS**

- 1 Democratic candidate for Vice President (6,6)
- 8 Line equidistance from the poles (7)
- 9 \_\_\_ Dent, from count-down (5)
- 10 Roman emperor (5)
- 11 Insect appendages (7)
- 12 Type of average (6)
- 14 Dwarfed tree (6)
- 17 Famous North American waterfall (7)
- 19 Iconic winter bird (5)
- 20 To modify (5)
- 21 Accuse of misconduct (7)
- 22 Second highest football league (12)

**DOWN**

- 1 Someone who compulsively steals (12)
- 2 Seated on a horse (7)
- 3 Water lily (5)
- 4 Description of alternative medicines (6)
- 5 Italian rice dish (7)
- 6 'A Doll's House' playwright (5)
- 7 The way in which things are connected (12)
- 13 gramana unjumbled (7)
- 15 Religious day off work (7)
- 16 Component of hummus (3)
- 18 British rapper (5)
- 19 To mature (5)

If you want more crosswords to solve, head over to Sport to find this week's cryptic crossword!

**Points Available**

- Cryptic Crossword: 10
- Concise Crossword: 5
- Hot: 3
- Medium: 2
- Mild: 1
- Word Pyramid: 3

Points are available for partially solved cryptics!

**Leaderboard**

- 1. Mr Puzzles (40 Points)
- 2. The Flots (38 Points)

Send in a picture of your solutions and your entry to the cryptic clue writing competition by Tuesday 12pm to fsudoku@imperial.ac.uk to take part.

**Clue Writing Competition**

Your word is STREETWISE!

Send in an original cryptic clue to fsudoku@imperial.ac.uk for a chance for it to be published in next week's issue.

**Mild Sudoku**

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

**Medium Sudoku**

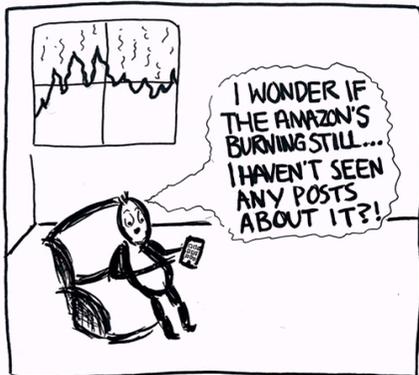
		7	9	6		2		
9	2				3		4	
	8		4		2			
						1		6
3				4				5
1		2						
			7		4		8	
	4		2				6	7
		8		1	5	4		

**Hot Sudoku**

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

# Is the Amazon still burning?

Flora Dickie Sustainability Editor



F.D.

During the summer of 2019, there was a surge of outrage and concern for the fires raging in the Amazon, in which 1 million hectares of forest were burned. There was unprecedented media coverage on the issue and social media shares skyrocketed like never before. And for good reason. From the period of January to August (2019) there was a 39% increase in forest loss than the same period in 2018. This increase was likely due to the policy changes President Jair Bolsonaro brought in when he came to office at the beginning of 2019 (this is the man who has been quoted saying, 'Let's use the riches that God gave us for the well-being of our population' on a visit to the Amazon for a mining project).

The social media mania brought with it a flux of publicly accessible environmental education and awareness on Amazonian issues that environmentalists and local communities had been talking about for decades. Hundreds of celebrities with large followings urged people to donate to NGOs supporting the relief effort, and International leaders offered a relief fund to Brazil of \$22.2 million, expressing global concern.

But where did our concern go? Considering the lack of rage and concern this, one may assume that the Amazon is ok now, and the fires all went out...

Well, the Amazon is still burning, and this

year could be worse than the last. Understandably, this year we have been preoccupied with other things such as the global pandemic and the civil rights movement which started in the USA over the summer. But the COVID-19 pandemic has hit Indigenous communities hard. And this year could be more damaging and destructive than the fires of 2019.

Deforestation increased by 51% in the first three months of this year compared to last year, soil is drier, and the temperatures are hotter. To understand why this is worrying we need to know how the fires occur in the first place.

Fires are not a natural occurrence in the Amazonian ecosystems. Most fires are caused by human burning of the remains of deforested areas; shown by the satellite images of fire hotspots being located next to agriculture, pasture, and roads. Of the area that was burned in 2019, two thirds were recently deforested (in the last few months). More often than not, land grabbers deforest public lands to transform it for commercial purposes. Therefore, the focus of policy change should be on minimising deforestation to prevent further transformation of more land into agriculture in the Amazon.

So, the combination of increased deforestation, drought, and increased temperatures create the conditions for more fires, especially from the beginning of the dry season in May.

In June this year, there were 19.6%

more fires in the Brazilian Amazon than compared to last year, according to the Professor Marcia Castro of Harvard University. Additionally, the numbers of fires have increased in Venezuela, Colombia, and Peru compared to last year.

It is crucial to highlight here that when forest is burned and transformed in this way, it may never fully recover. Since July there has been a 'ban on forest fires' in Brazil, yet there is a lack of enforcement and fires continue to burn.

This is terrifying. And for the Indigenous communities of the Amazon and areas around it, this is

**51%** increase recorded in deforestation in the first 3 months of 2020 compared to 2019

trauma; more specifically Solastalgia (anxiety and sorrow from the changes in the natural environment). Indigenous people are most affected by the deforestation and fires of the Amazon. For many groups, the forest is their livelihood and their home; fires and deforestation threaten this. The air pollution created by fires is also causing a spike in respiratory problems, with smoke poisoning becoming more and more common across Amazonia.

The Amazon is a huge carbon sink, but it could become a carbon 'faucet'. It is our responsibility to reduce harm and further exploitation of the people and the ecosystems. We must stand

in solidarity with the Indigenous people fighting for their lands and we can support them through organisations such as Amazon Frontlines. Plus, we cannot rest on our laurels and depend on the Amazon to be the 'lungs of the earth'. We have the duty to increase our carbon sink potential in the UK if we have any chance of preventing further temperature rise across the world.

## Inspiration of the week

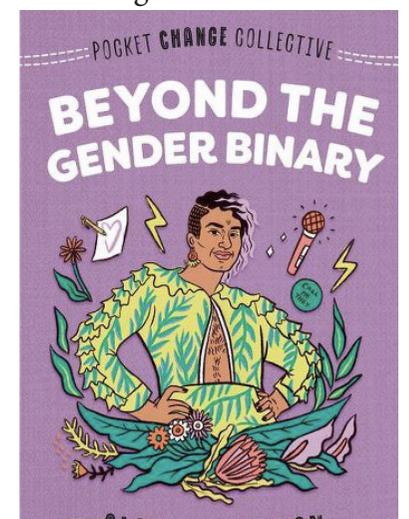


### A Quick Read

By Flora Dickie

We cannot imagine a just and sustainable future without the inclusion of all peoples.

Erasure of certain persons due to their gender non-conformity is not acceptable. This book explores why we need to move beyond the gender binary as a cultural belief which creates 'conflict and division'. Gender non-conforming people face harassment and prejudice for just being. Our society demonises those who don't conform to either 'man' or 'woman', and this systemic discrimination serves to eliminate a minority group. In this way, gender non-conforming people are erased from society. For example, in 2019, the Department of Justice of the USA announced that trans and gender non-conforming



workers were not to be protected by civil rights law.

This book explains the injustices and experiences of being gender non-conforming and why we need to go beyond the binary to have justice and safety for all. I highly recommend this book to everyone no matter your interests; For some, it may be education, and for others, it may be recognition as the author writes, 'this book is dedicated to everyone who has ever been made to feel like they were too much or never enough'. It is part of a series by the Pocket Change Collective to spotlight activists, published by Penguin.



## SUSTAINABILITY

# Indigenous leader in the TIME 100 List

Flora Dickie Sustainability Editor

**N**emonte Nemquino, leader of the Waorani in Ecuador, has been named by Time Magazine in the 2020 list of the Top 100 Most Influential People in the world.

Raised in the traditional Waorani community of Nemonpare, with a brief period at a missionary school, Nemonte went on to become the first-ever female leader of the indigenous group (the Waorani of Pastaza) and co-founder of the organisation Ceibo Alliance. Her leadership is helping to protect the lands of her community against exploitation from oil extraction, and she is showing what true guardianship of our ecosystems is.

In 2012, the Ecuadorian government carried out a consultation of lands including those of the Waorani territory. Yet, they only presented the potential local economic benefits of the planned oil extractions to the local communities, and they did not ask for consent from the local people. It is required in Ecuadorian and international law that they ask for consent from the community and make explicit the possible negative consequences of the extraction. However, post-consultation, the



Nemonte Nemquino, leader of the Waorani in Ecuador

government started to split up sections of the Amazon (including the Waorani territory) which would be put up for auction to the international community for auction with aims of oil extraction.

In 2018, the Ecuadorian government reduced the amount of Amazonian land up for oil auction, removing the Waorani territory. However, this does not mean that the community is safe from future extractive activities according to the community's lawyer, Lina Maria Espinosa; 'this territory is threatened by extractive activities, and the perspective of a Western world that ignores and denies interculturality and the relationship of these peoples with

their territory'.

The Waorani people have responded to this severe lack of protection of Indigenous lands by starting a petition to gather international support and by taking the government to court to sue them for not properly consulting with them before. This action is not just for the Waorani people and their lands, but for the whole Amazonia; an overwhelmingly rich ecosystem of intertwined networks of life that are every day contaminated by industry purely for economic gain, causing detrimental health impacts and displacements of local communities.

On April 26th 2019, the Waorani

won their case. The court ruled that the Ecuadorian government could not use their territory for oil exploration without the prior consent of the community. In an interview with *The New Yorker*, Nemonte says, 'The court recognised that the government violated our right to live free and make our own decisions about our territory and self-determination'.

The Waorani are not the first Indigenous group to win a case against the government of Ecuador. In 2018 the Indigenous Kofan community won their case against fraudulent mining activities in their territory. These wins are a win for all. For life and beings and ecosystems.

Under Nemonte's leadership, her community managed to protect hundreds of thousands of acres of rainforest. Yet, we must not expect this work to be done by those who suffer the most from the Western industry and exploitation. We must step up and support these communities to reject the exploitative nature of the extractive industry that our Western cultures continue to demand and invest in.

I urge you all to read Nemonte's letter to the Western world. It is accessible on: [www.amazonfrontlines.org](http://www.amazonfrontlines.org).

## Being an environmentalist is a death sentence depending on where you are

Flora Dickie Sustainability Editor

**E**nvironmental activists all over the world stand and fight for the future of the planet, in a most courageous and selfless act, putting themselves at risk of threats, imprisonment, and even death. The number of incidents is particularly worrying in South America where there is such high biodiversity but the people protecting this and their lands are often violently attacked.

A report from 'Tierra de Resistentes' in 2019 highlights that Indigenous people face a higher risk of violent attack for opposing extractive industries such as mining and logging. This re-

port also states that over 10 years, there have been more than 1300 attacks on environmental advocates across seven countries in South America and those targeted are considered to be 'anti-development' or 'unpatriotic'.

In addition to these stark figures, the 2018 report from the organisation Global Witness found that 3 people per week were killed for being environmental guardians, activists or protectors. Furthermore, this organisation highlights that not every case is reported, so the number could be much higher.

The most dangerous region for environmentalists is South America, but in 2018 the country with the most deaths

of environmentalists was the Philippines. According to the national environmentalist coalition in the Philippines, the mining sector is particularly dangerous. Those who are openly critical of the operations of mining companies are often bullied and threatened. The Philippine army has listed various environmentalists as insurgent communists, and with this categorisation, the army can detain, interrogate or arrest them. Additionally, the Philippines has a law in which businesses can request support from the government if they feel threatened. Industry uses this to criminalise and intimidate the defenders of the environment.

The global trend is that the planet's ecosystems and its people protectors are under severe threat. We are seeing more and more interventions of environmentalist action by police or armed forces as more environmental protections are removed from legislation around the world.

You can support the indigenous people and their territories too by making donations to organisations such as the Rainforest Action Network, Amazon Frontlines, the Ceibo Alliance, and Wahana Lingkungan Hidup Indonesia. You can also advocate for climate and environmental justice by joining Extinction Rebellion and Divest Imperial.

## SPORT

# My Favourite Moment in Sports History

Amanda Barden Sport Editor

There are so many moments in sports that take your breath away, that make you marvel at the human ability, that make you want to jump in and be a part of, and that make you completely overwhelmed, sometimes without even knowing why. Any fantastic sports moment is appreciated by all people, regardless if they play the sport or if they even know about sports. I have many moments that I have admired, that I remember watching and feeling so happy that I got the opportunity to even be a part of. But one that always comes to mind is in basketball, game 6, NBA final, 2013: Miami Heat vs San Antonio Spurs. As a little backstory, I started supporting Miami Heat in 2010, when I was lucky enough to watch a live game when traveling to the US. It was a completely surreal experience for 10 year old me who had started playing basketball that year. These people were huge! They could reach the net like it was no effort and could cross the court in seconds when it felt never-ending to me. They had these insane tricks that they made look so easy. The Heat at

that time also had the "triple threat" – Chris Bosh, Dwayne Wade, and LeBron James. Every year since then, I've supported them whole heartedly, and was one of the designated Heat fans among Lakers and Celtics fans in my school. I was living in Ukraine at the time of the game, so I had to wake up at 5am to go into my living room and set up ESPN. My family friends stay the night, who were also Heat fans, and who, luckily, had the ESPN subscription. We had set up the couch to turn into a pull out bed and we all huddled on it with bowls of cereal (eventually, we would have to go to school). I was so nervous, the Spurs had been up the entire time, always at least a 1 game lead, and they were predicted

to win this game, but we had hope. By the start of the fourth quarter, however, we had lost that hope. The Spurs were up a few points and it just didn't look possible for Miami Heat to keep going. We were all packed and getting ready for school, disappointed that this will be a loss for Miami and preparing to hear all my friends give their "condolences". The moment came with about 8 seconds left on the clock. Miami Heat had managed to get quite close, scoring many points throughout the 4th quarter. With 8 seconds left, they were down 92-95. This basically meant they needed one three pointer to tie the game and put them into over-time. This was the last play of the game, and LeBron James was going to take the 3-point shot. We

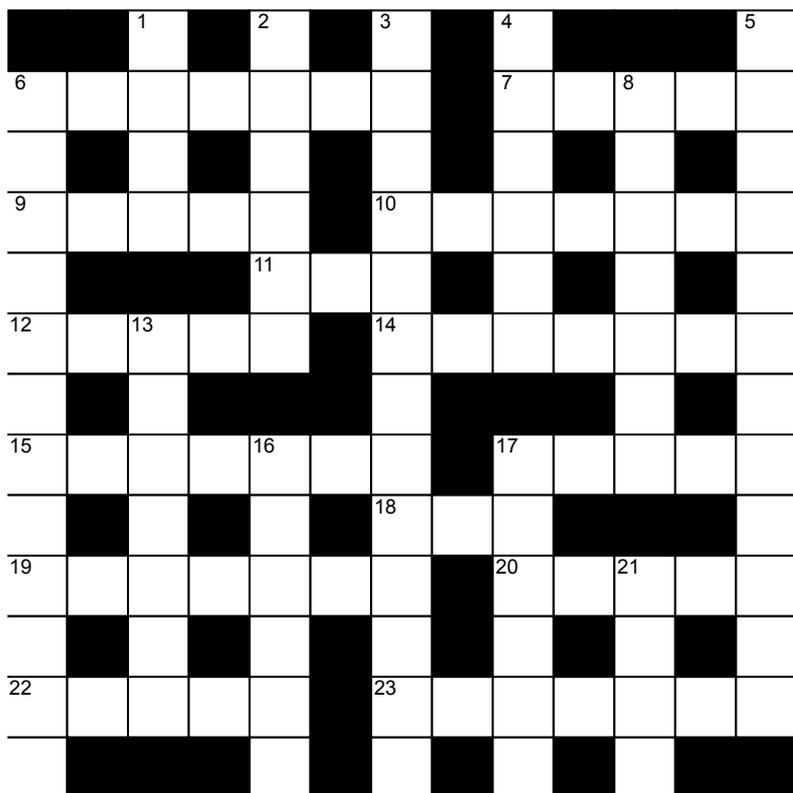
all held our breath as LeBron went up for the shot. The second it hit the rim and missed, we all accepted defeat. Somehow, out of nowhere, Chris Bosh had gotten the rebound in a sea of Spurs players and passed it out to Ray Allen. Ray Allen took a step back and sunk a three-pointer to tie the game. The buzzer rang seconds after and the game went into overtime. We, and the crowd, went absolutely crazy! At this point, we still didn't know if Miami were going to win the game in overtime, but we knew that was one of the best basketball plays we had ever seen. The dread of seeing LeBron James miss the shot followed by the completely shock of Ray Allen making it felt completely surreal. It was a one-in-a-million chance that it would have ended like that. In the end, Miami had managed to win in overtime and went on to game 7, where they managed to beat the Spurs and become the 2013 Champions. We all think the thrill and adrenaline from that shot is what led them to win overtime and Game 7. It feels amazing to have been able to watch a moment in basketball that is still considered one of the most memorable events in NBA history.



Ray Allen Three-Point Shot

## Felix cryptic Crossword No. 4

Serendip



### Across

- 6 Socialite that is going to become different; accepting (7)  
 7 Short guy's saying (5)  
 9 Ocelot hasn't much to eat upon losing heart to other big cat (5)  
 10 State word in French to inspire new gossip (7)  
 11 Worried about foreign character (3)  
 12 Confused Italian not A1 with his old language? (5)  
 14 Someone who steals the contents of the caddy? (3,4)  
 15 Creating jobs for the boys backed through some illicit openings (7)  
 17 Sea urchin and salmon starters essential to this? (5)  
 18 With it, one gets covered in sauce (3)  
 19 Unknown drug the likely cause of AIDS in South African school (7)  
 20 Hawaiian's introduction/parting at base of Mauna Loa? (5)  
 22 Dish - roast duck - becoming a dreaded one perhaps? (5)  
 23 Guest upset by touching act (7)

### Down

- 1 One gets into fool's gold (4)  
 2 Film about CR7 maybe? No, Juventus in third place! (6)  
 3 Ice can melt and not even graph fails to give this global threat a name? (7,6)  
 4 Sex overheard after a planned "to-do" list (6)  
 5 Take the energy out of Joe? (12)  
 6 They investigate deplorable Tory scandal - essentially squandering! (12)  
 8 They hurl bananas, oranges... (7)  
 13 Key workers largely rank first and second in usefulness (7)  
 16 Supplier of snakebite invested in brown ale (6)  
 17 Slight disheartening - she secures average score at first (6)  
 21 Where we must bear this cross? (4)



Think our clues are too easy? Too hard? Write crosswords for Felix puzzles! See the main puzzles section for more information on our clue writing competition.