



Felix

The Student Newspaper of Imperial College London



EDITORIAL

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Front Cover // Taja Strle

Impartiality and the Rent Debate

I've had a long debate with myself about whether to write this Editorial or not.

I view my role in the College community, as Felix Editor, as being somewhat of a 'fly on the wall' - observing, but remaining neutral; offering opinion on occasion via this column but only on a holistic basis, rarely on specific controversial issues. I am not given a vote on Union Council - the only sabbatical officer not to have one, in fact - because my remit is specifically not to advocate or represent students, but rather to run this paper with unbiased integrity.

It's a hard balance to strike - my position gives me insights into aspects of College and student life, decision-making, experiences, and so on, and I feel a duty to share that. However, I have no desire to risk what I hope is a commonly held perspective: that I genuinely attempt to be as impartial and balanced in my investigations and reporting as possible.

On the halls rent debate, I feel that some will feel that the reporting is not balanced. To an extent, that is the result of a dearth of engagement from the College side. I cannot share the perspective of someone who will not speak to me. Fortunately, prior to now, I have found everybody in the Union and College to be highly forthright in speaking to me as a reporter from the student paper. I did not expect that entering the role, and highly respect it. This is the first time I am navigating these particular waters: how to report fairly when one side remains silent, and your information is driven by fewer sources.

In this Editorial, I want to offer a personal opinion and some thoughts on how this situation came to be.



I will say now: I do not think that the proposal offered by College initially was reasonable, for a variety of reasons. According to the information I have, it cannot possibly be considered a genuinely 'break-even' model. There are a series of very tough questions I believe the College need to ask themselves when assessing the financial development of their model, on the monetary end of things, and on the procedural. There appear have been clear and gaping oversights in the way this model was constructed.

This was not a malicious act - of that I am convinced. People are generally not bad, either as people or at their jobs. Rarely is a whole division bad at either or both. Instead, I personally suspect it stems from the eternal disconnect between those making the decisions and those affected by them. It comes from a failure to have the right people in the room when decisions are being made.

The metric by which this model was assessed to be reasonable was not sufficient. As I understand it,

a benchmarking exercise was undertaken, in which the proposed rents were compared to other halls across London. They were in the same range, and so the College considered the offer reasonable.

This is an Excel spreadsheet exercise.

No student would ever be mollified by that. Had they been in that room, there are so many points they could have raised much earlier in the decision-making process - points which, inevitably, were immediately raised by students the second it was put to them. Qualitative points, about how deeply and irrevocably student welfare and community at this university would be affected. We do not want a wealth-segregated community. We do not want to price the poor out of halls, or out of attendance at the university. Neither does the College, of course - but the difference is that these issues are the primary and immediate concern for students, whereas naturally they are secondary considerations for those who are not directly affected. It is immediately apparent to the former, while the

latter might miss it.

There is an argument to be made that this is the point at which consultation occurred - I realise that. However, much of the resource and investment into this model has been wasted (speaking on the assumption that the College will amend the model based on ongoing discussions.) Additionally, the College has garnered ill will with the student body when it was just completely avoidable and unnecessary if they were willing to involve the right people in their decisions from the get-go.

This isn't the only situation in which this occurs. Another example: funds were wasted at White City when vital equipment or labs had to be moved after it was discovered the original location was too close to the train tracks, rendering the equipment useless due to vibrations. This is something researchers in that lab would notice long before those who were making the decisions - naturally, as it is their area of expertise.

Having the right people in the room from the start requires a lot of work in restructuring the way power and decision-making agency are distributed and managed. It also requires a lot of trust and collaboration. There's a lot of anger and damaged trust between various communities here already, so that will take time to amend. But we have to start trying to.

People are not bad, money-hoarding socio-paths. Students are not unrealistic or entitled. This angry, dismissive rhetoric needs to be supplanted by a common identity and a genuine desire to move forward and address the underlying systems that currently are not functioning in a way that actually benefits us.



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Ethical Investment Paper Passed by College Council

A paper presented to College Council by the Union President on establishing a Socially Responsible Investment Policy working group was passed on 22nd November

NEWS

Henry Alman
Editor-in-Chief

The paper, written by the Union President, Deputy President (Finance and Services), and Ethics and Environment Officer, was originally submitted on the 22nd of November and was passed with minor amendments from the President's Board.

It establishes a 'working group' that is mandated to investigate various proposals for guiding the policies by which the College's Endowment Board invests funds – which is due to report back to College Council on February 14th 2020, at which time a vote will be taken on whether to implement the recommended policy. One of the few conditions on the recommendation is that it must be "easy to implement", according to Abhijay Sood, the Union President, which he believes is reasonable.

Francesca Siracusa, the Ethics and Environment Officer, said: "we want to have a discussion about our beliefs and values as a university, and how that impacts everything

"We want to discuss our beliefs and values as a university, and how that impacts what we do"

we do – including where we spend our pounds and pence. This is about what we want to be doing just as much as what we don't want to be doing. While we are certainly aiming for full divestment, I feel there are other options than just to divest or to not divest – there are options B, C, D, E, and F that other institutions, such as MIT, have done."

Currently, the College has millions invested in fossil fuel companies, totalling to £8.9 million as of 2017, as well as often investing in other industries that have ethical implications such as arms or tobacco.

The working group is comprised of members of College Council, including the Union President, the Chief Financial Officer, the Provost, the Dean of the Business School, and an elected staff representative. It does not include the Ethics and Environment Officer, who was one of the authors of the original paper. The group will be consulting with external experts and stakeholders, as well as accepting submissions for consideration from staff and students prior to January 31st (see end of article for more information.)

Abhijay said of his involvement that "it is one of the most meaningful working groups in which I'm involved, because it has a clear remit and is going to report back on a specific date."

In the case of the paper, the aim is not necessarily divestment, but rather to open discussion. As Francesca said, "my perspective is that there weren't many really constructive discussions that

were happening between students and senior leadership, and that was our essentially aim of this paper". The complexities of social responsibility often pose difficult questions with regards to 'drawing the line'.

This was recently highlighted when an internal email sent by Ann Muggeridge, the Chair of Petroleum Engineering at Imperial, to the rest of the academic section was leaked, which described divestment from fossil fuels as a "simplistic reaction to a very complex problem" and encouraged colleagues to consider "how we can best articulate the importance of our research in both mitigating the impact

"This leak should stand as a sign that if we don't fight for it, vested interests in the College will block it"

of burning fossil fuels whilst providing essential raw materials and energy to societies around the world."

Initially, this was identified as internal lobbying to oppose ethical investment on behalf of factions with vested interest within the College, prompting the Divest Imperial campaign to offer the statement:

"We at Divest are disappointed, but sadly not surprised, that these researchers immediately felt it necessary to use the



The College Council // Thomas Angus, Imperial College London

talking points and tactics of the global fossil fuel industry to undermine an internal College process, especially one which has strong support from the staff and student body. That they must resort to slyly persuading their colleagues that fossil fuels are beneficial to society when we know they are accelerating climate breakdown is just embarrassing and demonstrates a blatant lack of scientific integrity ... This leak should stand as a sign for those who support divestment that if we don't fight for it now, vested interests within the College will block it."

Speaking to Ann, she said that her aim was to "make sure that everyone has their view represented within the considerations of the working group. It's freedom of speech here." She further clarified that this is inclusive of people within the section who do agree that investment in fossil fuels is socially irresponsible. Her personal perspective is that working with fossil fuel companies is necessary for development of sustainability-focused practices

such as carbon capture and geological storage, which are essential for reducing carbon dioxide emissions while renewable energy technologies are developed. She clarified that she believes divestment would be discourteous, and could make it more difficult to work with fossil fuel companies to deploy vital technology.

There has been growing pressure for College to address the issue of ethical investment from both external and internal sources. In particular, the campaign group Divest Imperial has been highly active, having staged demonstrations – including one with around 200 people on the Queen's Lawn on 29th November, in partnership with the UCU – gathered hundreds of signatures for petitions and open letters, and met with senior College management several times. They, along with Francesca, have also been involved in organising a recent Climate Assembly, which played host to guest speakers, ran workshops, and opened the floor to students and

staff to discuss and voice concerns. Another is scheduled for early next year, with provision of support from the Union.

It is also a topic on which the Union has been mandated to act for over two years; however, little traction has been gained. Part of the reason for that has been a degree of reticence from the College; however, Abhijay also points to the Union itself: "I don't think my predecessors thought that this was a priority or thought about it enough to think of a way to constructively move forward."

"This is a testament to what you can do when you stand firm and don't blink, when you think about how to get a discussion going and open doors, because there are people who would not want this to have been brought forward."

Submissions to the SRI working group will initially be written, but a subset of early submissions will be chosen for a further oral presentation. The contact email is sri.policy@imperial.ac.uk.

NEWS

news.felix@imperial.ac.uk

Union Council Votes 36:1 to Reject Increase in Halls

During the Union Council meeting last Tuesday, the 12.2% rent increase proposed by College was discussed, the

NEWS

Isabelle Zhang

News Writer

The Union and College are currently in negotiations over the price of rent in first-year accommodation, which College is proposing to increase by 12.2% overall in order to match a break-even model as calculated by Campus Services. On Tuesday, December 3rd, the Union President and Deputy President (Welfare) brought a paper to Union Council for votes to be taken on several aspects of the rent model. With regards to the 12.2% rent hike, this option was voted 36:1 in favour of rejecting it completely.

This session of Union Council saw around 30 non-Council members attending, who were mostly students keen to contribute their opinion on the issue that they felt would be important to them. The rent

“With regards to the breakeven model requiring a 12.2% rent hike, it was voted 36:1 in favour of rejecting it completely”

segment of Council began with the Union President and Deputy President (Welfare) detailing the circumstances.

As explained by them and as detailed in the last issue of Felix, College runs first-year student accommodation on a breakeven model, where the total cost of running the halls is offset by the revenue made from rent. This model includes only first-year residences of the accommodation portfolio – Eastside, Southside, Beit, Wilson, Pembridge, and Woodward. Xenia and Costume Store are externally owned and not considered a part of this model. The running cost is made up of expenses including staff salary, estates (security, cleaning, waste management), a fund for long-term maintenance of the hall, as

well as the debt accrued from loans taken during the actual construction of

“This means that after 50 years of students paying off the debt, the College is left with a valuable asset - which is not considered in their breakeven model”

the buildings. For older buildings such as Beit and Wilson, this debt has likely been nearly paid off; for newer buildings such as Woodward, the debt is aimed to be paid back over a 50 year period. This additionally means that at the end of the 50-year period, the College retains an asset that has value and that has no debt on it - a value which is not factored into their "break-even" model, and a value which is also likely to appreciate or increase over time as it is London real estate. Nonetheless, these are all paid by the rent revenue from students, regardless of whether they live in the hall in which debt is being paid off for, or whether they will ever experience the benefits of the long-term maintenance fund they are paying into.

To the best of the Union's knowledge, new costs that are not included in the current break-even model are being added into the break-even model for 2020/21. This includes an 80% increase in the contribution towards the long-term maintenance fund, and cost for staff who work on halls off-site. These are the main reasons for the overall 12.2% rent increase, and this is what the Council has voted to reject. Without these included costs, there is a possibility that rent would not have to rise.

Each of these factors received heavy criticism from students at the Union Council meeting. One student who spoke at the Union Council meeting said: "The College's funding model is an insult to students who are meant to be financing this. They are not counting capital gains from their property holdings ... they are not counting long term appreciation ... It's a disgrace that they do this and then make us pay for it. The 12% increase in a year is ridiculous, and I really think we should question what the Union is for if they are not standing up against this."

Independently of overall rent hike, but still a necessary part of the discussion, is how in the coming years the price of rent should be distributed across halls. Currently, 27% of the freshers' cohort live in North Acton. However, in 2020/21, College will be discontinuing the use of Pembridge (100 bed spaces) for student accommodation, and furthermore, the new Kemp Porter building (700 bedspaces) in North Acton will be opening for first-year residence.



The Union Council and attending students at the rent discussion on Tuesday December 3rd // ICU

NEWS

news.felix@imperial.ac.uk

Rent Price

floor was opened to students for questions and contributions, and the proposal was voted on

“It is possible that without the new included costs, rent would not have to rise”

These two changes to the College’s accommodation portfolio mean that 49% of freshers will be living in North Acton next year. The year before the North Acton halls opened to students, it was decided by the Union that the price per square meter of North Acton rooms versus non-North Acton rooms would be 1:2; accounting not only for the distance and travel costs incurred when travelling from North Acton to get to class, but also ensuring that there was some sort of affordable accommodation on the portfolio.

While the total revenue generated from rent must comply with an overall model decided by the College, the distribution of rent price across halls and rooms is delegated to the Union. With a changing accommodation portfolio, on top of the proposed 12.2% rent hike, things get much more complicated. In the original paper brought to Council, the Union President and Deputy President (Welfare) laid out four potential options for how this 12.2% increase could be distributed across North Acton and South Kensington halls (any hall that is not in North Acton is considered to be South Kensington-centric). These options ranged from a flat increase of 12.2% across all halls, to a 20% North Acton increase

and 8% South Kensington increase. The decision on price distribution largely depends on balancing the availability of affordable housing options for first-year students whilst simultaneously avoiding splitting the fresher cohort into North Acton/South Kensington communities that have large wealth disparities. First-year halls are crucial to building a community where the student body is well integrated and everyone feels a sense of belonging; this would be incredibly difficult to achieve if the price gap between South Kensington and North Acton halls were to grow much larger, which would essentially segregate students by wealth.

Though the 12.2% hike was ultimately voted down by Union Council, College is under no real obligation to comply with this decision. Union President Abhijay Sood has said about the Council’s rejection of the rent hike, “The preference of College Campus Services would have been for Union Council to accept their break-even model, and endorse one particular version of what they put forward. Union Council did not feel that they could endorse that, and Shervin (Deputy President (Welfare)) and I did not personally feel we could endorse that because of how steep the proposed increases are. We went back to them and they have expressed a willingness for us to work together to get through this impasse.

“We have established that we have a lot of common ground - we all want to reach an agreement, we want to agree something and to do so in a relatively tight

time frame, and we want students to be treated fairly and for as many students as possible to live in halls as a first-year, as it's very positive for the student experience. We also all want the College to be financially solvent; we don't want the College's finances to be bad, because that damages students too. This common ground, we can use to proceed. We won't be giving minute-by-minute updates because it would be unfair on both us and College, but we really do believe an agreement can be reached, and if it can then we will be bringing that agreement back to Union Council on January 21st as a public meeting.”

“We believe an agreement can be reached, which would be brought back to Union Council on January 21st”

With a 12.2% rent hike, the price of living in halls is no longer much different from the market rate of real estate. A single room in Beit, which currently costs £235/week would be projected to cost £264/week following a flat 12.2% increase.

Also discussed at Union Council was the unfairness of the rent increase for students living in Eastside/Southside/Beit, not because of preference but because of health conditions. Students whose physical or mental wellbeing are unfit are guaranteed



Pembridge Hall will be removed from the halls offering in 2020-21 // Neville Miles

accommodation in these halls as returning students because of their proximity to campus. Students asserted that any further price hike would be unjust because they are not living in these halls by choice, but rather because their conditions necessitate them to.

There was also discussion about how the price of rent could be subsidised for Hall Seniors, who currently take on the role entirely on a voluntary basis. This has been in discussion for a while; in a session held last year by the previous Deputy President (Welfare) Becky Neil, hall seniors were asked how the Union and College could show their appreciation for the work that they do, and some of the suggestions included

a 10% rent subsidy. The Council voted in favour of reducing rent for Hall Seniors, but with no further specifics given the rejection of the overall model and the necessity for further negotiation with the College. Also passed by Council was a decision to slightly reduce the rent of several rooms on the Lower Ground floor in Southside and Eastside, whose windows faced a wall and meant they received extremely limited sunlight.

After the Union Council session ended, Felix and ICTV interviewed students as well as Council representatives about their view on the rent increase and the breakeven model, the video of which will be released on Felix’s Facebook page as part of their

"Lifting the Rock" series. There was broad consensus about the importance of rent price in choosing first-year accommodation, corroborating the idea that the North Acton/South Kensington price gap is a fairly sensitive issue that the Union must handle. The Council session itself was live-streamed and the full video can be found on the Union Facebook page.

The College did not accept a request for interview, but a College spokesperson did comment: “we are continuing our conversations with the Union on a rent framework agreement so we can keep providing high quality and fairly priced accommodation for our student community.”

NEWS

news.felix@imperial.ac.uk

The Ongoing Direction of the Union

Last week, Felix reported that the Managing Director of the Union, Jarlath O'Hara, was stepping down, with Jon Tucker to provide interim support. We provide an update on the situation and a discussion on the ongoing direction of the Union.

NEWS

Henry Alman

Editor-in-Chief

It has been confirmed that Jon Tucker, the Business School's Faculty Operating Officer, will be providing interim support to the Union following the departure of the Managing Director.

The decision was made after a discussion with College by Jill Finney, the Chair of the Union's Board of Trustees, the group whose responsibility it is to oversee the Union's activities. The Board was consulted via email and telephone about the decision, in the absence of a scheduled meeting, but retains the ability to overturn it at the next Board meeting on Tuesday 10th December.

Jill clarified that the decision needed to be made swiftly such that the organisation could continue to function, hence not waiting for the next meeting. "That we haven't had a Board meeting does not mean the Board should not take action on an issue that needs to be dealt with rapidly; it has to respond regardless of when the meetings are fixed."

The Board will also discuss the timeline for recruiting a new full-time Managing Director, as well as receiving a presentation from Jon on how he envisions his role in the organisation.

The decision has prompted queries about the Union's ability to be effective in advocating for students if the College

"There are clear lines between College helping us to be independent and robust, and the Union's ability to negotiate issues"

is actively engaged in the Union's senior management. Regarding the choice to approach College to ask for recommendations, rather than searching externally, Jill said that "this was the most expedient model for ensuring student and staff support in the short-term." She also emphasised that "there are clear lines between College helping us to be an independent robust Union, and the Union's ability to negotiate and to take on issues. They are completely divisible, just as discussions about Union finances do not interfere with the ongoing negotiation about halls fees."

Abhijay Sood, the Union President, offered clarity on Jon's position within the Union: "Jon has a lot of experience with how both business and charities function, so we want to play to his strengths and have him advise us on how to rectify some of the foundational challenges the Union is

facing at the moment. He is not an interim Managing Director, he is not a Chief Operating Officer. He is not here to tell us what to do, he is here to tell us what we can do in terms of what will be effective. He is advising and mostly liaising to get support from the College on operational activities like data protection, recruitment, or building maintenance. Having met Jon, any concerns about conflicts of interest have very much been allayed."

Jarlath O'Hara, the outgoing Managing Director, added that he believes that this opens new opportunities going forwards. "When someone who is known and trusted says to the College the same things the Union has been saying for a while, maybe it will land firmer." He also said that Jon's experience in the Business School will help to offer a "lens of consistency" with regards to how the Union and College interact, in line with how the

College interacts with faculties, on the areas where parallels can be drawn such as building maintenance.

Regarding his departure, Jarlath said that this was the least disruptive time for him to step down – despite the major work ongoing with the Union's negotiations on halls rent. In essence, the reasoning behind it is a difference of management styles – he has a particular method, and the Union's ongoing needs require something different; a style that he was not interested in carrying forward, and meant that it was a "healthy time" for a

change and a "fresh pair of eyes" on the Union's issues.

He also discussed with Felix the troubles currently facing the Union, and the ongoing direction he believes they need to take.

Two major issues facing the Union in the past 12 months have been establishing their prioritisation with regards to provision of different services, as well as ensuring clear remit and accountability both internally and with regards to the split of responsibilities between themselves and College. Examples include the ongoing work on health and safety issues in the Union kitchens, as well as general maintenance work on the building – which the Union is currently liaising with the College's Estates division about. Part of the reason for the disruption has been a lack of clear communication and understanding about what areas fall under whose remit. These two issues will be driving factors in the Union's new strategy for 2020-23.

Another has been staff turnover. Though some directorates within the Union have remained stable, others have been decimated – with the worst-affected being the Activities team, which saw all three Coordinator roles depart within a short time-frame. Part of the cause is, Jarlath says, a "culture of development" that is intrinsic to the Union – the encouragement of staff to take on and do more. This encourages progression, but with fewer management roles available as one moves up the hierarchy, this

actively promotes higher turnover, which the Union has failed to account for in terms of its structure and processes. As Jarlath put it, "if you're going to consciously fuel that cycle, you need better things in place to mitigate against the turnover."

A possible restructuring of the Union is therefore on the cards having been discussed at management and Board level; a more "agile" way of working that allows flexibility in addressing emerging needs and changing priorities.

Furthermore, criticisms have been levied that the Union has been too compliant to the College on issues negatively affecting students. However, Jarlath views this as a problem with visibility and communication. Often, the Union will oppose the College on issues, but not in a publicly visible way – a consequence of the "collaborative" style that he and previous sabbatical officers have adopted. "There are officers and unions who are good at shouting about how great they are, but don't do a lot. It's tough because communicating takes time – so you end up having less impact in order to communicate it, because it takes time away from what you're doing. And yet the Union suffers reputationally from not being visible with stuff that happens."

Finally, he shared what he feels are personal successes during his time in the Union, and his passion for the organisation. "In terms of success, I view it along the lines of what the organisation has achieved

while I've been leading staff member, not just what I have personally done. I am proud of introducing the Wellbeing Rep Network, and that despite a poor financial year last year we are in a stronger and healthier position

"There are officers and unions who are good at shouting about how great they are, but don't do a lot"

today than when I joined four years ago. Most of all, I'd point to us continuing to outperform – I know that we are the envy of many unions, students, and universities in terms of our CSPs, election turnout, systems work with eActivities, and so on."

"I want to say that I've had a really great experience for the last four years. It's a fantastic role, a brilliant organisation, and I think the stuff that we do is incredible – with 'we' being 99% students. It's been a privilege to be in this position for four years. I've been in unions for 20 years, and I absolutely, coming into the role, saw it as the pinnacle of the student movement – there's no role I'd want above it within the student movement, and it's felt like that every day I was in the role."

Space: The Final Frontier

NEWS

Henry Alman
Editor-in-Chief

The College has, in recent years, struggled with the amount of space available on the South Kensington campus, and is separately making decisions like the sale of St. Mary's and the construction of White City – but projects are still ongoing to optimise the space available. One such project is the Space Sharing Programme, sponsored by Chris Banks, the Director of Library Services and Assistant Provost (Space).

The programme aims to investigate the potential for sharing space between departments and faculties within the College,

“Imperial currently only manages space utilisation of around 22%”

in order to allow for a growing student cohort. The overall student numbers at Imperial have increased by almost 20% in the last five years, between the 2013-14 and 2018-19 academic years.

Currently, teaching space in the College appears heavily underutilised as a whole. The national Research England benchmark is currently for space to be utilised at 35%, calculated on the hours a room is available, time spent using the room and how full the room is during use – but Imperial only manages around 22% based on recent data.

The concept is that



Chris Banks, Assistant Provost (Space) // Thomas Angus

when space is not being used by a department, it should be available for use by somebody else, whether for teaching, meetings, conferences, or student study space. The current system means that each department owns and manages its own space with a very high degree of agency, which is then often inaccessible to others. Sharing potentially addresses the space shortage problem, and recent investment in teaching spaces is beginning to address the disparity of quality of available space.

While the potential benefits are clear, there are also drawbacks and concerns from the departmental side. For example, should a space be shared, whose responsibility is it to clean it up, to maintain it, or to pay to replace equipment? The programme seeks to address these concerns by establishing behavioural expectations or standards with regard to room sharing and usage; however, gaining ‘mutual buy-in’ from departments has been a challenge, which is needed to get this type of project started. As Chris puts it, “sharing is caring”.

One example includes construction plans for

White City, in which a colossal joint basement floor was proposed which would connect through multiple buildings and departments as a linked space, available for learning, meeting, exams, events and the like. The plan was not taken forward, and instead each building is a separate entity; the opportunity for shared space was not followed through.

There are two major ongoing projects as part of the programme: one on data collection, dubbed ‘Occupancy Insights’, which tracks WiFi connections throughout the College to determine room usage; and another on developing and implementing a new system for room bookings.

Occupancy Insights is still in an early implementation stage, with only a few people from across the College having access to the growing data set. The project is being taken slowly, as there is a concern with the data might be misinterpreted or used to ‘name and shame’ people for under-utilisation of space. Chris stressed that this is not the aim – the idea is to gain solid data on usage to inform decision making and planning, which is an area the College needs to

improve on at a wide and holistic level.

The data has many potential uses. It can show whether a large space is being booked for too few students, or whether space is being booked out for too long – such as blocking out three hours for seminars that end after only two. On the more nuanced level, it can shed light on whether the utilisation gap – the 13% difference between current utilisation and the goal of 35% – is actually more reasonable than it first appears. For example, the wind tunnel in the Roderic Hill building takes up a colossal amount of space and will only play host to a small amount of people at once, even though it provides high value.

It can also help to optimise timetabling – if, hypothetically, there is heavy underutilisation in 9-10am slots, it might be possible to expand student numbers and just schedule more lectures, labs, and tutorials in 9-10am slots. The data is also aiding Chris in supporting the bid for converting basement space in the library, which could accommodate a large group study area for an extra 200 students. The data has also been used recently to determine the effectiveness of a fire evacuation drill.

There is also a long-term intent to use the data set for modelling purposes – if the College can predict the effect of planned changes to curriculums, or more ambitiously the flow of students around hypothetical White City construction plans, then it allows for optimisation before issues even arise.

The room booking system revitalisation is also aimed at smoothing processes across departments. Currently, the high agency of faculties and their ownership

of space has led to the development of at least 13 different systems across the College for room booking and related processes, each used exclusively within a limited range of departments or buildings. This makes space sharing virtually impossible. Additionally, most of those systems have human elements as a fundamental component, and are often administered via email. Chris describes it as a “noisy process”; one that is frustrated by human error, in which visibility and accessibility are limited, and which collapses as soon as an individual goes on holiday.

There are also regular problems with double-booking through different sources, as two different programs are used to book for teaching purposes and for conferencing and events – CELCAT and KX, respectively. Each of these can be used to book, but bookings from each can overlap. A systems fix for this would be expensive and would incur a large technical debt, and so again the focus is on establishing protocol changes that may ensure problems such as double-booking do not arise.

However, the potential long-term end-goal is much more ambitious. The aim is to explore the development of a ‘one-stop shop’ system, in which every room in College is visible and bookable. Additionally, it would feature the ability to search for free rooms based on certain criteria, such as facilities in the room or size. Chris also added: “my end goal is absolutely to get more rooms viewable and bookable by students as well”, for study purposes.

She also mentioned that James Medler, the former DPCS who developed the

new interface for room bookings for the Union, is working on the project – creating visualisations of how the different room booking systems across the College currently interconnect.

One of the problems with long-term projects at the College is managing to effectively communicate with students. Although consultations may be run, the student turnover year-on-year often means that most of a current cohort remain unaware of any improvements and changes being worked on, leading to frustration.

Chris said: “We’re aware of the potential for information overload, so we need to choose the point at which we reengage – either for further consultation or to inform people that something is actually happening. If there is a big clamour, ‘why is no one doing anything about X’, I’d certainly like to be able to say we are doing something about it. The information is there. But balancing the communications with timeliness, with everything else that’s going on and everything we have got to deliver, is difficult. We want to deliver – but we can’t just flick a switch.”

“Nobody comes into work to do a bad job. It’s not that, but rather people being frustrated. We’re in a situation with 20+ departments doing things 20+ ways, and in some ways have made things difficult for ourselves, which is why we are trying to optimise processes and expand systems to include things like student bookings. A lot of this work is about surfacing those differences, and seeing if we can establish a process and direction for improvement, to make the whole thing much simpler – but it takes a lot of time and resource to do so.”

NEWS

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Felix Interviews: Anne Barrett, College Archivist

The College maintains extensive archives and records of its activities, containing a wealth of fascinating history – which is presided over by Anne Barrett. Felix spoke with Anne about the archives and their role in the College's operation

NEWS

Henry Alman

Editor-in-Chief

Felix: Most students probably aren't really aware that the college has archives – do you interact with students a lot?

Some of them are – particularly the constituent college unions – and I do host evenings with different groups. When I had the City and Guilds Union members in, they were looking at their past publications, and they were fascinated to see what was acceptable to write in the past that perhaps wouldn't be so now. But they were sensible about it, and they understand the context. You need to understand the context of the time and history is history; you can't and you shouldn't attempt to change history - but you should learn from it.

What we do in the archive is reflect the history of the College and people's experience here – so it doesn't matter what the thing is, it could be as simple as meeting minutes, I like people to bring me things!

Felix: When you talk about having groups in, what does that experience look like?

We bring them into the research room and bring the materials they need to them – which aren't always the things they originally asked for! Often their needs change as their research does and people don't always know



Anne Barrett, the College archivist // Thomas Angus, Imperial College London

the right thing to look for; we need to interpret their needs and use our expertise to figure out where they should look to find their answers.

When student groups come in it's usually focused around their own deposits of their records, like the RCSU's Broad-sheet or minute books from old meetings. We hold onto those things for them, having the expertise to manage it and the space to store it, but it belongs to them. As to access for research, we need to know what people want exactly in order to assist them to what they need, which isn't always what they may ask for. We need to drill down to their real question, and this is unique material, so we have to supervise them using it. We will provide

things digitally if requested, but don't allow people to take pictures when they come in – because, for example, a lot of our archive is copyrighted. We are open to internal and external researchers.

Felix: Something that was raised to me by one of the constituent unions, the CGCU, was that Imperial as an institution feels as if it is phasing out its own history at times – does that ring true for you?

I think there was this notion that constituent unions would become 'chapters', so people felt that downgraded them. My view is: Imperial is so big now that you really need to feel like you belong to something. I

actually think constituent college unions are really important, to make people feel like there is something they can get hold of, that they can do their part in, rather than a big nebulous thing.

Felix: Do you think the STEM focus here leads people to disregard the history of the College at times – operating in a 'bubble'?

Not necessarily. I think that people are very, very busy, and that there's masses more knowledge now than there used to be and so there's masses more to learn. Courses are very, very intensive. So people don't have the capacity to do what students used to do, and that sort of freedom

rather than anything else. But students and other sections of College use our services a great deal.

Felix: What sort of challenges do you face in your role? I would think College's expansion over the years would make things harder!

It does make things slightly harder in terms of volume. We try to encompass as much as we can. But within that, we aren't looking back, but are rather looking forward. We need to know what's happening now, and we need to know what is going to happen, in order to make sure we get in contact with the right people to obtain and retain important documents - so our work is very forward

thinking, not so much backward as people might expect.

The electronic expansion has also meant there's masses more to find. Email especially is a challenge for everybody! There is a lot of material in emails, and nobody globally has come up with a solution for keeping and sifting through all that material. Human nature makes it hard – when people use a particular email headline, they don't stick to that topic; the conversation moves onto other matters. If everyone was very disciplined and wrote proper titles or subjects and switched email chains when discussing something else, it'd be much easier to manage for them. I think one of the biggest challenges for the future is

NEWS

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ensuring that early career scientist are aware of the need for them to retain their own digital footprint for career and biographical purposes. If they don't keep material it will be lost. It is important for veracity and their future lives and historically too. That's a message I'd like to get across to people. For records generally, it's important to make decisions about what is to be retained, and for how long. There are many issues to consider in this. The Archives creates and manages a Records Retention Schedule which lists college records and their retention or disposal time periods. This is online.

Felix: You also handle Freedom of Information requests – that's very current, rather than 'looking back' as you say, and has a vital remit in terms of ensuring transparency. How does that play into your role?

I think our FOI system is very good. It is run by Central Secretariat which oversees College governance, of which the Archives is part. We are well placed to find the required information from contacts across College. We all value transparency and accuracy of information, which is of very great importance.

Felix: Who do you work with around the College?

We have a digital preservation system I have brought in, called Archivemata, which has been picked up by quite a few other systems in college – such as the library, tied into their SPIRAL system. Archivemata is an ultimate system – things will be kept forever – and putting it there instead means SPIRAL doesn't get clogged. They don't want to keep every paper

on SPIRAL forever, but they can transfer it after to an iteration of Archivemata, or another similar system.

Felix: Is there any other work you do with the library?

In a few ways – a personal favourite is that every year during Women's Week, I and several colleagues around the College run a women's 'Wikithon', which is editing and correcting Wikipedia pages, in the library computer room. It's a great thing to do and a good skill to have. The Wikimedians and colleagues who join us are great because they give tuition to newcomers.

Felix: Who else do you work with around College?

We work across College and so, at sometime or another, that will be with all academic and administrative departments. We also manage the records, not just archives, which are slightly different. The former is about current records which need to be kept for some period, or for longevity, and so

we look at the records lifecycle: from creation to when it no longer needs to be used currently but forms evidence of College business.

Felix: What are some of your favourite moments – either odd requests you've received or a favourite item in the archives themselves?

One time we had a letter delivered addressed to the "College Alchemist" – if I could turn things into gold, I wouldn't be here!

My favourite archival stuff is based on the 19th century RSM records! For a very long time I've been doing a PhD thesis on a series of lectures called "Lectures to Working Men", which was set up by the RSM in the 1850s – it was the first government-funded higher education institute, so it had to 'give something back'. It did occasional lectures which were open to the public, but it then wanted to do something specific for artisan-class people who were very skilled in their jobs. They had to get permission from

their foreman in order to go just for the evening! And they loved it; it ran for 49 years. The lectures were on everything that was taught at College to matriculated students, at the same level – and they also did a lot of extra ones at British Association meetings and such, which travelled around the country.

It's social history as well as scientific history, as well as professionalisation development of scientific careers, which were very different from now. The series eventually stopped because education changed hugely, and there were a lot of other organisations like the Workers' Educational Association which came in. There were more evening classes and night schools, and more vocational options. It's a shame it didn't make 50 years. There was a real zeitgeist for educational self-help in those days.

Felix: Do you think that's missing now?

Well, there are lots of opportunities, lots of things online – but there is a cost to them, they maybe too expensive for the people

who need them to do. The Open University is still going. More people are encouraged to go to university now, so there's a change in outlook. Apprenticeships, which the government are trying to bring back in a modern form, are really important, because there are a lot of people who actually would benefit more from doing something practical and that's where their expertise lies, rather than trying to shoehorn themselves into a university course.

Felix: You mentioned working on a PhD thesis; are there other projects you've worked on?

I've also written a book about women at Imperial! *Women at Imperial College Past, Present and Future*.

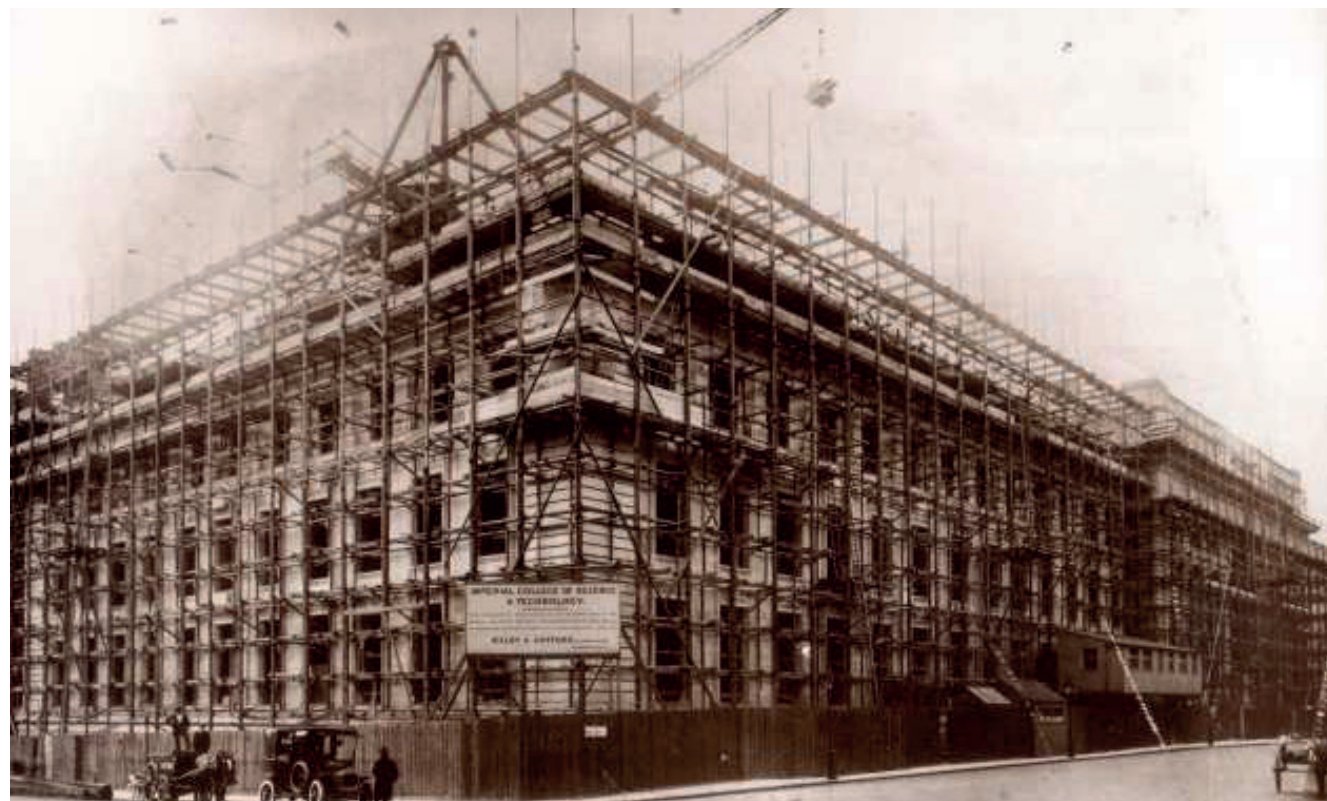
I was asked to do this by a couple of the senior women in the College some time ago – Dot Griffiths OBE in the Business School and Dame Julia Higgins in Chemical Engineering – and it sort of just grew. They asked me at a time when

it would only have been a monograph, but with the increasing number of women it just took off.

My premise was that there have always been women here, even if sometimes they might have been ignored – though often, to be fair, they weren't. Even in early days at the Royal College of Chemistry, (1845) the German chemist Hoffman brought his wife and his sister who were doing assaying on metals and testing their compositions. T.H. Huxley took his wife sea-dredging on their honeymoon!

There's a good saying which is that "no scientist works in a vacuum", as we said earlier! Their lives and family lives are really important. If I'm collecting papers, I don't want published papers, I want the manuscript papers – I want to know what they were doing.

Relatedly, I run the Centre for Scientific Archives, which is a charitable cataloguing organisation, which at the moment has a project to digitise their past catalogues – at the moment they're just flat paper which is hopeless to search, so we're making it cross-searchable and adding things like blockchain elements for verification of ideas and discoveries. You can find out a lot more about people and their interactions and ideas this way, find out if two different people had correspondence if it wasn't known before, for example. And this is a cultural blockchain, not financial, so it's not huge in computing power. Again, the role always requires me to be looking forward and learning new things.

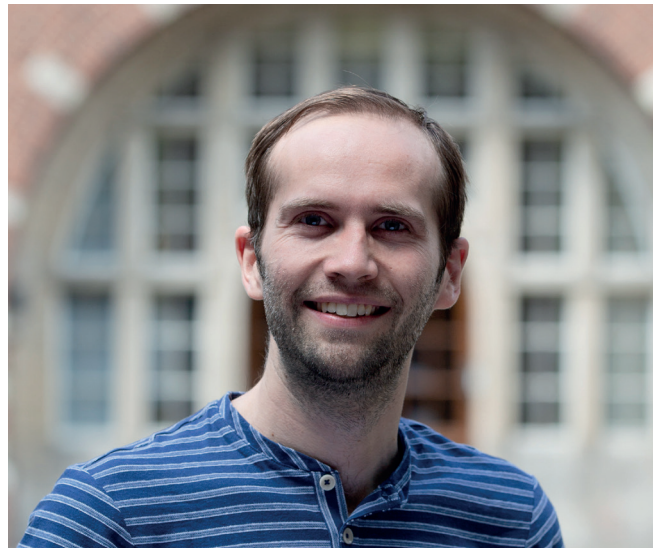


The original Imperial College building // Imperial College London Archives

A CONVERSATION WITH...

felix@imperial.ac.uk

This week, Felix sat down with the Deputy President (Education), Ashley Brookes, to catch up about NSS and PRES recommendations, rep training feedback, and his trip to Singapore!



Ashley Brookes, the Deputy President (Education) //ICU

Felix: Last time, we spoke about progress with analysing and bringing the results of the NSS and the PRES to the College and the working groups would be set up for those. What's the progress?

AB: For the NSS, we had a working group. It was interesting because there was a lot of agreement amongst some of the different departments on the recommendations we provided, and it was something that they had raised as their own issue as well - so it was good to see that was a synergy between our recommendations and some of the action plans that they had been thinking of.

Felix: What types of things were shared?

AB: Things like exam solutions being more accessible and available to students, and providing more funding for student-staff community initiatives were two. Providing more precise feedback and guidance on assessment for major projects, as well - sometimes they are so loosely defined that students don't really know so what the marking criteria is.

We have had one meeting, and the next meeting is scheduled for February - so it's a case of trying to do as much as possible around the recommendations between now and then. I and the reps have created a spreadsheet of all the recommendations across the different departments so that we can actually track from the student perspective what is happening with the recommendations over the term and over the year - I think that's very valuable.

I've also been liaising with Rachel Witton, Executive Officer in the College Education Office, about how to do that - apply a bit more pressure to get things done.

Felix: How is implementation of PRES recommendations going?

AB: The PRES working group has been a bit slower on organising the first meeting. We have been applying a bit of pressure from myself and the Graduate Student Union to get the first meeting up and running before Christmas. There has also been a slightly different but related working group

created, looking at post-graduate regulations, and we'll be meeting at the end of this week for the first time. The undergraduate curriculum went through a complete review of regulations before major modifications, and now there is a similar thing occurring for postgraduate study. Historically there has been a bit of a disparity across departments, so they're trying to bring it all together as one set of documents of policy and regulations.

Felix: So 'regulations' refers to policy and the official guidance on how assessment is carried out, and so on?

AB: Yes - in particular, for example, we will be looking to ensure parity in the experience of post-graduates going through the early stage assessment and late stage review.

Felix: Last time, we spoke about quality assurance for post-graduates, and how regulations exist but they aren't always followed or tracked. Is that something else you'd be wanting to look into with the Postgraduate Research Quality Committee?

AB: That is essentially the idea behind all of this - there is no general oversight. The fact that it will be centralised - that there will be one set of regulations - will make it a lot easier to make sure that supervisors are adhering to policy in a more structured way.

Felix: Regarding the recent rep training, how did that go?

AB: I would say we

captured a good 80% of people - there are always some people not available on the day. I think having some targeted groups, where we targeted 20 students at time, generally worked quite well. The training was generally very well received - we did a survey at the before and after each session and we got really good positive feedback with reps feeling more confident in their ability to do tasks they need to. The sessions have been delivered by myself Shervin, Abhijay, and also by other people in the rep team who have helped when necessary such as Lucy and Gabi and Christy - so overall I think it's been a strong team effort.

Felix: In our last interview, you had some very strong words about how there has been some failure in rolling out rep training this year - with it being very late for certain roles. Based on the training that you have just done and some of the feedback you had from that, as well as thinking about how things can be improved for next year, what are your findings and what are your recommendations for how rep training should be improved next year?

AB: We definitely want to bring the CU rep training earlier in the year - finding the right time is not always easy but we feel that should be done before the summer, since all the CU Presidents are already enrolled by that point. Training of the other reps has generally been good - it has been in time before the departmental Student-Staff Committees, which is one of the critical times you want people to be up to speed. I don't think it is possible to really bring that any

earlier because it happens as soon as possible after Autumn elections.

Felix: You mentioned in your recent Union Council report a video, that was made to improve SOLE feedback - what does that mean?

AB: I think SOLE has had a bit of a bad press from students and probably from staff as well. It doesn't necessarily always capture views or problems in the right way, and there is work being done in the college to try and revamp that and renew SOLE in the future. However, in the meantime, we need to work with what we have. So we are going to put out a video to help students fill in the survey, to help give as much constructive criticism as they can - to give specific actionable points to lecturers, for example. That will be released when SOLE goes live.

Felix: You recently went on a work trip to Singapore. What was that about?

AB: That was an interesting process to be a part of. There is a joint exchange program between the medical school at Imperial College and a medical school at NTU Singapore. Imperial College was heavily involved in creating the curriculum and content for that course. It reached the point where they needed to do a periodic review, to assess whether it was a partnership and collaboration that was working. So they brought in several representatives on the panel from both Singapore and Imperial, which included a student representative from each university - and I was the

Imperial one.

Felix: What did you find?

AB: Their approach to learning is very interesting - it's mainly based on team-based learning. They read some proprietary material before coming to the class, and it's very much not lecture-based. They have teams of 6 to 8 people, and they discuss questions and have to answer as a group, coming to some kind of consensus. Their answers are then discussed as a class. They have a content expert as opposed to a lecturer, who will then facilitate that and provide some insights in areas of ambiguity.

It's been very well received by students and I think it's really helped to build that sense of community - and helped students to be slightly less competitive all of the time.

Felix: Do you think that there is a problem of competitiveness among students at Imperial, with how they they approach their learning?


AB: I think there can be. But the culture around that is slowly changing, and with the new curriculum that is being rolled out now there is much more active learning. It's currently approaching the end of the first term of the new curriculum, so I'm looking to speak with a number of reps - particularly the first year reps - to try and get a feel for how things have been going.

POLITICS

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General Election Bingo!

Tories mention getting Brexit done	Footage of party leaders leaving houses and getting into cars	Lib Dems mention revoking Article 50	“North London metropolitan elite”	Dishevelled Conservative minister stood next to children’s cartoon character
Party leader loses seat	Socialism vs capitalism	Old lady says she doesn’t care about the vote anymore	Lord Bucket-head/Count Binface	Tory voter being interviewed in a gastropub
Labour’s Red Wall	“The pollsters got it wrong”		Green Party mentions Climate Emergency	“Coalition of chaos”
Jeremy Vine and the Swingometer	Brexit Party talks about the 17 million people	Jeremy Corbyn is called a Stalinist	UKIP wins more than 10 votes nationwide	Politicians holding pints
Video footage of Corbyn on a West Midlands train	Russian hacking	Labour mentions selling the NHS	“Portillo moment”	“The people have spoken”

First one to reach 5 squares in a row gets to sell off the NHS



POLITICS

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Felix's 2019 GENERAL ELECTION POLL

With a general election in full swing, Felix has been polling students at Imperial College to gain some insight into their voting intentions and opinions on a People's Vote (a second referendum Brexit).

This anonymous survey, which was open to all irrespective of voting eligibility, also asked for gender, age and faculty. This data was then used to determine whether certain stereotypes applied to Imperial, how voting preference differed across faculty, how Brexit cuts across party alliance.

Created by Isabelle Zhang and Eamon Akil Farhat

220 PARTICIPANTS

23% FEMALE; 77% MALE

MEAN AGE OF 20.9

41.1% SCIENTISTS

46.9% ENGINEERS

12.0% MEDICS

Diagrams made on flourish.studio

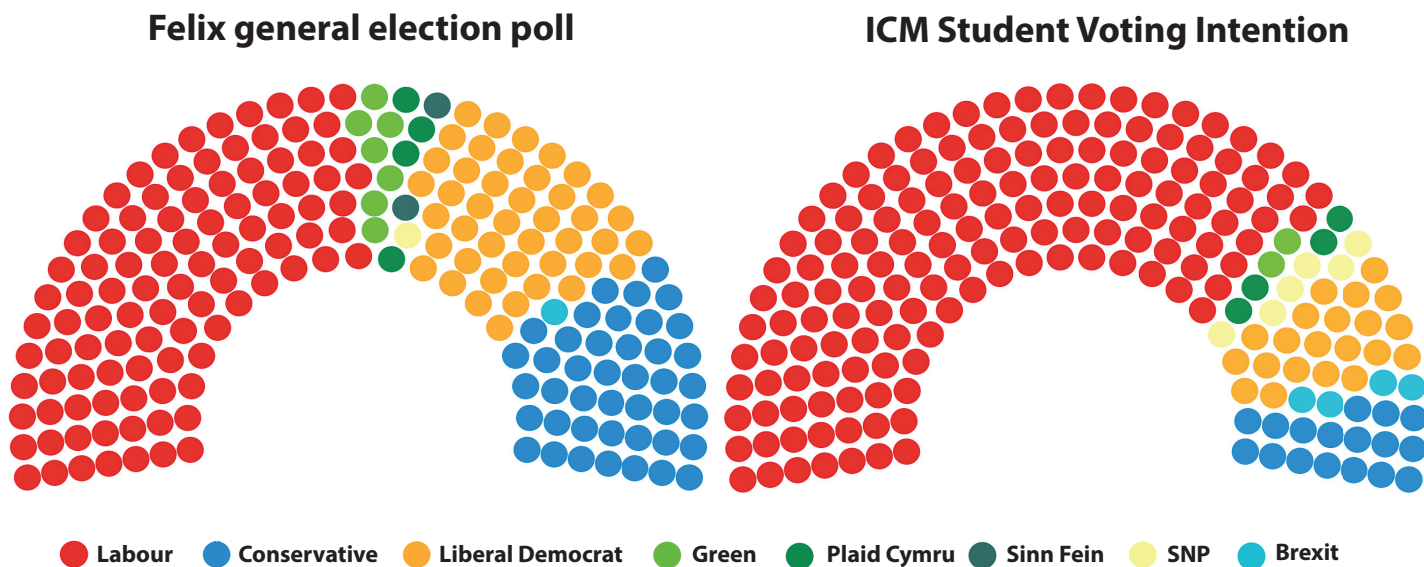
Imperial vs. National Student Voting Intention

LABOUR: 50% vs. 72%
CONSERVATIVE: 21% vs. 8%
LIB DEM: 21% vs. 10%

This chart represents each respondent to our survey as a seat in a mock parliament.

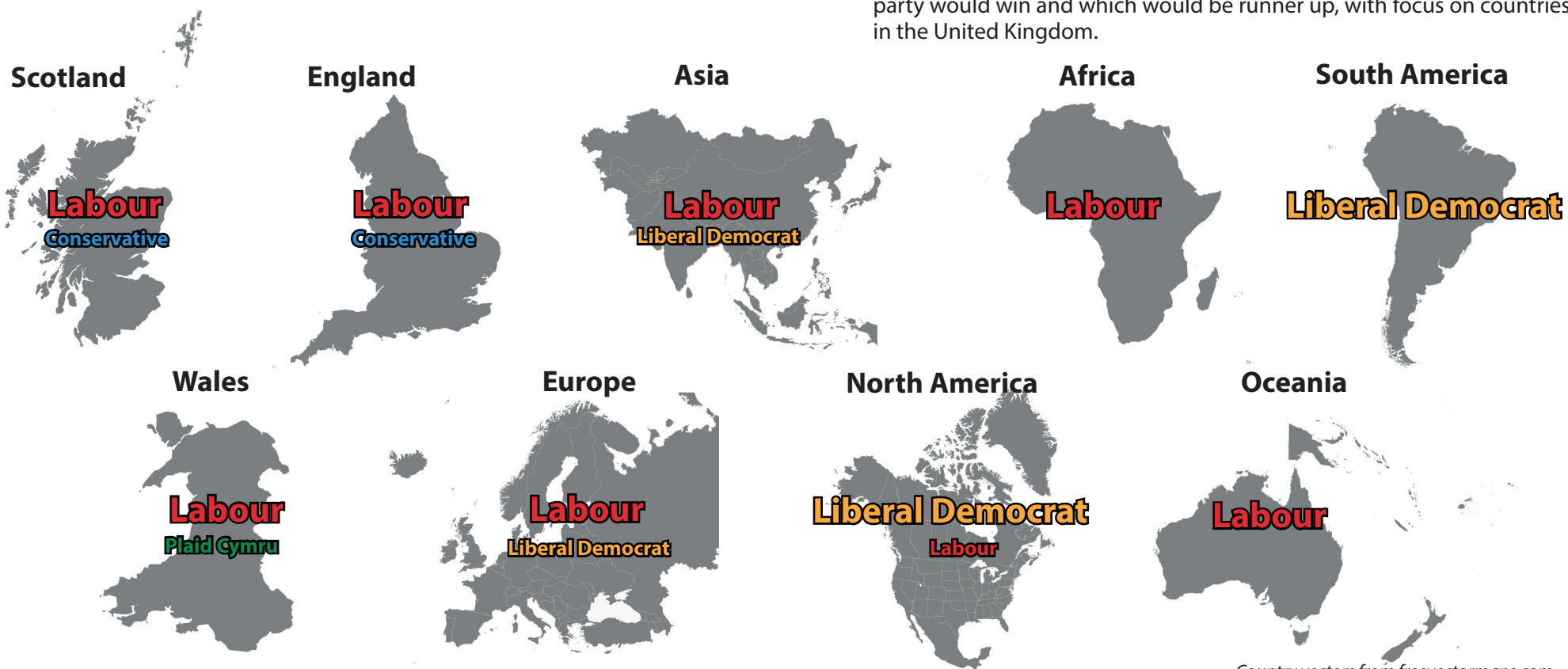
We then scaled the latest national student poll from Dec 2 (published by ICM) onto a second mock parliament with the same number of seats.

We even did a Chi-squared test to see if the Red&Blue are statistically different - and yes, yes they are (x-value: 9.29; p-value: 0.0023)



The international student body weighs in

Lots of students at our university can't vote but we still included them in our survey. To show the geographical variation in voting intention we represented each region surveyed as a constituency showing which party would win and which would be runner up, with focus on countries in the United Kingdom.

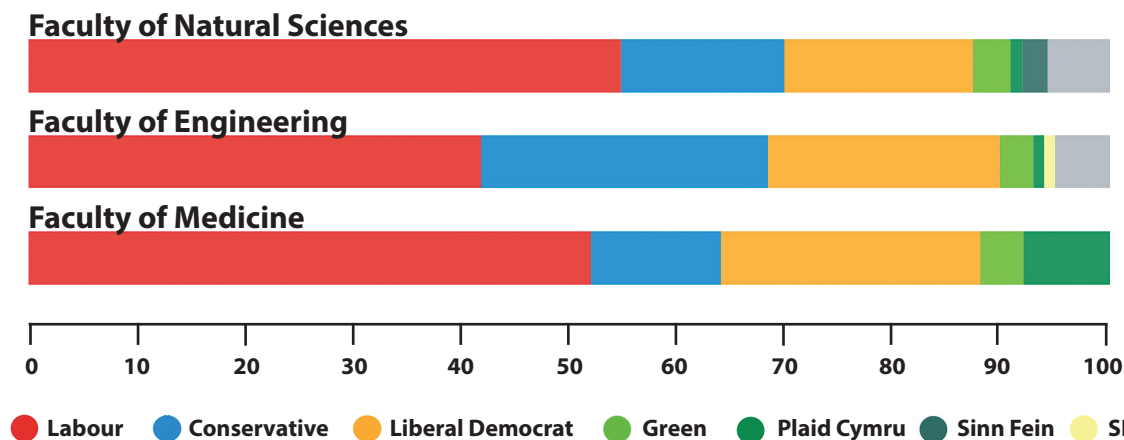


Country vectors from freevectormaps.com

POLITICS

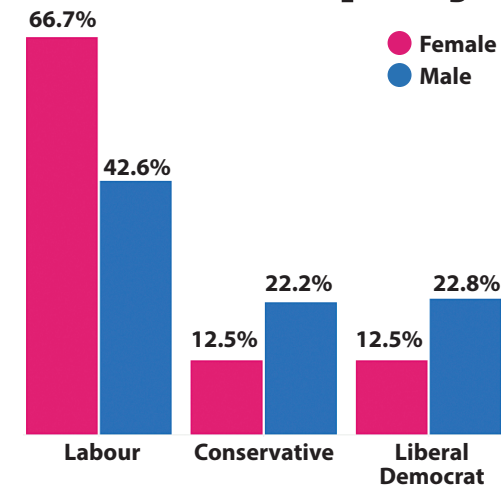
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How does each Faculty vote?



Some of the variations in voting intention could be attributed to wide variations in the gender balances across different faculties at Imperial. However, when comparing Engineering and Sciences, both had around 76%-79% male respondents and yet the Sciences still seemed more liberal.

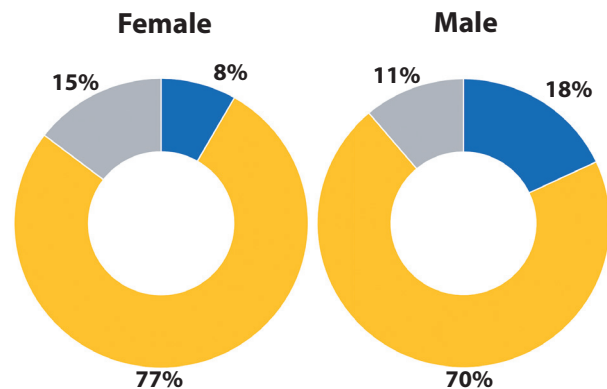
Gender and party



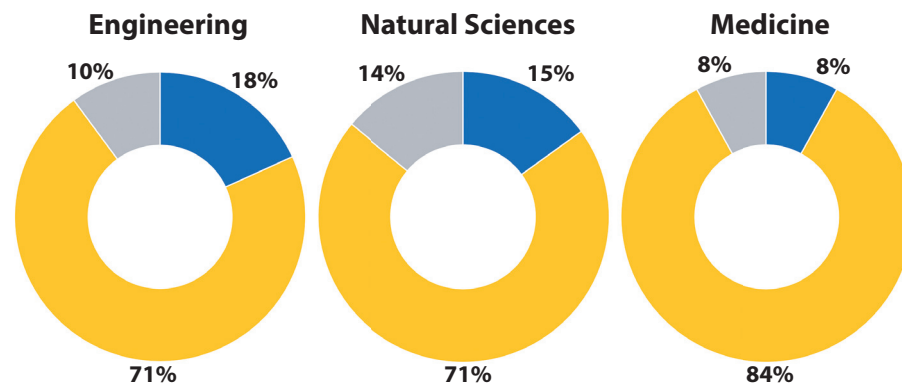
PEOPLE'S VOTE AND BREXIT

70.8% support a People's Vote **19.2%** don't **10%** are undecided

By gender



By faculty

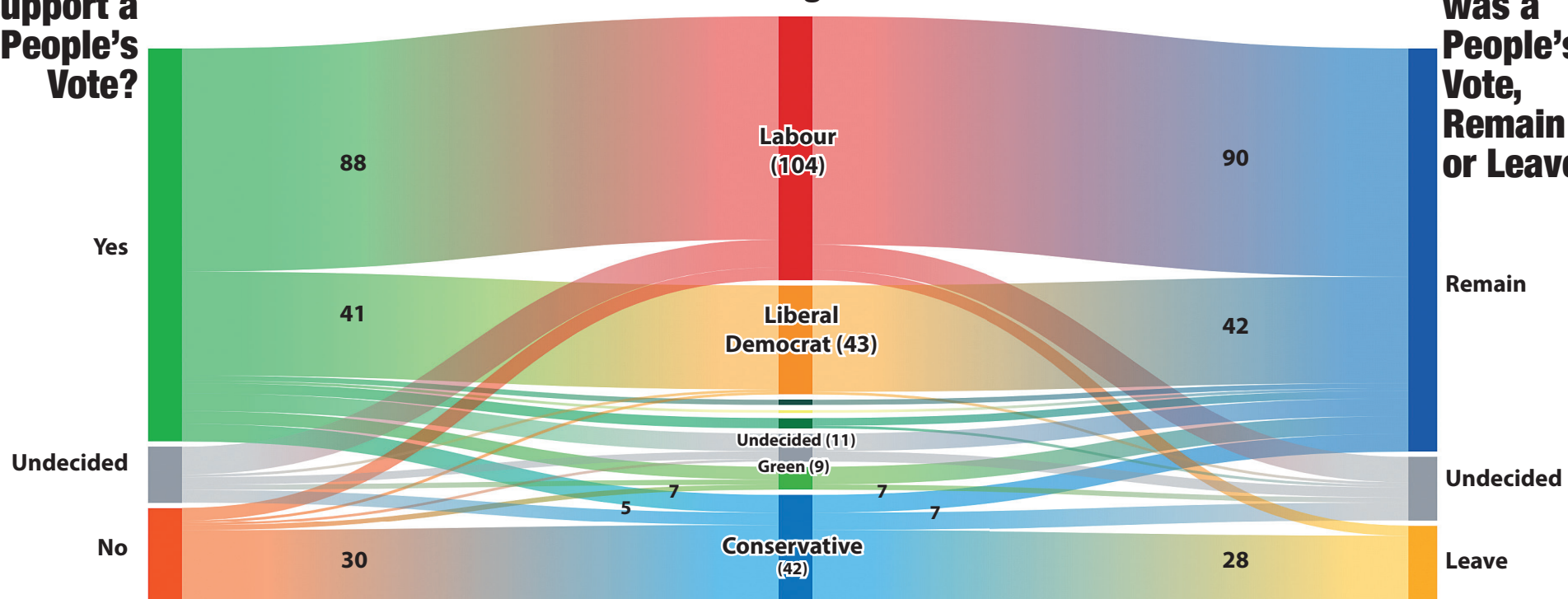


OVERALL:
73% REMAIN
20% LEAVE
11% UNDECIDED

Would you support a People's Vote?

2019 voting intention

If there was a People's Vote, Remain or Leave?



POLITICS

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“If you dare to struggle, you dare to win..”

This week marks the 50th anniversary of the assassination of Fred Hampton. Union President Abhijay Sood reflects on Hampton's influence as a young radical and lessons we can learn from him today.

POLITICS

Abhijay Sood
Union President

Before dawn on December 4th, 1969, Fred Hampton was murdered in his bed. He was killed in a police raid with the assent of local law enforcement, the state government's prosecutor's office, and the FBI. He was 21 years old.

Hampton was a member of the Black Panther Party. Established in 1966, the Black Panthers were founded as a reaction against racist police brutality, with the core practice of “copwatching”, where they formed an armed citizens patrol to protect each other from the police and monitor police action.

“His organizational role in Black Panther, and his skills as an orator, made him a threat to entrenched power”

They cited the law as a defence when challenged, eventually precipitating strict gun control laws, including in California where the legislation passed was supported by then governor Ronald Reagan. The Black Panthers also organised support for black citizens

at a time when the government was doing little to economically empower black communities, with social programs including free breakfasts for poor children, after-school programs, and community health clinics.

Hampton joined the Panthers in Chicago in late 1968. He was instrumental in significantly expanding the party's membership; he organised weekly rallies, taught regular political education classes, and contributed much to copwatching and free breakfast programs. Perhaps most significantly, he brought Chicago street gangs together to form a non-aggression pact, emphasising that class solidarity would be the key to lift people from poverty, whereas racial divisions would only maintain them. He eventually became the chairman of the Illinois chapter and deputy chairman of the entire Party.

This organising, and his skills as an orator, made Hampton a threat to entrenched power; J. Edgar Hoover, 1st director of the FBI and inveterate racist, regarded him as an enemy agitator, and had him surveilled. At the same time, the FBI fomented mistrust among disparate members of Hampton's “rainbow coalition” (the multicultural political group), sparking violence and fracturing among the different groups he'd brought together. Eventually, they blackmailed a convicted criminal, William O'Neal, into infiltrating the Chicago Panthers, who supplied them with the intelligence in advance of the fatal raid.

Hampton was drugged

by O'Neal on the evening of December 3rd, and was thus unable to react when law enforcement stormed the building he was in, murdered one of his associates, wounded him and then shot him twice more for good measure. His partner, heavily pregnant, had been sleeping next to him and was forcibly removed from the room before his death.

I wanted to write about

“Emphasising that class solidarity would be the key to lift people from poverty, whereas racial divisions would only maintain them”

this story for two reasons. First, I think it's important that we understand that no matter where in the world you might be, people with power are capable of abusing it, and that the government and law enforcement don't necessarily have your best interests at heart.

Second, I think there's something we can draw from Hampton's story, and the positive albeit short-lived impact he was able to have in his community. To me, it's amazing a 21-year old could become a focal point for organising significant enough

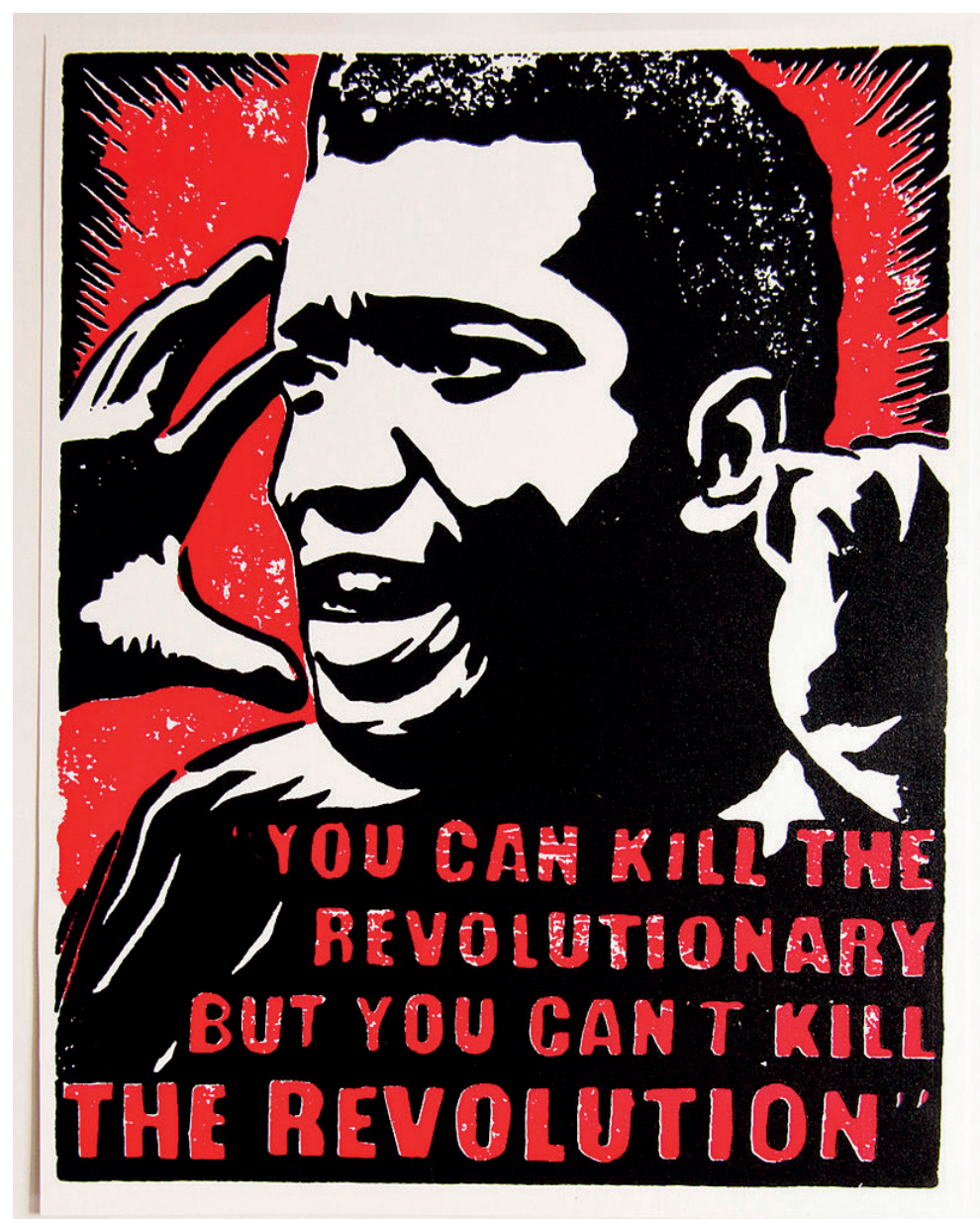
change that huge government agencies determined he was a threat worthy of elimination. Through tenacity and strength of will, Hampton changed the equation of black liberation and social change in Chicago. In doing so, he made enemies, just as Martin Luther King, Thomas Sankara, Mahatma Gandhi and so many others did. Change threatens people in power. And though the reaction against the Panthers eventually led to their disintegration in the 70s, their efforts resulted in black

Americans gaining a lot of ground on civil rights, and shined a spotlight on various social issues that had been hitherto ignored. While the personalities of individual leaders do provide focal points for movements, the strength of these movements is really in numbers.

In my mind, the most significant lesson we can learn from Hampton's story is that, if they could achieve so much in the face of poverty and persecution, we should be able to do even more from our position of relative privi-

lege. The injustices and issues we face now are no less pressing than they were then – economic injustice, climate injustice, racial injustice. If they could act then, we have no excuse to fail to act now.

In Hampton's words: “if you dare to struggle you dare to win, if you dare not struggle, then damn it, you don't deserve to win.”



Fred Hampton // Jacob Anikulapo, Flickr

POLITICS

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The Rise and Fall of Jo Swinson's Liberal Democrats

Following success in the EU elections and a pro-remain Brexit stance, why does support for the Liberal Democrats seem to be dwindling?

POLITICS

Lloyd James

Politics Writer

Six months ago, British politics seemed poised for upheaval. The Liberal Democrats, standing on an unambiguously pro-remain platform, secured a higher vote share than both Labour and the Conservatives in the EU elections. The overall victory however, had gone to the equally unambiguous Brexit Party. One YouGov poll showed voting intention in almost a 4-way split between these parties. The received wisdom at the time claimed that the EU Question had irrevocably changed the face of our political discourse – and yet now, as we barrel towards a General Election, a kind of familiarity is returning. Hard-Brexiteers have fallen in line behind Boris Johnson, and so the Brexit Party vote share has unsurprisingly collapsed. But what happened to the Liberal Democrats, who also seem to be in freefall? Why are voters fleeing them in droves when, at least by their own estimation, there is no alternative Remain party?

The most essential weakness of the Lib Dems is their leader - Jo Swinson. Polling has shown that remarkably, the more voters see of her, the more they dislike her – even among Remain voters – with her approval dropping significantly after each major debate and television appearance. This would be incredibly damaging for the leader of any party, but particularly for one that has made its

leader a central feature of their branding. The party frequently refers to itself as 'Jo Swinson's Liberal Democrats', and its manifesto as 'Jo Swinson's Plan for Britain's Future'. One of their recent rallies even featured a 'Swinzone selfie zone.' Every election from 1992 to 2015 saw the Lib Dem's vote share increase over the campaign. This trend was bucked in 2017, under the leadership of the useless (and quietly homophobic) Tim Farron, and so it seems to be again, as

“The most essential weakness of the Lib Dems is their leader - Jo Swinson”

Jo Swinson withers under the light of scrutiny. The Lib Dem brand, built atop Swinson's personal popularity, appears now to be sinking like a house built on sand.

The Lib Dems have also faced challenges not of their own creation – victims of several widely shared 'fake news' stories. The mostly prolific of these was a fake Mirror story (by a 'Wurrence Telephone') which claimed that a video had emerged of Swinson firing stones at squirrels (or 'pleb bunnies', as she was alleged to have referred to them). Swinson has since publicly denied that she enjoys killing woodland creatures for fun. A more recent fake story emerged

in the form of tweets by a 'Max Gapes' which claimed that Swinson was considering resigning before the election, and that senior Lib Dem figures had already attempted to discuss a coalition agreement with the Conservatives. These tweets, painting a picture of a party in total disarray, were shared by senior Labour Party figures, but then promptly debunked.

For a party victimised by, and so strongly opposed to, fake news, the Lib Dems have come under heavy criticism for circulating fake information of their own. The widely derided 'Lib Dem bar charts', a recurring tactic of misrepresenting polling or historic election data to exaggerate their own electoral chances, have been out in full force

this cycle. The party's head of media was also suspended over allegations that she fabricated an email in attempts to discredit a negative news story. Many voters flocked to the Lib Dems after being frustrated and disaffected by the Leave campaign's deployment of misinformation, so the party's own failings in this area will have contributed to pushing away these voters.

The Liberal Democrats' failure to retain a loyal base of Remain voters can also be explained, counterintuitively, by their extreme Brexit policy of revoking Article 50 (i.e. cancelling Brexit without any additional referendum). Jo Swinson has struggled to justify this policy on multiple TV debates, with many

Remain voters criticising this policy as too extreme, undemocratic, and too alienating of Leave voters to have any chance of success. It does not help that the party's main defence of this policy has been that they would only enact it if they won a majority (implicit in this statement – that it is rather unlikely). So why even bother voting for them? The party which long championed the 'People's Vote' seems to have shot itself in the foot by abandoning it.

With polling day imminent, only time will tell whether the Lib Dems will be able to recapture some of the support they formerly enjoyed. The party hopes to be the kingmakers of a hung parliament, but to reach this position they will need

more than the humble 13 seats predicted by the YouGov MRP model. And if they do, will they break their promise not to put Jeremy Corbyn in Number 10? Or will they once again back the Conservatives (perhaps in exchange for a referendum on Boris' Hard Brexit)? And will Jo Swinson be able to hang onto her East Dunbartonshire seat, which the SNP are striving to retake? Only one thing is certain – the once expected Lib Dem 'surge' has emerged as little more than a trickle.



Jo Swinson following her election as leader of the Liberal Democrats // Flickr

POLITICS

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A Decade of UK Politics

In this article, Ansh goes through a condensed history of the past 10 years of UK politics. With a General Election imminent, it is time to strap in for a ride through recent history to see how we arrived to the politics of today.

POLITICS

Ansh Bhatnagar

Politics Writer

As the clock ticked midnight on 1st January 2010, the nation celebrated the completion of an entire decade into the new millennium. At the time, 10 Downing Street was occupied by Gordon Brown, the Prime Minister who took the country through the global financial crash of 2008. Brown had been part of ‘New Labour’ governments since 1997, first as Chancellor of the Exchequer and then taking over as Prime Minister after Tony Blair. ‘New Labour’, of course, had been Blair’s political rebranding of the Labour Party in an effort to move it away from its left wing past and place it firmly into the centre-ground of British politics, with even Margaret Thatcher having said that her greatest achievement was “Tony Blair and New Labour. We forced our opponents to change their minds.” In the wake of the global financial crash and the failure that was the Iraq War, the new Conservative Party leader David Cameron successfully created a narrative that the state was like a household budget – and that the deficit and debt of New Labour due to the bailing out of the banks had to be eliminated. With the Liberal Democrats also having a new leader in Nick Clegg, the stage was set for a General Election.

Scottish Independence Referendum 2014

After the Scottish National Party stood on a manifesto for a referendum on Scottish independence and won an overwhelming victory at the Scottish Parliament elections, and with continued pressure on the Coalition government from the party, the Coalition agreed to legislate for an independence referendum and worked with the Scottish government to arrange it for the Autumn of 2014.

Both the Tories and Labour teamed up to make the case for the union, promising further devolved powers if the

people of Scotland voted to stay in the union. Ultimately, independence was rejected and further devolved powers were delivered later on. The Scottish First Minister and SNP leader Alex

Salmond resigned in light of the defeat, with Nicola Sturgeon becoming the new SNP leader and First Minister. The Referendum was touted as a once in a generation vote – an attitude that would change because of a different referendum a couple years down the line...



Ed Miliband 2015 // Wikimedia

With the Coalition government having overseen years of devastating cuts to public services and with Liberal Democrat popularity at an all time low, the 2015 General Election saw Labour leader Ed Miliband concede too much to the political centre – with an example being the infamous release of mugs that had “controls on immigration” written on them. In the Coalition, the Lib Dems had reneged on their promise to students of not increasing tuition fees – instead tripling them to

£9k a year. Emblematic of Labour’s response to the Coalition, their manifesto only proposed cutting fees to £6k – still double that of the fees in 2010.

With a combination of this, and a hostile press characterising him as a weak leader, it is no surprise Miliband lost the election, even surprising pundits and pollsters expecting another hung parliament but instead Cameron had won a majority after having promised a referendum on the UK’s membership of the EU during the election

government.

Gordon Brown resigned from the leadership, triggering a Labour leadership contest. The key figures emerging were two brothers: Ed and David Miliband, the sons of Marxist academic Ralph Miliband. The Labour left offered Dianne Abbott, the first black woman MP to be elected to Parliament, for the leadership, however this campaign was carried out with little support. With Ed being seen as the more left wing candidate, and his

brother being seen very much as a continuation of New Labour politics, the membership decided it was time for a change away from New Labour and elected Ed.

The AV referendum took place a year after, and with the Lib Dems being the only major party to support AV, the campaign for AV was resoundingly rejected at the ballot box with 68% voting against its introduction.



General election 2010

The Conservatives had been leading in the polls consistently since October 2007, with by-election and EU results to show for it. The results: a hung parliament with the Tories the largest party and the Liberal Democrats with enough MPs to be the kingmakers, and after days of talks and a concession from the Tories to hold a referendum on getting rid of the First Past The Post voting system in favour of the Alternative Vote (AV), the two parties emerged as a coalition

General election 2015

campaign. This decision meant he could appease Eurosceptic voters who otherwise would’ve voted for Nigel Farage’s UK Independence Party (UKIP) and split the Tory vote in many areas, delivering seats to the opposition. The decision was taken under the impression that Cameron’s favoured side, Remain, would easily win the referendum. As we are all aware, this impression proved to be fatally incorrect.

Miliband resigned the leadership, triggering a fresh Labour leadership

election. With centrist/centre-left establishment figures like Andy Burnham, Yvette Cooper, and Liz Kendall in the race, backbencher Jeremy Corbyn put his hat in the ring as the candidate for the Labour left. Seen widely by pundits as an outsider with little chance of winning, Corbyn won by a landslide on a platform of firmly rejecting the austerity agenda and bringing the party back to its left wing roots.

POLITICS

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Brexit // Pixabay

EU Referendum 2016

An entire article could be written on this fateful referendum alone. The Leave campaign was based on lies and anti-migrant rhetoric, and the Remain campaign was based on fearmongering and an overcrowding of untrusted establishment politicians. Remaining in the EU, as backed by Cameron's government, was rejected by an infamously slim margin of 52-48, as a rejection of the establishment and

a demand for change. Cameron, embarrassed, was forced to step down after 6 years as Prime Minister, triggering a Conservative leadership contest which was ultimately won by Theresa May – a Remain-voter promising to get Brexit done. Meanwhile, a second Labour leadership contest was triggered by rebels in the Parliamentary Labour Party (PLP), a contest that was won by

Corbyn. Parliament triggered Article 50 on 29 March 2017, starting the two year withdrawal process.

Realising that the Cameron majority may not be enough to get a controversial Brexit deal through Parliament, and with Jeremy Corbyn's Labour polling disastrously compared to her party, May called an early General Election, hoping to crush the opposition and gain a great majority.

General Election 2019

With both Labour and the Tories hopeful to win a majority, with Nigel Farage's new Brexit Party in the mix, and with the Liberal Democrats moving to a 'Cancel Brexit' position, it is unclear how this election will play out. For many, tactical voting or Leave majority will dictate how they vote. For others, the National Health Service and the threat posed to it by US trade deals is their main concern. Can Jeremy Corbyn end 9.5 years of Tory austerity with a Labour

majority government transforming the UK and giving voters the final say on Brexit? Will Johnson secure a Tory majority and get his withdrawal agreement through Parliament? Or will we enter another hung parliament, with the SNP or the Lib Dems as the kingmakers? All shall be revealed in 4 days time – and it all depends on how we vote. Make sure you go to the polls this Thursday and have your say in the most important election since 1979.



Boris Johnson // Flickr

General Election 2017

Despite the pundits expecting Labour to receive their worst ever election results for almost a century, Corbyn and his party campaigned on a progressive manifesto promising the abolition of tuition fees and putting public ownership back onto the agenda. May's popularity fell, along with the Tories' manifesto launch offering next to nothing for the ordinary working family. Young voters were inspired by Corbyn and his policies to come out in record numbers, and when the Exit Poll came out at 10pm on 8th June, it shocked the nation.

Corbyn had won many seats and forced a hung Parliament, with the electorate firmly rejecting May's call. Forced to enter into a confidence-and-supply deal with the Democratic Unionist Party (DUP), the Tories went into minority government.

With a widely unpopular Brexit deal negotiated by 2019, it was time to take the deal to Parliament for approval. Parliament, with Corbyn as Leader of the Opposition, rejected it multiple times in historic defeats on a scale never before seen for a governing

party, and delayed Brexit to October 31st to avoid a no deal exit. Unable to deliver Brexit, May stepped down in June and triggered another Conservative leadership contest, this time won by Boris Johnson, former Mayor of London and former Foreign Minister, promising to get Brexit done by October 31st no matter the cost – even with no deal in place.

With a new Brexit deal negotiated by Prime Minister Johnson, labelled as 'May's deal but even worse', he failed to get it through Parliament and Parliament forced

Johnson to delay Brexit even further in order to avoid no deal, with a new leaving date of January 31st – meaning that Johnson failed to deliver his flagship promise.

With the Labour Party agitating for an early General Election to save our public services and deal with Brexit once and for all, and with no way forward for his deal in this Parliament, Johnson decided to back an early election: for December 12th, 2019 – this Thursday.



Theresa May 2017 // Wikimedia

POLITICS

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The End of a Decade: Spain

POLITICS

Julio Perez

Politics Writer

The last decade has been a period of historical changes in Spain that have transformed its political culture and society forever. This historical phase is parallel to the European economic crisis and its aftermath, which were particularly intense in Southern European countries like Spain. Arguably, most of the last decade's events were ultimately motivated by this unstable setting.

2010 was the last year of PSOE's (social democratic party) government after the 2008 crisis. The party's denial of the



The Spanish flag// Wikimedia

crisis left the country unprepared and resulted in historic unemployment numbers and the introduction of austerity measures. This situation resulted in millions of civilians spontaneously taking over main squares around the whole country in the form of protests, in what

is called today 15-M. For many historians it marked the end of the old democratic era of Spain.

Months later, general elections were held and PP (right-wing party) won. During this legislature emeritus King Juan Carlos I abdicated in his son Felipe VI, after a cor-

ruption case involving the royal family. Under these political circumstances two new parties entered the scene: Ciudadanos (centre) and Podemos (left, born out of 15-M). The 2015 elections constituted the end of the bipartisan parliament, but after not being able to form a governing majority, elections were held again in 2016 and PP managed to stay in power.

“Most of the last decade's events were ultimately motivated by this unstable setting”

Meanwhile, the independence movement in Catalonia (North-Eastern area of Spain), a phenomenon that has centuries of history, had been strengthening and separatist parties had formed a majority in the Catalanian parliament. In 2017, Catalonia's government held an illegal independence referendum and declared the formation of the Republic of Catalonia. The Spanish central government intervened with armed forces and separatist political leaders fled the country after being sentenced to prison for rebellion and have not come back since.

In 2018, a no confidence vote against PP was put forward due to the many corruption cases uncovered during their legislature. After a year of provisional government,

elections were held giving a majority to PSOE, but their inability to reach an agreement with Unidas Podemos led to another set of elections in November. PSOE won again and have agreed to form a coalition with Unidas Podemos after the threat of the rise of VOX (alt-right party).

This last decade of Spanish politics witnessed the end of the old political system, exposed the fragility of the social structure and demonstrated the necessity of addressing Catalonia's separatism. We begin this new decade with the possibility of a left government, a chance for change and a future of democratic prosperity.

The End of a Decade: Italy

POLITICS

Luca Rameli

Politics Writer

The past decade has witnessed a proper political earthquake in Italian politics: what once was is no more. The political framework that has been in place since the nineties has fallen – the abrupt political changes that have occurred are similar to the previous largescale reshaping of the political system. Indeed, three decades ago, the dissolution of the two main parties, the Italian Communist Party (PCI) and the Christian Democracy (DC) was regarded as the end of the First Republic, which was formed after WWII.



The Italian flag// Wikimedia

Nowadays, the recent change in the political system is said to be the fall of the Second Italian Republic, and the birth of the Third one.

Let us review this step-by-step: at the beginning of the decade, Italy was still recovering from the dire economic situation caused by the 2008 financial crisis. Under these

circumstances, the President of the Republic asked PM Silvio Berlusconi to resign and asked for the formation of a national unity government, a coalition containing almost all parties, so that the economic crisis could be faced as a cohesive government body rather than a fractured one. In 2011 economist Mario

Monti was chosen to take Silvio Berlusconi's place. His government helped restore creditors' trust in Italy, but his application of austerity measures following EU directives plus the sluggish reprise of the country's growth made him a polarising figure, with people either supporting his austerity policies or deeply condemning them. This resulted in a hung Parliament following the 2013 elections. Ultimately, centre-left Democratic Party (PD) formed a government with a group of dissident MPs who had left Berlusconi's centre-right party.

The most characteristic figure in this period has certainly been PD's young Secretary Matteo Renzi, who initially had vast popularity, but later

lost much of his approval after the result of a Constitutional Referendum proposed by his party. This referendum, which was focused on possibly reforming the legislative branch, took place in 2016 and was a striking defeat for Renzi. In 2018, new elections saw instead the impressive success of two populist parties, the Five Star Movement and the League. The latter is led by Matteo Salvini, who managed to shift many moderate voters of Berlusconi to the more right-wing views of his own party. Both Salvini and the Five Star Movement profited off of Italians' distrust of institutions, which stems from prolonged economic stagnation, with Italy trailing other European and G7 countries in growth (last

year just 0.9% of GDP). These two parties originally wanted to form a coalition, but internal tensions and Salvini's desire for new elections, given his party's roaring numbers in recent polls, collapsed the coalition. This paved the way for the current government formed between PD and the Five Star Movement itself.

Whilst uncertainty and volatile coalitions have been a constant in Italian politics, a further change may therefore soon await us: the new majority seems indeed to be as tense and unstable as its predecessors, and the eventuality of elections seems therefore to be more plausible from day to day.

COMMENT

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Your Union is Standing Firm

Union President Abhijay Sood reassures students that the Union is continuing to work hard to represent you despite the recent staffing and kitchen issues

COMMENT

Abhijay Sood
Union President

There's no doubt that this has been a tricky term for the Union. Our most senior member of staff is stepping down, the kitchens are closed, and student officers, in particular the deputy presidents, have had to work overtime to compensate for understaffing in the office.

Despite this, the Union is standing firm. We're triaging our issues, so we know what needs to be addressed immediately and what we can take time over. We're recruiting new staff across all our direc-

torates, with at least one student officer on every interview panel. Through all this, we're maintaining our commitment to representing the interests of students to improve our collective experience at Imperial. On h-bar, space on campus, UG and PG student satisfaction, halls rent, ethical investment, and so much more, we're working hard to make sure your voice is heard, and that students come first when decisions are being made at Imperial.

We welcome the help the College is offering us at the moment, and much of it should continue once our immediate issues are resolved. But it's important that we retain our autonomy, so that when the dust settles, the voice

of students hasn't been weakened. We want to work together as partners resolving a common issue, a frame of reference I know many senior members of staff in the College agree with.

Whatever our challeng-

**“Not being
oppositional
for its own
sake, but
firmly and
constructively
raising issues”**

es are, we must continue to challenge the College;

not being oppositional for its own sake, but firmly and constructively raising issues where we don't agree with what's being done. Wherever possible, we want to find ways we can collaborate, and make decisions that benefit students, staff, and senior management, without compromising our underlying principles.

On ethical investment, this has meant finding a way to have tough conversations about the consequences of where Imperial puts its money. On halls rent, it has meant going back to the College and telling them that what's being proposed is unacceptable to students, and that we need to do something different. In both of these cases,

though it has caused some discomfort on both sides, we've found a way to push forward together: a working group where we have equal footing with staff for the former, and a full negotiation without predetermined confines for the latter.

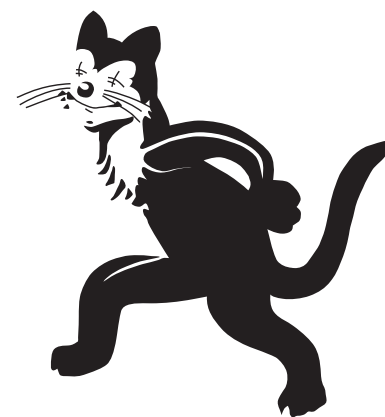
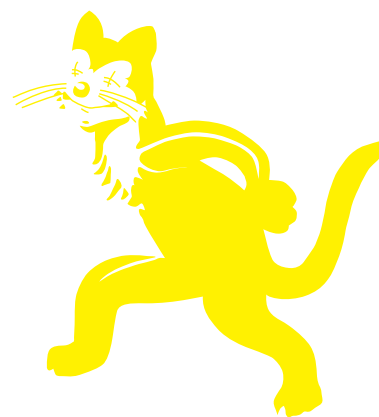
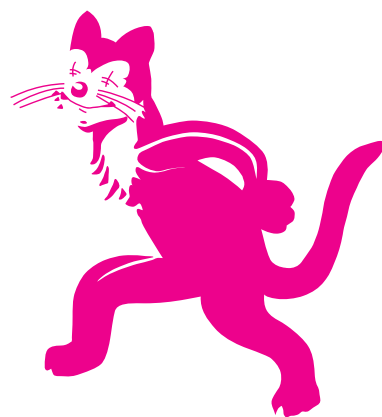
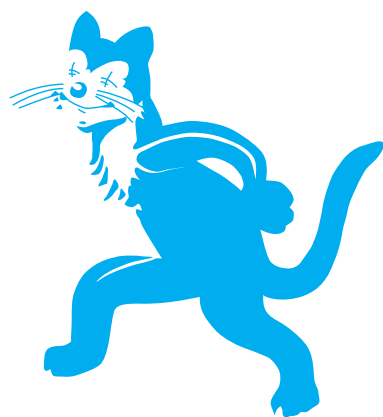
However, our ability to do anything meaningful as a Union depends largely on the extent to which other students are willing to act. If they don't feel they can do anything, we can only do whatever our skills in persuasion and the goodwill of individual staff members allows. However, if they're willing to get involved, our ability to make meaningful change multiplies.

For now, that mainly means spreading the word.

Tell a friend about the dispute over halls rent or the push on ethical investment (see the articles on pages 4 & 5). If you'd like to do more, on rent: fill in the register of interest at tiny.cc/rentregister; on ethical investment: consider making a written submission to sri.policy@imperial.ac.uk with your thoughts on where Imperial should and shouldn't be investing its money.

Together, we have an opportunity to make some real changes to the way Imperial works; I hope that's something we can take advantage of this year.

Felix is recruiting!



We want you – yes, you! We're looking for writers, photographers, editors, illustrators, reporters, computer experts and grammar nerds to join our team. No experience needed – we'll teach you everything you need to know. If you're interested, send us an email on felix@ic.ac.uk

COMMENT

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It is not Corbyn that we should be blaming but Labour centrists

The refusal of some powerful centre-left figures in the party has crippled the electoral position of the Labour party, to the detriment of the entire country.

COMMENT

Calum Drysdale

Comment Editor

It is now a truism to say that the British electorate is shifting its allegiances more than ever before. A swathe of Labour strongholds, stretching from North Wales across the Midlands and the North, the so called red wall, is looking shaky. Seats like Don Valley in Yorkshire, a former coal mining area, that has returned Labour MPs since the 20's are predicted to fall to the Tories on 12th December.

Polling, focus groups, and news reports tell the same story. The people of these areas do not trust Corbyn. They see him as a member of the left-wing London elite that cares more for the people of Venezuela or the IRA than ensuring their economic prosperity. They dislike his disdain of the armed forces and despair at the muddled Labour policy that would likely overturn the result of the referendum that they so comprehensively voted for. As a result, sections of the electorate that once would rather have died than vote Tory, will think twice before crossing the box next to the red rose.

Much of this, however, is not Corbyn's fault. His preferred policy platform, present in a diluted form in the Labour manifesto is one of easing the economic burden of the least well off in society by imposing a much heavier burden on the wealthy. This is an admirable goal and essential

in a climate of mounting inequality. Other elements of the manifesto such as the National Education Service to help workers retrain for new careers that didn't exist in their youth or providing high-speed broadband to the entire nation are well thought out policies to help the people living in 'red wall' areas. However, these are not the policies that are cutting through and reaching the electorate. They are tertiary issues in an election that can only be about one thing.

Corbyn's foreign policy quirks could have been forgiven as long as he stayed firm on the one issue that mattered. On this he failed by allowing Labour, after months of internal wrangling, to define itself as a party of Remain with numerous caveats.

This complicated Brexit policy has allowed the Tories to define this election as another run of the 2016 EU referendum and the polling suggests that history will repeat itself. This is not Corbyn's fault. A long term Eurosceptic, he has voted against every European treaty and for the EU referendum, breaking the Labour whip to do so. He has long regarded the EU as a neoliberal project that helps employers undermine the ability of workers to bargain with their employers for better conditions. What power, he asks, does a workforce have if they can be easily replaced by immigrants from Eastern Europe? When it comes to Brexit, Corbyn is far more in tune with the voters of the



The Labour Red Wall are seats that are threatened by a Tory swing // Felix

north than many would believe. So why has Labour chosen to follow such a muddled policy of renegotiating a deal that it would then campaign against?

It has been the centrist, moderate and metropolitan MPs, the darlings of the metropolitan left that are responsible for this betrayal of Labour's base. Moderate MPs such as Sir Keir Starmer and Emily Thornberry who sit on the

front bench with folded arms and amused smiles that say 'we all know he is mad but once we lose the election he will be gone and it will be business as usual' have forgotten what the party known as Labour was established to do.

The majority of them are London MPs who have nothing but disdain for the people of the North. Complaints of schools being full up and no jobs are dismissed

with a waggled finger as xenophobia by lawyers and union officials more used to Westminster than Yorkshire.

Their politics are not those of coal miners and strikes. They represent a new generation of facile left-wing thought found largely in students and people working in right-on fields such as media or creative industries. They believe in freedom of movement, hate speech

The Red Wall

The so-called 'Red Wall' includes many of the old Labour strongholds like Great Gimsby, Workington, that is famously being challenged by the Tories, and Don Valley. Many of these seats have non-local MPs who have been given a safe seat as a reward. Don Valley in Yorkshire, for example, is the seat of former Blair cabinet member Caroline Flint who grew up in London. Many of these seats voted heavily to leave the European Union and it is predicted that a swing of 9% to the Tories would be sufficient to deliver a working majority of at least 28 to Boris Johnson. At the moment the polls suggest that this will occur, kicking Labour veteran Dennis Skinner out of his seat.

and everyone being nice to each other which are not issues that poll well in the red wall. These politicians have presumed that the north would always vote for Labour and so have become indifferent to their concerns and dismissive of their needs and this is finally being rewarded by voters.

A weak and divided Labour has perpetuated the Brexit fiasco for three years and allowed a zombie Tory government to limp on. Rebel MPs should back their leader and put their case to the people as strongly as they can or leave the party and join another party or set up on own. The smug rebels need a reality check.

ARTS

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Pop hits take the West End: & Juliet

A celebration of the greatest wordsmiths in history: Shakespeare, Britney Spears, and the BackStreet Boys

ARTS



Where? Shaftesbury Theatre

When? Until 30th May **How Much?** From £23.50

Eamon Akil Farhat
Arts Editor

Romeo and Juliet, is probably one of history's most famous love stories which (spoiler alert) tragically ends in death. This modern retelling considers what could have happened if Juliet (Miriam-Teak Lee) was given a life beyond Romeo. She travels to Paris with an entourage consisting of Nurse (Melanie La Barrie) her mother figure, and her best friends Anne (Juliet Cassidy Janson) and May (Arun Blair-Mangat).

Expanding on the universal themes of love and tragedy found in the original story, this rendition puts a modern twist on Juliet who is pre-

sented as a fully-formed, independent woman. If this premise seems a bit infantile and simple at first glance, fear not as it is actually a story within a story. These two parallel stories seem a bit cliché in the opening half, but in the second half, this added dimension is used as a way of exploring the relationship between William Shakespeare (Oliver Tompsett) and Anne Hathaway - yes she is his wife and Juliet's best friend, keep up! Anne Hathaway, despite being Shakespeare's wife is almost never mentioned in his work and has never been known historically in her own right. This parallels Juliet's characterisation, simply as Romeo's plus one, in the original Veronian story. Anne's story is explored subtly at first, culminating in a powerful, slightly in your face, scene where she puts her feelings raw for the audience to understand.

What makes this musical stand out, and what will undoubtedly make it a big success, is



Left to right: Anne (Juliet Cassidy Janson), Juliet (Miriam-Teak Lee), Nurse (Melanie La Barrie) // Johan Persson

how every emotional high and low is framed by a modern hit by writer and producer Max Martin. From Ariana Grande's Break Free, to Britney's Oops!... I Did It Again, each song fits perfectly in its moment while retaining a little of the absurdity. Were Ariana, Britney and Kesha ever meant to meet Shakespeare?

The nurse (Melanie La Barrie) is definitely one of the most loved characters by the audience. The attitude, personality and humour that La Barrie brings to the role is perfect for the story.

The musical does make a concerted effort to have a diverse set of characters and May played by Arun Blair-Mangat is presented as the token LGBTQ+. When May bounces onto the scene as the stereotypical gay best friend, you could feel a few eyes roll in the audience. It is of course amazing to have this type of unapologetic

representation, but this first impression, playing on classic stereotypes, was disappointing. As the story progresses and May's narrative is interwoven into the wider plot, more complex, nuanced characteristics are pushed to the forefront. It was not made overtly clear, but after May's heartfelt rendition of I'm Not a Girl, Not Yet a Woman by Britney Spears, it seemed that the character was also being presented as a one questioning their own gender identity. A more explicit approach, in the style of May's original presentation, may have made more of an impact

“Were Ariana, Britney, and Kesha ever meant to meet Shakespeare?”

but this was nonetheless a very welcome representation.

A special shoutout has to be made to the set designers and costume designers on this production as they contributed to the killer combination of traditional with the modern. The set was spectacular, bringing together a double rotating stage (move over Les Mis!) which could also become a raised platform. Almost every scene had a different set which would be seamlessly wheeled in; the audience hardly had to use their imagination at all! Together, the set and the costumes combined the fun and glitter of a pre-teen Jojo Siwa fan with a more grungier aesthetic of the same teenager a few years later.

Some people are quick to turn their noses up at those who seek to instil a bit of modern pop fun into the theatre world of by creating these jukebox musicals. However,

not only do these new productions draw a wider audience into the theatre but they also tell very important stories with wider representation than more traditional musicals. If you like Shakespeare, Ariana Grande or the Backstreet Boys this is the show is for you!

**The more you know
Jukebox Musical:**

A film or stage performance which features songs from well known artists. Examples include Mamma Mia, Pitch Perfect as well as the Rocky Horror Picture Show.

These types of shows do sometimes have original songs alongside tracks from one or multiple well known artists.



Juliet makes a grand entrance // Johan Persson

ARTS

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The illusion of accessible theatre: how far have we

In a world where we experience more and more things through screens, the importance of theatre on personal growth and development is crucial. But how can it contribute to the lives of young people across the world when most of us can't afford tickets?

ARTS

Ozibil Ege Dumenci
Arts Editor

Ever since my stint as a Felix arts editor began, I've been preaching the importance of making theatre more accessible. For the most part, the baby-boomer leaning demographics at the theatre astonish me. I strongly believe this medium of arts can be a formative part of a young person's development. It certainly was for me, and I wouldn't have it any other way. The thrill of live theatre can be inspiring. A brilliant script brought to

life by a talented company can be transformative. In a time where we are more divided than ever, theatre can be where we're united. However, with ticket prices upwards of £200 (I'm looking at you, Hamilton), how can we expect an average

"How can a young student, barely able to make ends meet, make the most of living in London?"

family to be able to afford a night out at the theatre? How can a young student, barely able to make ends meet, make the most of living in London, one of the theatre destinations of the world?

Over the last few years, there have been some clear steps forward when it comes to drawing younger people to the audience, but I'm not yet fully convinced that enough has been done.

Discount Schemes

A select handful of venues have programmes in place which allow young people to obtain tickets for very affordable prices. Examples include the Jamie Lloyd Company, who have introduced a

£15 ticket scheme their upcoming productions including for *Cyrano de Bergerac*, a brand new adaptation of the French-language classic, starring James McAvoy. The English National Opera has a scheme called Access All Arias, and the National Theatre has one called Entry Pass. In addition to the Entry Pass, National Theatre sells any remaining tickets for any performance, regardless of the original price point, for £15 to those with a valid student ID card 45 minutes before the curtain call.

This is all excellent, however there is a huge flaw in this system. These schemes are extremely poorly advertised. You would only know of them if you've fallen into the rabbit hole of cheap West End theatre ticket hunting. This restricts the demographics hugely as the only people who do this are theatre nerds like me. So, yeah, while some theatres do offer some deals for students, not

only are they pretty darn sparse, but also hard to find out about.

The Celebrity Factor

Whenever I go to any kind of performance starring bigshot movie stars, I find that a significantly large proportion of the audience is there for the celebrity, and not necessarily the performance. Sure, I could be a snob and say how this is destroying the theatre, but I tend to think otherwise. Yes, some fans attending shows have caused some trouble (During YouTuber

"Rush tickets and lotteries are great, but only if you know about them, and care enough to queue either in person or in a virtual line"

Colleen Ballinger's stint in *Waitress* on Broadway, there were several incidences of filming the show, or people leaving the show halfway through to grab a good place at the stage door, which is frankly disgusting), however, it's only logical that with star power comes attendance by those who would never pay up for a theatre ticket otherwise, including young people.

This sometimes works well. For example, whenever Daniel Radcliffe stars in a play on the West End, Potterheads march directly to the theatre. Likewise, when Cate Blanchett was leading a play at the

National Theatre, the tickets were so in demand that a ballot system was put in place. Albeit, most of her fans were on the older side and it was a shame that the play was absolutely horrible. Stunt-casting is a big issue when it comes to the 'celebrity factor'. Stunt-casting is casting people in a show who wouldn't be cast otherwise either due to a lack of skill or not being fit for the character in question. This is very common, especially when a production is suffering from poor sales and need a boost. Without naming any names, this not only makes for an unpleasant theatre experience, but also causes a spike in the ticket prices, milking the fans of a celebrity as much as possible. It's just kind of sad.

Rush Tickets

This is by no means catered specifically towards students, but it is one way of being able to see shows in premium seats for a minimal price tag. TodayTix, a mobile app, releases 'Rush Tickets' at 10 am every morning for a range of shows for £15- £25, and these are allocated on a first come first serve basis. Likewise, some theatres still keep it old school, releasing Rush Tickets at the box office every morning. Popular shows such as *Hamilton* and *Harry Potter and the Cursed Child* have been doing online weekly lotteries (*Cursed Child*'s is through TodayTix, whereas *Hamilton* has its own lottery app). Rush Tickets and lotteries are great, but only if you know about them, and care enough to queue either in person or in a virtual line. Therefore, similar to discount schemes, they mainly tend to be used by those who are already involved



It wouldn't be an understatement to say *Hamilton* has revolutionised the term 'musical music' // Matthew Murphy

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come and how far do we have left to go?

in the theatre community, at least more so than those who have never stepped into a theatre before.

Content and Context

I suppose it's common sense that if the content of a show caters towards a young audience, they'd be more likely to see it. Word of mouth alone should be enough to draw some young people to the theatre. Some recent examples to what I consider to be 'approachable content' include *Hamilton*, *Six* and *Dear Evan Hansen*. The former two, although focusing on historic events way before our time, have found a way to make themselves extremely relevant. *Hamilton* is a 'rap musical' about one of the founding fathers of the United States, and *Six* is a raging girl band concert about Henry VIII's wives. *Dear Evan Hansen*, on the other hand, is written about young people, for young people, touching on important issues that

"approachable content means nothing when tickets cost an arm and a leg... upwards of two hundred pounds"

today's young people can relate to, such as depression and suicide and social media.

It is my genuine wish for productions like these to keep appearing on the West End, as every time I visit the theatre for such a production, it makes me happy to see that they do, in fact, tend to be made up



A triumphant podcast-musical about what truth really means // *Two Up Productions*

of audiences that are noticeably younger. I've met many teenagers and young adults while watching *Dear Evan Hansen* and *Hamilton*, some of whom had travelled to the UK from across Europe.

However, it must be noted here that all this means nothing, when tickets for these shows, namely *Hamilton*, cost an arm and a leg. Upwards of 200 pounds in some instances. Charging almost-unprecedented (and thus most likely unwarranted) amounts for such shows is greedy, and defeats its own purpose.

Podcasts

This is an odd one. A few years back, a group of very creative individuals came up with the idea of a 'musical podcast', with an original story and original compositions, free for all to enjoy on all the usual podcast platforms. Their

first challenge was to write a musical that the listeners would be satisfied with simply listening, and would not leave feeling like they need to see it staged on a show. The result was a three-act musical called *36 Questions*, starring Jonathan Groff (*Hamilton*, *Glee*, *Mindhunter*) and Jessie Shelton (*Hadestown*, *Waitress*), both of whom are respected, well-known Broadway actors. And boy, does it work.

I discovered this project only a couple of months ago. However, a quick google search leads to a plethora of articles published around the time of its release that calling the project 'the future of musical theatre'. I'm not sure that I would go that far.

This specific project is excellent, and does provide a way for anyone with an internet connec-

tion to be able to enjoy a musical free of charge. Everyone involved do a wonderful job and the final product is entertaining and original, however, I am not quite sure if it

"a 'musical podcast', with an original story and original compositions, free for all to enjoy"

can replace the physical experience of sitting in the audience.

The initial idea of providing free, original musical content to anyone who felt like it seemed to work quite well. However,

the one existing follow-up project (from a completely different team), *Anthem: Homunculus*, starring an endless number of iconic Broadway stars including, Cynthia Erivo and Glenn Close, has exclusively been made available on a paid podcast platform. I don't know how much this platform costs, and I'm not sure I really care. It just makes me feel sad, knowing that a group of people have taken this selfless idea that originated with *36 Questions* (their only revenue would be from the small ads that play before each episode), and charge people for it. Once again, the theatre community found another way to defeat its own purpose.

Just a small note here: between starting to write and finishing this article, a two minute trailer for a new project called *Childish: The Podcast*

Musical has made its way onto the internet. A quick google search shows that this project was brought to life as a result of a campaign that raised around £1700. From what I gather, this will be more along the lines of *36 Questions* in terms of broad availability. So maybe all is not lost for musical podcasts after all. Only time will tell.

In conclusion, I honestly do think that over the years we've made great progress when it comes to audience diversification. Solid efforts have been made, be it through discount schemes or bringing theatre to you in the form of podcasts. However, there's still a long way to go, especially since greed seems to be playing a role in gatekeeping the barrier between the theatre and the youth.

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Amelie: A warm hug in this cruel world

Despite being a Broadway flop, Amelie charms and stuns on the London stage by re-igniting some of the Parisian charm from the original movie

ARTS



Where? The Other Palace

When? Until 1st Feb

How Much? From £19.50

Ozibil Ege Dumenci

Arts Editor

Adapted from the five-time Oscar nominated French language movie of the same name, *Amelie* tells the story of a girl with a wild imagination who takes pleasure in performing “small, but extraordinary acts of kindness” with the goal of bringing joy to those around her. What must she do to bring herself the happiness that she so effortlessly provides those around her?

Charming is the only word I can think of that sufficiently describes *Amelie*. The relatively small stage and auditorium of The Other Palace greatly contribute to the cosy feel of the production, which makes it perfect for a date. The

couple sitting in front of me would probably agree, as they partook in an endless round of tonsil tennis throughout.

The only downside of the small stage size is that, at times, it felt overcrowded, especially due to the actor/muso approach - the cast members themselves were the ones playing the instruments on stage. However, this was rarely an issue, and I strongly believe that the small stage size helped give the production an intimate feel more than it hurt it. There were some relatively odd choices sprinkled throughout the show, such as using the death of Princess Diana as a time-frame reference, and as justification for *Amelie*'s actions. However, the oddest moment of the production was a dream sequence involving ‘Elton John’ serenading the lead character, complete with weird pop culture references (such as Oprah’s famous ‘you get a car’ speech). I guess this all worked well to illustrate the colourful imagination of *Amelie* and draw the



Love is around the corner // Pamela Raith

audience in..

Although the show was globally outstanding, the final twenty minutes were completely breathtaking, and without a doubt some of the most romantic moments I’ve ever witnessed on stage.

I am half ashamed to admit that I have yet to see the movie, although I have been in love with

its score for many years. I was hoping that the show would have borrowed some elements from the iconic score by Yann Tiersen, which brilliantly captures the charm and the melancholy of the character. This unfortunately wasn’t the case. However, the music was strong enough to stand on its own two feet, having a distinct Parisian feel.

The overall cast was exceptional, with Audrey Brisson providing an unbelievable vocal and theatrical performance as the titular character. Her voice had a magical, unique quality that feels as true to the character as one could imagine or hope for. Likewise, Chris Jared proved to be an excellent choice for Nino, the mystical yet endearing potential love interest for *Amelie*.

Having opened on Broadway in 2017, closing a mere two months later despite the undeniable star power for

Philippa Soo (her first role since leaving the cast of *Hamilton*), I was curious to find out two things: why the Broadway production ended so prematurely, and why such a failure would be brought to the London stage. Being the investigative journalist that I am, I quickly found out that the main issue with the Broadway production was the complete loss of its original charm and Parisian feel. This is abundantly clear from the Original Cast Recording as well, which sounds like... well... every other show on Broadway...

I am extremely happy to report that this issue has been completely resolved for the UK production as this is no direct import from Broadway, but a re-imagination of the source material, and a complete return to form.

accordions), which brings back the Parisian feel to the show that it desperately seems to have been missing in New York.

Charming. That’s

“This is no direct import from Broadway, but a re-imagination of the source material and a complete return to form”

all I can say about this gorgeous production that ultimately has its strength in its cosy feel. Don’t let the initial bad press surrounding the Broadway production scare you. See this show.



Its good to be gnome // Pamela Raith

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Surrealist Superstars

Magritte and Dali are two of the biggest names of the Surrealist movement, which changed the art world with its daring incorporation of the subconscious into artistic themes in the mid-20th century. You can now see the combined highlights of their works

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Where? Royal Museums of Fine Arts, Brussels
When? Till 9th Feb 2020
How Much? €8

Martin Flerin
Arts Writer

Brussels's Place Royale is a mecca of art, like a small, art-oriented brother to the museums surrounding our beautiful campus. The Royal Museums that flank it comprise some of the finest works of the European canon, from the Flemish masters to the modern genius of Magritte. The latter's personal museum quickly became a favourite of mine when I discovered it last year, and it was already back then that a single painting by Dali amongst the sea of Magritte's works piqued my interest.

Saint Anthony, naked and ragged, kneels on one side of the canvas, confronted with fantastically vulgar beasts symbolising

the devil's temptations. A white horse heads this procession, seemingly kept at bay by nothing but the cross that the naked saint is brandishing above his head. The proportions are horrifying. The horse seems to be at once right on top of poor old Tony, and at the same time his hind legs are far behind him, spindly and grotesque. But the gangly legs look even more terrifying on the elephants following in his wake. These carry beautiful naked women, palaces, an obelisk, and what appears to be a minaret. It is certainly a very striking image but more than that, it sheds light on some of the obsessions that both artists shared: the little window framing a woman's body, the magnificent clouds, the masterful and lifelike rendering. Like many of Dali's most poignant works, it is situated in the desert under a mesmerising blue sky. This stark blue was flashing in my mind as I made my way to see *Dali x Magritte*, the exhibition commemorating ten years of the Belgian Surrealist master's very

own museum.

The wide avenues of Brussels are perfect for contemplation, especially with the sky above looking like freshly mixed concrete. With some time to kill before my scheduled slot, I lazily made my way down Avenue Louise, thinking long and hard about the music that would befit the vibe of the exhibition. In the end I mixed myself a punch-bowl of The Doors and Pink Floyd. I was happy with my choice.

As an introduction, the curators treated the museumgoers with a digital take on a painting that held great significance for Magritte's foray into surrealism, and the relationship between the two artists. *Threatening Weather* was painted as Magritte was visiting Dali on the coast of the Mediterranean, along with some of the other surrealist bigshots. Mingling with Dali's then wife, Georgette, as well as his future wife, Gala, accompanied by Paul Eluard, gave Magritte inspiration to re-evaluate the role of representation in his works. A tuba, a naked female torso, and a chair float above the coast of Cadaques in cloud form in the original work, and likewise in the installation. They morph into existence slowly from ordinary clouds, giving us a rather simplistic and awkward but nevertheless interesting insight into how the artists first tapped into the surrealist vein.

The exhibition then proceeds through sections outlining the differences and similarities of both artists' approaches. These are divided methodically

but unfortunately do not stimulate too much of a narrative. The first common point is the motive of the human eye as the prism through which we perceive the (sur)real. On Dali's side, the example of this is an obvious one - *Un Chien Andalou*. The contrast between the shocking visuals in Dali's short film collaboration with Buñuel and Magritte's depiction of an eye on a circular canvas could not be starker. Dali's version of surrealism constantly teeters on the borderline of the violent (see also vulgar and vexing), while Magritte's is more toned down. Over time, Dali's work became less freely associative, and Magritte's became more daring.

In the obsession to unearth what lies underneath the surface

“the obsession to unearth what lies underneath the surface of everyday reality”

of everyday reality, both artists had running themes. Magritte had his tuba, placed with the mouthpiece facing up, and the windows, which served not to reveal but to play with depth perception and their ordinary role of revealing something beyond. Dali had his spectacular desert scenes,



La Magie Noire, René Magritte // Fine Arts Museum Brussels

the objects smooth and luscious but at the same time shocking. The Spaniard's ability to entice with the beauty of his colour palette and brushstrokes, while at the same time horrifying us with his imagery, makes him unique. On the subject of dreams, Magritte did not believe in their portrayal as an entry into the surreal, while Dali freely tapped into his Freudian inspirations (perhaps due to his Oedipal obsessions). They also both had a penchant for using writing in their art. Be it Magritte's '*Ceci n'est pas une pipe*', French for 'This is not a pipe', or Dali's *The Enigma of Desire/My mother, My mother, My mother*, they both used words to add a new dimension. 'In a painting, words have the same substance as images',

Magritte claimed.

Perhaps the most important uniting aspect for both artists is the incredible fame that they both reaped. Dali's ridiculous curvature of moustache sitting above one of his quotes and Magritte's pipe are both staples of gallery shops around the world. Whether one approves of Dali's extravagant lifestyle and questionable politics, no one can dispute the impact that both artists' popularity had for others following them. Both had unprecedented success across the Atlantic, and the impact that the movement they spearheaded between the wars had on art following the Second World War cannot be understated. They were two of the first truly global art superstars, and that in itself is an achievement.



The Temptation of St Anthony, Salvador Dali // Fine Arts Museum Brussels

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Tepid Reviews for Dear Evan Hansen?

The Broadway awards juggernaut arrives in London to less than glowing reviews... but is this justified?

ARTS

**Where?** Noel Coward Theatre**When?** 30th May**How Much?** From £15**Ozibil Ege Dumenci**
Arts Editor

It was rather surprising to me that the majority of the professional reviews for Dear Evan Hansen, the Broadway juggernaut that just made its way to the West End stage, have been rather tepid. Unlike its Broadway counterpart, which was showered with endless praise and a plethora of five star reviews, it seems that in London, most reviewers have enjoyed the show, just not enough to give it the glowing 5 stars that everyone was convinced it would be getting.

Over the last month or so, I was lucky enough to see the show twice (thank you, random stranger on Twitter who gave me his extra ticket). And I loved every second of it.

With the music and lyrics written by Benj Pasek and Justin Paul (the writers behind the music of The Greatest Showman), and book by Steven Levenson, Dear Evan Hansen tells the story of an anxious teenager, Evan, who finds himself in a web of lies, pretending to be best friends with a classmate who committed suicide. One of the show's main strengths is the witty, sharp songwriting which takes the audience on a rollercoaster of emotions. The show isn't overtly sad, however there are some

undertones that touch on very sensitive topics that successfully manages to get an emotional reaction from the audience. None of it is overly sappy despite exploring heavy themes with sufficient depth.

It is also gorgeously staged, reflecting images of social media platforms on the stage and on many screens, driving home its point regarding the impact of technology on today's teenagers' lives. The choreography is also quite gorgeous, with constant callbacks to earlier bits of the performance, perfectly supplementing the lyrics.

My only complaint about the show is that the first half of the second act kind of drags, mainly because it contains some of the weaker songs in the musical, but this doesn't take away much from the overall viewing experience. My least favourite

“The first half of the second act kind of drags, mainly because it contains some of the weaker songs in the musical”

song in the musical is easily ‘To Break In a Glove’. While I get why song is placed where it has been placed, and the purpose it serves in the story. The metaphor is crystal clear (maybe a bit too on the nose at times). It's just a bit of a dud in comparison to what comes before and after.



The impact of social media on the youth is front and centre in Dear Evan Hansen // Matthew Murphy

Despite falling in love with the show head over heels, I'd like to put my own two cents in and explore why the reception has been rather lukewarm on this side of the pond.

Without a seed of doubt in my mind, I believe that the main reason for the rather lukewarm reception is rooted within the sky-high expectations of the show. Having opened on Broadway in 2016, the original cast recording has been available on every music streaming service for 3 years now. It is unlikely that those who are well versed in the world of musical theatre haven't heard at least some of the show's music, given the amount of positive publicity the show has received over time. Therefore, when the show finally made its way to London, it was... old news?

Having mentioned the original Broadway cast recording, I would be remiss if I did not talk

“Sam Tutty, fresh out of drama school, does a commendable job as Evan, executing the emotional depth of the character perfectly”

about the original London cast. Sam Tutty, fresh out of drama school, does a commendable job as Evan, executing the emotional depth of the character perfectly. However, vocally, he is no Ben Platt. Don't get me wrong, Tutty is a great vocalist and probably a more believable high school student, but whoever was cast as

Evan would have most likely been a step down from Platt, whose vocals still blow me away every time I listen to the original cast recording. Platt's career was propelled to new heights, releasing an album and starring in a Netflix original show, which doesn't come as a surprise given how much buzz there was around Dear Evan Hansen in the States, mainly surrounding Platt.

Some reviews pointed out that the show's storyline is too far-fetched, which I wholeheartedly disagree with. The show does take some leaps here and there, sure. However, when Aladdin and Jasmine flew on a magic carpet, no one called it out for being too far-fetched. Suspension of disbelief is an important part of the theatregoing experience, and Dear Evan Hansen makes use of this in the best way possible to touch on so many important problems plaguing today's

youth, such as anxiety, depression, suicide and the role of technology in all of this. Perhaps one of the reasons why the same plot was seen as far-fetched in the UK while being called groundbreaking in the States may be the vastly different high school experiences between the two countries. Who knows.

Overall, Dear Evan Hansen is an excellent show, touching on many important issues surrounding the youth in this day and age. It is a show that is written about young people, for young people. I would jump at an opportunity to get to watch the show again (and again), but I do understand why middle aged reviewers who've been familiar with the material, performed by a completely different cast, for years would be slightly let down by the final product on the London stage.

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The greatest play in the history of the world

Does it live up to its claim?

ARTS



Where? Trafalgar Studios

When? 2nd Dec – 4th Jan

How Much? £20 - £35

Deniz Ak

Arts Writer

A man wakes in the middle of the night to discover that the world has stopped. It was exactly 04:40. The title, intriguing and vague, leaves you wondering what the greatest play in the history of the world could possibly be.

The Greatest Play in the History of the World written by Ian Kershaw and directed by Rax Shaw is performed by a single actor, Julie Hesmondhalgh, through monologue alone. I was quite impressed how one actor managed to deliver a full seventy minutes of a play single handedly. When I arrived

at Trafalgar studios, I was surprised to find an intimate theatre consisting of very few rows. It was a true story-telling experience with the audience huddled around, listening to what happens next. This made for a deeply personal experience since you could lock eyes with Hesmondhalgh herself. Furthermore, she interacted with the audience directly which lets you get very absorbed in the play.

The creativity in the props used was clever, she told various stories using shoes and their boxes alone. Hesmondhalgh borrows the audience's shoes to aid her story-telling which is quite unique. The background wallpaper consisted of glittering sparkles and so you felt like you were in a different world entirely. Hesmondhalgh was also impressively funny. It is usually very difficult to make me laugh however Hesmondhalgh's connection with the audience made it easy.

My main criticism of the show is that the plot can be quite confusing and the language used can be difficult to follow. Kershaw's play alludes to the voyager through the play and parallels Carl Sagan's universal messages on the voyager to love. The allusion to the voyager was clear however the plot itself surrounding this frozen time around the main characters was hard to follow. Potentially I may not have the appreciation for it since it seemed more aimed at others in the world of acting. However, the creativity in the set overpowers the confusion and I left with my heart warmed by the delivery. Hesmondhalgh's glow also carries you pleasantly throughout the play. Although it may not have been the greatest play in the history of the world, I understand the reason for its name and appreciated the talent showcased in the play.



Long-lost brothers, reunited // Marc Brenner

The Arrival: Two Brothers Reunited

Olivier-award winning director Bijan Sheibani makes his playwriting debut with this thought-provoking examination of the gulf between nature and nurture.

ARTS



Where? Barbican

When? 4th Oct - 16th Jan

How Much? From £5 (young people)

Martin Flerin

Arts Writer

Samad (Irfan Shamji) and Tom (Scott Karim) have lived very different lives. Different upbringings, different parents, different friends, different schools. Social, geographic and cultural barriers have divided them for over thirty years. But they have one thing in common, they are brothers, despite only meeting for the first time as adults. At first they think they aren't so different but as they grow closer and try to integrate into each other's lives, they both soon realise things aren't going to be as simple as they had hoped.

Tom was adopted at birth, whilst Samad was raised by their biological parents. Tom tracked down his brother in the hopes of establishing the bond that he felt was

missing his whole life. The pair are undoubtedly different - Tom is brash, enthusiastic and eager to feel a sense of belonging in the family he thought he didn't have. But he is also alien and unfamiliar to Samad's bookish, softer and more pampered middle class lifestyle - with his Cambridge degree and close-knit family unit. Samad, initially equally enthusiastic, starts to regress as their lives become more intertwined. He seems threatened by this new presence. What works at the start slowly starts to break down over the course of this pacy 70-minute play, and the cracks start to show as family secrets are uncovered.

Some things confused me - the backstory of why Tom was adopted was hinted at but never quite explained. However, the marvel of the play in itself along with the chemistry between Shamji and Karim made up for such discrepancies. Although I wanted more information, perhaps the cryptic writing by Sheibani was intentional - it made the audience really focus on the current actions and the beautifully raw

performances of Shamji and Karim, who expertly revealed their vulnerability and pain.

What really stood out to me were the non-verbal, choreographed sections of the play. Special mention must go to the movement director, Aline David. Changes between scenes were filled with meaning as the brothers imitate, chase one another, dance, change clothes, battle. Samal Blak's designed a very apt setting - a circular revolving stage that facilitates these scene changes. David often pits the brothers against each other, either facing inwards to each other or mimicking one another. I loved these moments; it gave a fluid feel to the whole performance, and often the actions spoke louder than the words.

This taut family drama provides a superb exposition of loyalty, discovery, loss, belonging, and betrayal. The price is reasonable for what you get, and the tickets are cheaper if you're under 26. Delicate and complex in both the writing and performing, I commend all those involved and highly recommend this play.



A deeply personal experience // Wikimedia

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Sun, Sex and Suspicious Parents: 1920s Edition

As we charleston our way into the 2020s, The Boy Friend is a window into life during the roaring 20s.

ARTS



Where? Menier Chocolate Factory

When? 22nd Nov – 7th Mar

How Much? From £29.50 for students

Eamon Akil Farhat

Arts Editor

In a few weeks' time we will be in a new decade, the 2020s. If it's anything like the 1920s, it should be a blast! *The Boy Friend* gives a little glimpse into what life back then was like.. for young, pretty socialites at a finishing school on the French Riviera that is!

If you fit this description then the musical really does create a perfect period atmosphere transporting you back a century. The set is simple, with a few chairs and tables on a patio framed by a delicate, lace-like frame. As this is the 20s, a white grand piano is the centerpiece of the scenes.



Polly (Amara Okereke) and her friends enjoy life on the French Riviera//Manuel Harlan

Polly Browne (Amara Okereke), whose love story with secret Oxford dropout Tony (Dylan Mason) is the main plot of the show, has a beautiful

voice which sounds like it comes straight from an old classic. At times she sounds just like the young lady who had her Broadway debut playing this exact part in 1954 - you may have heard of her: Julie Andrews.

Maisie (Gabrielle Lewis-Dodson), Dulcie (Annie Southall) and Fay (Emily Langham) play Polly's three school friends. For all intents and purposes they are one single character, who share a single brain by the sounds of things. Wearing simple 20s dresses that look perfect for a tea party, they moved as one in a dramatic and giggly way. At times it was like watching an old cartoon with piercingly prim and proper accents.

The frightfully funny and fearlessly french Hortense (Tiffany Graves) stole the show for me.

She plays the maid at the finishing school but is much more of a cool-aunt figure for the english roses studying there. As everyone from the

“Whether the performers are dancing a waltz, tap, or even tango, they seem to be having lots of fun!”

young socialites to the older elites seemed to be caught up in silly little love stories, Hortense, like the audience, saw the absurdness in these rich people problems. Her

comedic timing was impeccable and her radiant stage-presence meant you were always drawn to her even when the stage got busy.

Although the show has some moments of hilarity, drama and joy, the audience is left a bit confused at what exactly is being presented. As the dramatic storylines get resolved in the third act, it is unclear if the audience was meant to take them seriously all along or if the funny situational comedy was the substance of the show. The first half introduced a fun 20s setting and the second half introduced the comic characters. However, the third act seemed to pale in comparison as the big ball that everyone had been building towards was executed in a lacklustre way. The costumes, which up to this point were

immaculate, were a bit disappointing here. They looked cheap: a sort of butterfly polyester dress and a rushed Aladdin costume needed huge improvement. The show had done such a good job keeping true to its 20s roots but this is one place where it missed the mark.

Despite the problems in the third part, the show is still a real blast and will have you (attempting) the Charleston all the way home. Although the choreography is at times quite complex, whether they're dancing a waltz, tap, or even a tango, the performers seemed to be having lots of fun and it is infectious. If you want an intimate musical which will whisk you away to the sunny seaside on a cold London night, this is definitely for you!



Hortense steals the show // Manuel Harlan

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War Horse: A Year Later

ARTS

Ozbil Ege Dumenci
Arts Editor

Last year, I was lucky enough to watch War Horse at the National Theatre, its return to the original National Theatre venue a celebration of the centenary of Armistice Day. I loved it so much the first time that I grabbed a different friend the next evening and ended up queueing for return tickets to watch it again.

Just about a year later, the play returned to London once again, this time playing at the Wembley Troubadour Theatre before embarking on a year-long international tour, heading to France, Australia and Singapore. Obviously, I had to go watch War Horse once again. Having convinced a rather hesitant pair of friends to tag along, we made our way to Wembley and left feeling that not only was the commute fully worth it, but that we'd be more than happy

to travel further to witness the marvel of War Horse. In fact, as I'm writing this, one of my friends is already making plans to return before the show closes.

The story, adapted from Michael Morpurgo's best-

"The first time I saw the play, I started sobbing the moment the horses showed up."

selling book with the same name, is simple enough. However, it is the staging which elevates the narrative to completely new heights. According to the internet, when Morpurgo was approached with the idea of turning the book into a play, he initially thought it was an insane idea. However, the resulting product is a stroke of genius. The horses, which are brought to life

by a group of incredibly talented puppeteers, are so well-executed that the first time I saw the play, I started sobbing the moment the horses showed up.

War Horse has everything that makes a play great. It is innovative, thought provoking, relevant and just all around excellent. Audiences of all ages can find something to take away from it about humanity and the importance of love and compassion towards humans and animals alike. One just has to be heartless for the play to not strike a chord.

My feelings towards War Horse have not changed within the last year, despite the change in location and the cast. When people hear how frequently I go to the theatre, their first question is almost always 'What's your favourite play of all time?'. Not only is the answer clear, but even more so than before now that I've had the chance to relive the marvel that is War Horse.



I will never be not blown away by the puppetry in War Horse // Brinkhoff/Mögenburg



The writer explores the depths of our most primal need, hunger // Alex Brenner

Hunger - the battle between the self and the city

ARTS



Where? The Arcola Theatre
When? Until 21st Dec
How Much? From £15

Byron Gamble
Arts Writer

Simply titled "Hunger", director Fay Lomas delves into the psychological turmoil as this primal instinct comes face-to-face with ambition. What sacrifices are we willing to make for our dreams? Although the production is based on the 1890 novel written by modernist Knut Hamsun, it displays a shocking relevance to the present.

What unfolds in this intimate studio is a story that cuts at the heart and mind of an aspiring writer in his struggle to succeed. It becomes clear that this nameless writer is not limited by his talent, rather by the resounding rejection from the bustling metropolis. One by one, his friendships, career,

and grasp of reality begin to crumble as Hunger takes over.

The writer's desire to flourish is a craving to which we can all relate. When we hear accounts of the painful climb to success, it can easily go over our heads as those experiences are often brief and irrefutably one-in-a-million. As the story enters its second half, the city itself grows a character: an unforgiving, hungry predator that begins to swallow the failing writer whole.

Kwami Odoom as the protagonist shines with an earnest energy. He portrays a driven albeit naïve individual at the cusp of his dreams, whose sense of self gradually unravels. As we watch this happen, we realise the extent of which we depend on our career for purpose. For the most part, the performance is mesmerising. However, the downwards spiral to insanity is highly abstract. Portraying this in theatre is bold, and there are moments which simply do not work and sometimes detach you

from the scene.

Without prior knowledge to the original text, the ending can come across as abrupt and unexpected. But the rest of the performance is so well rehearsed and precise that it is as much a choreography as it is a play. It is a real pleasure to watch each step of the four actors as deliberate as the last.

This production is a ruthless, finely tuned tale of the harsh reality of pursuing a pipe dream. Small productions such as these have the freedom to stay faithful to the source text, and it is shameful how much it still rings true. Knut Hamsun in this modern age would be disgraced for his perverse views on race and politics. Despite this, "Hunger" remains powerfully relevant and thought-provoking, and an especially important tale for any aspiring student.

ARTS

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Troy: Myth and Reality

ARTS



Where? The British Museum

When? 21st Nov - 8th Mar

How Much? £17 students

Indira Mallik

Arts Editor

Legend has it that the goddess of discord threw a golden apple into a crowd, bearing the inscription 'for the most beautiful'. It was claimed by three goddesses, Athena, Hera and Aphrodite, and Zeus asked The Trojan prince Paris to make the final judgement. He chose Aphrodite, who promised him the most beautiful woman in the world. This woman was Helen, wife of the Greek

king Menelaus, who Paris stole away from Greece and across the sea beginning the siege of Troy. During the war, atrocities were committed on both sides but ultimately, the Greeks conquered the great city of Troy with the cunning use of the Trojan horse and the ferocity of the hero, Achilles.

The myth of the Trojan war has been told for over 3000 years and continues to inspire people today. It was first told by word-of-mouth, then immortalised in Virgil's Aeneid as well as Homer's epic poems, the Iliad and the Odyssey. Now, it is told through plays, operas, film and Troy: Myth and Reality.

The exhibition at the British Museum focuses not only on the history of the myth but explores the story in a rich and conclusive study. Patrons are

first invited to question whether Helen loved Paris or was merely a captive. There are different interpretations in art and the influence of the Gods is central to this, with many versions of the story depicting Paris and Helen as pawns in Zeus' plans. A large space is dedicated to Achilles as both a courageous war hero and a monster, murdering and defiling his enemies. The fall of Troy is particularly interesting with its depictions of the Trojan horse and the tale of Aeneas, who escapes the burning Troy to later become the founder of Rome. The exhibition goes as far as to cover the aftermath of the war, including the travels of Odysseus and his return to his wife, Penelope. In this section, attention is drawn to the fantastical beasts featured in Homer's



No Achilles heel in this exhibit // Wikimedia

works; the sirens and sea monsters are shown in works from the time but also in popular culture from more modern origin, revealing a fascination of Greek myth to this day. We also learn of the archaeological discoveries made around Troy and touchingly, parallels are made between the Trojan war and modern war and

crisis.

The collection is impressive in both quality and quantity, showcasing stunning marble sculptures, engravings, paintings, pottery and original items from 'Priam's treasure'. However, due to the limited exhibition space and intense popularity, the exhibit can become very crowded. I found that

I had to essentially fight my way to read exhibit captions, which were poorly placed at ground level. Although the visit may be slow-going, this does not detract massively from the installation and it was worth attending to witness the reconstruction of Achilles' shield, ancient transcripts of the Iliad and far more.

The Wind of Heaven: From Bethlehem to Blestin

ARTS



Where? Finborough Theatre

When? 26th Nov - 29th Dec

How Much? £16

Felix Swift Roberts

Arts Writer

The greatest objection to God has always been emotional. While it is true that the debate over divine non-presence is clothed in the mild-breathed language of logicism and rationality, what stirs in us feeling enough to slacken faith and scorn perdition is the atrociousness of evil and suffering - the feeling that an all-kind, omniscient, and omnipotent God couldn't possibly exist



There are some standing here, which shall not taste death, till they see the Son of Man... // Stefan Hanegraaf

alongside mothers that must bury their children.

It's a powerful argument. The Wind of Heaven entertains this notion: its central characters, consciously or not, grapple with the limits of mortal life and all the whips and pangs therein. The play is centred just out-

side the Welsh mountain village of Blestin, which lost its children a decade ago in an accident of unimaginable cruelty, and sets itself in the aftermath of the Crimean war - the mountain hospital overflows with maimed soldiers, the threat of cholera and typhus never far off.

Confronted with such suffering, and with a modern, godless capitalism looming over the not-too-distant horizon (represented here by a fast-talking nouveau-riche Birmingham businessman who owns a circus named after himself), it's only understandable that the village has no vicar and the church is now a post office.

But then Jesus comes to Blestin in the form of a Welsh teenage peasant. As a widow struggles to contain her grief and our Birmingham businessman confronts his past, the village erupts in a religious revival over a boy who can cure the sick and raise the dead. The Wind of Heaven fundamentally concerns itself with the power faith has to transform, heal and revitalise - and the production does

an excellent job of depicting the emotional growth religion stirs in its characters (that the Finborough Theatre is such an intimate venue only heightens the experience).

And yet it feels like a cheat: the play's power is co-opted from the reverence which even today we offer to, say, the quiet and cold stalls of a church, rather than being generated internally. Upon the interval, after an achingly beautiful Welsh hymnal, I was as ready to preach the gospel as any man alive, but I couldn't help thinking that a good sermon would have provoked the same response. In fact, it's a double cheat - by having Jesus raise the dead and cure the sick, the play fails to meaningfully respond to the problem of suffering; even the play's

Doubling Thomas, who argues that the whole fervour is just a case of mass hysteria, can only provide strawman arguments. This is a didacticism, not a dialectic.

And yet I can't write off the play so easily. The production's well staged, and that the script serves some dubious lines in its religious crusade is only a credit to the cast who pull them off. If this feels like damning with faint praise, it is, but not in the way you think: for all this, I couldn't help but be moved by the production, and I'm still chewing on it. If I can't make a rational argument for you to see this, I can certainly make an emotional one.

ARTS

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Let me be your star - MTSoc Revue: Review

ARTS



Where? Union Concert Hall
When? 4th Dec – 6th Dec
How Much? Free

Indira Mallik
Arts Editor

Sometimes all it takes to fall in love with a musical is that one special song or moment. MTSoc's medley of musical classics hopes to scratch that itch with over fifteen musicals represented! With more than 45 performers taking part in the show in small groups, the audience was transported across the musical theatre universe in short, snappy songs, with some being a little more memorable than others.

Daria Ditri's solo

performance in the song "Portrait of a Princess" from *Unwritten Songs* was one of the highlights of the night. The song itself is a quite daring, combining Disney princess stereotypes with much dirtier humour. It takes a lot to be able to sing in a Snow White-esque voice while pretending to pleasure your prince charming and not make it look a little awkward. Luckily for the audience, Ditri executed the performance wonderfully. With a very strong voice and impeccable comedic timing, her performance was one of the most memorable, despite being one of the few songs performed solo.

"His Work and Nothing More" from *Jekyll & Hyde* was another really strong performance. Sebastian Berger, Paul Monaghan, Celine

Driessen and Sam Winarski managed to pull off this difficult song through masterful coordination and amazing vocals. The real highlight of the first act, was the visually and vocally striking "Hellfire" from *The Hunchback of Notre Dame*. When robed men carrying candles slowly marched onto the stage from the audience followed by Daniella Gimbo's mesmerizing dancing, you knew good things are to come. From the moment Jonathan Hedley sang the first note, the audience was silent as his deep enchanted voice captures everyone in the room. Even more so than his singing, it was his ability to sell the character he was portraying that made his performance so remarkable.

In medley shows, it can be a little weird jumping

through completely different plots and moods, so performers have to fully commit to each act. Unfortunately, sometimes committing simply isn't enough. For example with Manuel Pestana Gageiro's performance of "Never Ever Getting Rid of Me" from *Waitress*. Despite truly embodying the character and selling the story to the audience, a combination of sound issues and a lack of enunciation meant that most of the jokes were lost. Fixing these issues could have made what was a great performance brilliant.

There were many other amazing performances from musicals such as *Hamilton* and *Six*. However, the standout ones mentioned above all had something in common, they all followed the rule that less



Daria Ditri was the fairest of them all // Khai Leed Yau

is more. When it comes to coordinating over twenty performers on stage, for example during the Hair-spray classic *You Can't Stop the Beat*, even if the performers and audience are having a blast, things have a tendency to look messy. During these bigger dance numbers, the performers with a dance

background stood out, like the very talented and graceful Ella Reich.

On the whole, this was a fun show to watch for musical theatre fans and novices alike, with plenty of talent on display. Keep your eyes peeled for MTSoc's next show!

DramSoc's Macbeth scores a MacB-

A tale of failed delivery (and I'm not talking about MacDuff). Maybe an early abortion would've been kinder.

ARTS



Where? Union Concert Hall
When? 27th Nov – 30th Nov
How Much? Check on union website

Syon Lee
Arts Editor

I don't remember much about *Macbeth*, having only studied it briefly in my early secondary school days. While I may have forgotten the plot and the characters' names, I could never forget the feeling of empowerment I experienced after learning of my king-slayer potential

wrought from the circumstances of my caesarean birth. You may have your full-term, spontaneous vaginal deliveries but I was born to topple tyrannous regimes.

Macbeth, with its bubbling cauldrons, moving forests, and ferocious inter-clan warring, is a play that demands powerful visuals and creative use of the theatre space. Unfortunately, DramSoc's production just didn't deliver. Using budget constraints as an excuse can only get you so far in explaining the complete lack of attention to aesthetic and design. The backdrops, vital in transporting the audience to specific settings, were merely pieces of card stuck together to

form shapeless, detail-less canvases. One might as well lower green screens instead and have the audience imagine a castle wall. The costumes, if you could call black t-shirts and jeans a costume, were disappointing even by college production standards. Bizarrely, the witches were dressed as post-war office secretaries, further adding to the directorial confusion surrounding the production. The lack of finish may have been acceptable in primary school but given Imperial's talented student population, the wealth of art/fashion clubs, and the members' own purchasing power, the show should not have ended up looking so nightmarishly amateur.

The acting, for the most part, was fine. Yuyu Lee played the titular role well, if a little too cheerfully pre-regicide. While his labile mood may have

"It is unfortunate that the talent on stage was let down by such poor direction."

worked perfectly to highlight *Macbeth*'s increasing insanity as the play progressed, it seemed

out of place for the grizzled war veteran we were introduced to at the beginning. There were two standout performances for me. Nick Twyman, playing King Duncan, was a delight to watch, expertly delivering his lines with style and warmth. It is one thing to understand and regurgitate the lines of a Shakespeare play, quite another to speak each word as though it is spontaneous thought. The other standout was Valerie Lau. While Twyman gave a comfortable, laid back performance, Lau brought forth the opposite. Her *MacDuff*, trembling with righteous fury after the slaughter of his family, carried the second act with a dramatic intensity

befitting a larger stage and a better sword.

It is unfortunate that the talent on stage was let down by such poor direction. Even the lighting and sound were poorly utilised. Prop movement and scene-changes were coordinated poorly with blackouts and sound effects were so sporadic that it distracted rather than supported the action on stage.

In the end, there was little to commend in this production of *Macbeth* save the cast. Next time DramSoc puts on a show, I hope they're willing to at least shell out the £2 for retractable prop knives.

ARTS

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Is It Art if Everybody Hates It?

They say that beauty is in the eye of the beholder. But what if there is a universal consensus that an artist's product is bad? Does aesthetic value mean nothing? Laura Casas attempts to unravel this conundrum...

ART

Laura Casas

Arts Writer

Van Gogh, while alive (1853-1890), only sold one painting. Though we all agree that *The Starry Night* (1889) and *Sunflowers* (1888) are artworks, people of the time detested or at least ignored these canvases. Thus, was it not art then and it is now? Was it always art?

In contrast, other masterpieces were acclaimed by public and critic from the very first moment. *The Persistence of Memory* by Salvador Dalí, a meaningful work of Surrealism, was taken to the MoMa shortly after being painted. *Pride and Prejudice* received wonderful, favorable reviews referring to Jane Austen as “the professional woman writer”. *The Pieta* was enthusiastically acclaimed from the beginning, launching Michelangelo’s dazzling career. On the other hand, Van Gogh’s case of posthumous success is not unique. Many other painters, like Monet and the impressionists, had similar problems. *The Rite of Spring*’s premiere (Igor Stravinsky, 1913) was a dramatic fiasco. Mozart died in poverty, without receiving his present recognition. *The Girl with a Pearl Earring* by Vermeer was sold for the current equivalent of €24.

These examples lead us to the question that entitles the article: Is it art if everybody hates it? According to *The Oxford Dictionary*, ‘art’ is ‘the ex-

pression or application of human creative skill and imagination producing works to be appreciated primarily for their beauty or emotional power’. This could make one wonder if hating a piece means it has an emotional power over them, after all. Certainly, a work can make you feel uncomfortable or even angry, like the very disturbing *Collective Invention* by Rene Magritte or *Saturn Devouring His Son* by Francisco de Goya; but for the sake of this article we have referred to hating a work as to loathing it for its absence of worth.

The above definition is not objective, for the meaning of beauty or emotional power is different depending on the person who judges. Not everyone is moved by the same pieces. Even within the most cultured,

“Given that art is very subjective, the fate of a work depends on the collaboration of spectators”

renowned, and sensitive celebrities there have been different criteria. The cubist movement was extremely criticised by figures such as Gino Severini while others, like Guillaume Apollinaire and Max Jacob, defended it fiercely. However, there are works that are unanimously acclaimed as masterpieces. Therefore,



Does the pineapple have innate artistic value? // Ruairi Gray, Twitter

it is tempting to say that a piece is art if there is enough consensus from a majority of people who feel that their “beauty” or “emotional power” is intense and profound. Although, admittedly, this idea is somewhat vague, taking it as an alternative definition of art, the answer to the question “is it art if everybody hates it?” would be “no”, given the lack of consensus about its value.

Anyhow, this is not a satisfactory conclusion for it does not shed any light on episodes like Van Gogh’s. Given that art is very subjective, the fate of a work depends on the collaboration of the spectators. If they don’t have enough tact and receptivity, a marvel could pass unnoticed. Cultivating the sensitivity of the observer is key for the work to be properly appreciated. This is why time plays an essential role in this discussion. Continuing with Van Gogh’s example, 19th century education was much poorer than the current one, thus people were not exposed to

artistic forms as much. The society was less prepared to evaluate potential art. This also explains why the very innovative works were often unsuccessful: there was hardly anyone with the right sensibility to enjoy them.

Let us now explore a complementary point of view to the original idea: would having a single person like it be a sufficient condition to call it art? Accepting such premise can create rather interesting situations. One of various examples is the pineapple incident that took place in an art gallery in Aberdeen, Scotland in 2017. The one-pound-pineapple which a student left as a prank on an empty stand became a masterpiece when employees protected it with a glass display case. Some claimed to understand the meaning of this supposed work of art. A theory jotted down by the *New York Times* was that “the pineapple symbolized the U.K. leaving the E.U., standing alone, attempting to survive, cut off from the outside

world”. As evidenced, this tropical fruit seemed to have been liked by some. Ergo, by this logic, the pineapple would be art.

Giving a random pineapple art status seems rather ridiculous. One mistake of this reasoning is that liking a piece does not imply by itself that it has emotional power, e.g. a good sewage system. Similarly, admiring a work by its technical difficulty (without this being the case of the pineapple) is not synonym of feeling its beauty. We can enjoy how an extremely difficult violin piece is played by a virtuoso. However, this does not endow the piece or the performance with artistic value, unless we have been touched by it. As can be inferred by its definition, art is not something that you evaluate, but something that you feel. Vanessa Marianna from *Daredevil* (TV) explains this idea when, referring to a white painting, she tells Wilson Fisk that “it’s not about the artist’s name or the skill required (...) All that matters is, how does it

make you feel?”

Let us conclude trying to answer to the initial question: Is it art if everybody hates it? The answer is “no” given the absolute lack of consensus about its value. But it would be more cautious to answer “not yet”, leaving a door open to a future recognition (which of course may not always come). If

“Giving a random pineapple art status seems rather ridiculous”

somebody is touched by a work, which is however hated by most, they can legitimately feel that it is a work of art, given the subjectivity inherent in the artistic appreciation, and hope that time will prove them right.

FILM

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2019 in Review: The Best Films I've Seen this Year

Taking a look at the best film's viewed this year, I've bottled them up into 5 unmissable features to look at during the winter break

FILM

Zuzanna Janusz

Film Writer

It was not a difficult task to name my favourite films I watched this year – the ones listed below were truly memorable and entertaining. So here is my selection, a bit eclectic I would say, and since there is no way to rank these gems, I present them in alphabetical order – enjoy.

BROKEN FLOWERS (2005)

It starts like this: Don's orderly but monotonous life is shaken up when he gets dumped by his fiancé and then finds out he has a son. We follow him across the US as he tracks down his ex-lovers, trying to figure out which one is the mother of his child. It's quite melancholic, seeing how the main character develops with every encounter with an old flame, reminded of the fact that as time passes, people change and most relationships turn out to be futile and temporary. The film is also gripping as it engages you in Don's search for clues. On the whole it's

"It doesn't give out too much information, which is one of Broken Flowers' greatest strengths"

just brilliantly written, with great attention to detail, like little quirks and habits that make each character unique and believable. It doesn't give out too much information, however, leaving some things unsaid, which I think is *Broken Flowers'* greatest strength.

DANGEROUS LIAISONS (1988)

The biggest surprise of the year for me. Certainly not a fan of period dramas, I found this film unbelievably absorbing,

"It's the contrast between the sugar coating and the desire to manipulate that makes Dangerous Liaisons actually very dark"

mainly thanks to incredible acting – Glenn Close and John Malkovich both give remarkable performances and the tension between them is insane. Combine that with elaborate costumes that inspire haute couture fashion designers to this day and you won't be able to take your eyes off the screen. Mind you, all these lavish visuals and the abundance of decoration are there to hide true intentions of main characters. It's the contrast between the sugar



Bung Joon-ho's Parasite // CJ Entertainment

coating and the desire to manipulate and shatter some hearts that makes *Dangerous Liaisons* actually a very dark film.

GHOST WORLD (2001)

I have done it countless times: added a film to my watchlist after seeing a still on Instagram or elsewhere, interested solely in the visual side of it. That was the case with *Ghost World*, which initially intrigued me with its lethargic suburban vibe, but turned out to be so much more. Based on a comic book that I've yet to read, this is a story of two high school graduates, bored and cynical, roaming around in their sleepy neighbourhood. Although the film feels subtle and muted, it does call up strong feelings, since Enid and Rebecca's fear of conformity and desperate attempts to be original are

hilarious and painfully sad at the same time. It's remarkable how well this film sums up the mood and doubts you have as you step into adulthood.

"He evokes so much empathy that you spend the two hours aching and hoping with him"

MY OWN PRIVATE IDAHO (1991)

This is such a bitter-sweet picture, entertaining but also very touching. One of the most important films of the early 90s independent queer cinema, it tells a story of

male prostitutes on the streets of Seattle. The main character, Mike, beautifully played by River Phoenix, lives a life disturbed by narcoleptic episodes. He just evokes so much sympathy that you spend the two hours aching and hoping with him, while he tries to find his long lost mother. Nonetheless, it's amazing that a film touching on loss, vulnerability and search for acceptance remains humorous and simply fun to watch. Its dynamic editing is noteworthy, funnier sequences alternate with moments of deep reflection (campfire scene being hands down the most poignant of the year) and the take on sex scenes is as unusual as it is amusing. *My Own Private Idaho* really stands out with its unique dreamy atmosphere.

PARASITE (2019)

Lastly, the only film on my list that was actually released in 2019. Having heard only enthusiastic reviews, I was really looking forward to this one and it did live up to my expectations. It is a story of two families and a look on social inequalities, but the less you know before watching, the better. Suffice it to say, atmosphere changes drastically throughout the film, which makes for an entertaining but also thought-provoking and aesthetically pleasing experience. A rather ambiguous ending is, in my opinion, another perk of this film, as it doesn't feel like a didactic tale but gives you space for your own interpretation and judgement. Coming to the UK in early 2020, this one is not to be missed.

FILM

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Most Important Films of the Decade

Four films that Felix Film believe have been monumental in cinema over the past decade

FILM

Charlotte Arrand

Film Editor

Now that this decade is coming to a close, for the last paper of the year we thought we'd do a round-up of what we think are the most important films of the 2010's, featuring one from each film writer. These films don't necessarily line up with the ones we have loved the most, however, they are what we think have shaped, changed and influenced the film industry over the past ten years. Film has developed a lot over the course of the decade, we have witnessed the release of the first *Avengers* film, a *Star Wars* return, *Twilight* happened, there was a *Frozen* craze that felt like it lasted forever and much, much more...

MOONLIGHT (2016)

When thinking of the best and most important films of the decade, *Moonlight* was one of the first ones to cross my mind. This film made history when it became the first best-picture winner from an African-American

"Gorgeous shots, impeccable casting, and a beautiful execution"

director, Barry Jenkins, at the 89th Academy Awards in 2017. For anyone that watches The Oscars, that

moment where the award was snatched away from *La La Land* (thank god) to be correctly received by the crew of *Moonlight* after a colossal error is unforgettable. A quick Google search has told me it was also the first best-picture film to have LGBT-themes at the heart of the storyline – monumental is certainly a word apt to describe this film.

Before I was ever interested in keeping up with new film releases, I decided to go watch *Moonlight* at the cinema on a whim with my friend as he had been told it was "good", and I left the cinema stunned. The gorgeous cinematography, impeccable casting and acting, and beautiful execution of the coming-of-age story of a gay black man were all achieved on a low budget, making it all the more impressive. Although the systemic racism of The Academy and entire film industry sadly still hasn't been eradicated, the recognition of this film was a step in the right direction and I am sure it will go down in history.

Jasmin Daley

Film Writer

SPIDER-MAN: INTO THE SPIDER-VERSE (2018)

An animation so rich and vibrant, I can only hope the new decade will bring us more of its kind. *Spider-man: Into The Spider-Verse* perfectly encapsulates the decade of the superhero movie by bringing a twist to one of cinemas most rebooted masked mavericks. Bringing to life a vision true to the style of the comics that inspired it, the creators

of *Into the Spider-Verse* manage to break the rules of animation with inspired creative choices and by beautifully blending multiple animation styles together with phenomenal results. This film could make the shortlist of most influential films of the decade based on its creativity in visual design alone but brings so much more. The way characters' thoughts and feelings are portrayed in this piece is entirely unconventional but undeniably real, an audience can feel every betrayal, every ounce of pain while never being too long from comedic relief. Much like the average Imperial Student, *Into the Spider-Verse* does it all:

"Much like an Imperial student, *Into the Spider-verse* does it all"

explaining the multiverse, converting non-superhero fans, giving audiences a killer soundtrack and diverse characters that are brought to life vividly, I wait in anticipation for the return of Miles Morales and co. in 2022.

Zuzanna Janusz

Film Writer

WHIPLASH (2010)

In a decade dominated by sci-fi and superhero franchises, *Whiplash*, a film about a promising young drummer whose ambition is to become a world-class musician, stands out with its



Mahershala Ali and Alex Hibbert in *Moonlight* // A24

simplicity in terms of means of expression. It's extraordinary how immersive and hypnotic it felt without digital special effects – that's due to brilliant film and sound editing. All cuts match the music perfectly and they feel so natural and spontaneous, as if the film itself was an improvised jazz piece. The beat and its pace are also essential in building up the tension on the screen.

Furthermore, *Whiplash* is minimalist in the number of characters and subplots. The main focus of the story is the interaction between the student and the teacher, and it's very clear from the beginning until the end. As such, the message conveyed by the film is very concise. *Whiplash* poses two important questions: how much should you sacrifice for a successful career? And where is the line between trying to push someone to succeed and bullying – does the end simply justify the means?

Whiplash is one of a kind, not many films are as intense and memorable. Great acting, a straightforward storyline with a

satisfying ending and the omnipresent rhythm make it one of the most important films of the decade.

Dominic Ede

Film Editor

THE SOCIAL NETWORK (2010)

Cutting it close but still making it into this decade, *The Social Network* established itself in late 2010 as one of the best films to come out of cinema in recent years. Taking source material from an inherently lacklustre subject in Mark Zuckerberg, a film about the formation of website doesn't sound like the most riveting or exciting of topics, yet it is the exact opposite.

Kicking off the decade, this film showed audiences exactly what a film should be, with a perfect script from Aaron Sorkin, a perfect soundtrack from Trent Reznor (of *NIN*), and perfect directing from David Fincher, it seems it would've been harder to make a bad film rather than a good one with such a talented line up. This set the precedence in a decade

that has now become almost defined by biopics, with every studio wanting their shot at an academy award, and so churning out (semi) non-fictional pictures year after year.

The extremely talented

"It seems like it would've been harder to make a bad film"

cast only enhanced the already outstanding script, with Andrew Garfield and Jesse Eisenberg being the real stand out performances. Again, I really have to draw back to the soundtrack here, as there are very few films that are so brilliantly scored. The electronic whirring along with strung out synthesizers perfectly encapsulate the landscape that the plot is centred around, with an extremely unique and iconic sound. As each brilliant piece of this puzzle slotted together, it defined itself as one of the most important scenes of the decade.

FILM

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Knives Out (2019)

FILM

KNIVES OUT



Director: Rian Johnson
Script: Rian Johnson
Starring: Daniel Craig, Ana de Armas, Jamie Lee Curtis, Chris Evans, Toni Collette

Dominic Ede

Film Editor

It's not often that a film starts getting almost unanimous praise from critics, so when this murder mystery from Rian Johnson started to garner attention from almost every direction, it left me wondering: what makes this film so good?

It centres around the family of Harlan Thrombey, a wealthy crime novelist, who is

found having slit his own throat the morning after his 85th birthday. Benoit Blanc (Daniel Craig) is hired anonymously to try to uncover whether it was truly a suicide, or whether there was "foul play" (which I can tell you, there is).

Knives Out is definitely a traditional 'whodunit' film, but also, it isn't. It's traditional in the sense that it follows a familiar structure, yet manages to avoid all tropes of those lesser that have come before it. With a devilishly clever and witty script, Johnson has managed to sidestep the sombre atmosphere,

"A devilishly clever and witty script"

all whilst maintaining this high level of suspense. Where other films may have lingered with a serious tone, *Knives Out* propels itself forward with moments of levity that brighten each scene, whilst the suspense keeps you hooked; not to give any spoilers, but this plot would really make Agatha Christie proud.

Where this film also sets itself apart from a plethora of others is the social commentary running throughout: Harlan Thrombey's death will mean the inheritance of his significant fortune to his family members, but who will be getting what? Taking aim at the upper-class elite with themes of inherited wealth, nepotism, and strong right-wing views, Johnson pokes fun at the wealthy, littering the

script with sharp digs and excellent plot details highlighting many of the obscene, eccentric characteristics of the elite. This is all presented in a very self-aware fashion, simply adding to the enjoyment and wit of the script.

Coming onto the cinematography, Johnson clearly has an eye for what he's doing. With many low angles, close ups, and panning shots, *Knives Out* definitely doesn't miss a beat when it comes to how they affect the scene. These are testament to how effective it can be for the writer to be the director, with each scene put together perfectly and often adding details that may have gone askew otherwise.

As a final mention, the whole film is tied together perfectly by an excellent (and star-studded)



The Thrombey clan // Lions Gate

ensemble cast. With Craig at the helm, donning such an expertly done southern American accent that you almost forget he's from Chester, we're taken into the world of Benoit Blanc, yet forbidden to see the inner workings of his mind. However, the most inspired actress of this film is the perfectly cast lead, Ana de Armas, who's performance as the kind-hearted Marta Cabrerias couldn't have

been more engaging and truer to the character.

If you're looking for feel-good film that goes beyond the shallow depths of many that seek to provide such levity, *Knives Out* is the perfect film to put you on the edge of your seat, and then knock you back into it with a barrage of wit and suspense to keep anyone thoroughly entertained until the very end.

The Third Man (1949): A Look at the Film Turning 70

FILM

Dominic Ede

Film Editor

Looking back at this aged and distant film allows you to visualise the significant amount of time that has passed since Felix was established in 1949, and also gives some relevant perspective in the advances cinema has made. Written by Graham Greene, the film centres around Holly Martins (Joseph Cotton) following his pursuit of the truth in finding the nature of Harry Lime's (Orson Welles) death.

For the first half of this film we're thrust into the unknown, with our

perspective being entirely that of Martins'. We're left to unpack the details of the events preceding his arrival in Vienna as we're trying to paint a picture of what's happened up to this point with Martins being drawn to Lime's lover Anna Schmidt (Alida Valli).

About one hour in, we're treated to one of the most iconic entrances of any character in the history of cinema: a shrill of a cat, a flash of light in the doorway, and Orson Welles introduces himself into this film as Lime, grabbing our attention immediately. Here we see the full themes of the film revealed to us, with morals beginning to go askew as we're shown the true nature of Harry Lime.

Welles' performance in this film is characteristically brilliant, stealing the show every time we're greeted with him on screen; the scene on the Riesanrad with the now infamous speech showcases his casual ability to draw the audience in, both charismatically and effortlessly.

With the soundtrack written and performed entirely on a zither by Anton Karas, the almost spellbinding twangs and plucks wholly set the mood for the film, as it examines themes of morals, deceit, and love. The cinematography also brilliantly reflects the plot and nature of the film. We're often given 'wonky' camera angles, shifting the axis ever-so-lightly as

we swap between characters in dialogue, leading to a feeling of disorientation and uncertainty that was so present in Vienna at the time. We're also given iconic shots in the sewer chase scene, with silhouettes painted in the

dimly lit passages, culminating in an exhilarating ending between Lime and Martins.

Given more space to write this review I would have liked to touch on the dynamic between Martins and Schmidt, examining

slight details in the interactions between the two that were brilliantly written. But as it stands all I'll say is that the final scene of this film couldn't have been better; a fitting end to a brilliant film.



Who is The Third Man? // London Films

FILM

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Mind the Gap: Movies to Look Out for this Break

Six films to look out for in the cinema over the Christmas break

FILM

Jasmin Daley

Film Writer

It's cold, you're bored, and your friends from home are looking for something to do. Look no further than our list of new releases to keep you entertained while we're away.

BLACK CHRISTMAS: 12th December

A loose remake of the 1974 fan favourite Christmas movie. As the nights grow colder and darker, girls on a university campus are killed by an anonymous stalker. Perfect for anyone looking for their Christmas and slasher fix all wrapped up into one.

JUMANJI: THE NEXT LEVEL: 13th December

Smolder Bravestone and the gang are back in this sequel to save their friend from the virtual world of Jumanji. With more deadly terrains and even deadlier animals, the challenge intensifies as two pensioners are sucked into the game too.

STAR WARS: THE RISE OF SKYWALKER: 19th December

Forty-four years after it all started, twenty years after Jar Jar Binks, and two years since swole Kylo Ren, 'the Skywalker saga' gets its final instalment this Christmas. Jedi vs. Sith. Resistance vs. First Order. I'd advise seeing this before twitter ruins it for you.



The Rise of the Skywalker // Walt Disney Studios Motion Pictures

CATS: 20th December

Tom Hooper directs his next musical film after *Les Misérables* to bring to life Lloyd Webber's musical, *Cats*. Sure to provide you with mind-blowing choreography and amazing vocals that will hopefully distract you from that oh-so-awful CGI.

LITTLE WOMEN: 26th

December

A remake of the classic novel with Saoirse Ronan, Emma Watson, Timothee Chalamet and Meryl Streep. This family drama follows the March sisters as they grow up in the aftermath of the American Civil War.

1917: 10th January

Directed by British director Sam Mendes (*American Beauty*). Two young soldiers are entrusted to deliver news to over 1,600 soldiers of a deadly attack. With Oscar buzz surrounding it already, something to look out for in this movie is how it appears to be one continuous shot from start to finish.



The little women // Sony Pictures Releasing

Festive Favourites

'Tis the season... to forget about your end of term assignments and watch a load of Christmas films

FILM

Charlotte Arrand

Film Editor

Since it is the season, I thought I would make a list of my go-to Christmas films for the December period. They aren't going to be ground breaking - I'm sure you will have watched them before - nor will they be films I consider impressive, however they give me that warm festive feeling and get me excited for Christmas. So, if the Imperial workload is suppressing your Christmas spirit, throw one of these

on and you're bound to feel a bit more merry.

LOVE ACTUALLY

Love it or hate it, with Colin Firth, Hugh Grant, Alan Rickman, Emma

Thompson, and many more, you can't deny it has a killer cast. Even though it's not really a Christmas film, but a romantic-comedy, it really is a Christmas classic and I doubt you'll manage to



Kevin and his tormentors // 20th Century Fox

survive the season in the UK without seeing it on the telly at least once.

HOME ALONE 2: LOST IN NEW YORK

I feel like not many people agree with this, but I definitely favour the second instalment in the *Home Alone* franchise over the first (who even cares about the rest?). It has all the fun of the first film, but is set in New York City, and who doesn't dream of a Christmas in New York?

HARRY POTTER

Of course *Harry Potter* films aren't in anyway

Christmassy, but I can't dissociate them from Christmas. There are few things more comforting than staying in to watch *Harry Potter* on a cold winter's day and I'm sure we've all participated in a *Harry Potter* TV marathon around this time of year.

HOW THE GRINCH STOLE CHRISTMAS

This adaptation of the classic story by Dr. Seuss has been a firm Christmas favourite of mine for as long as I can remember. Maybe its nostalgia, but I love everything about this, from Jim Carrey's interpretation of the

Grinch, the songs to the Who's little upturned noses. Personally I don't think you can be too old to enjoy this.

IT'S A WONDERFUL LIFE

It's a Wonderful Life is just a brilliant film in itself, but with the added festivities, it becomes one of my favourites. Growing up, my siblings and I had this film forced upon us by our parents annually. I may have found it slightly frustrating then, but now I find this story about a man on the edge of a suicide attempt being shown the importance of his life by an angel so touching.

TELEVISION

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The Marvelous Mrs. Maisel (Seasons 1 and 2)

Before another binge session of the newly released Season 3, let's take a walk down memory lane recapping the first two seasons

TELEVISION

Season 1



Season 2



Creator: Amy Sherman-Palladino **Starring:** Rachel Brosnahan, Alex Borstein, Michael Zegen

Jia Qi Tan

Television Editor

Amazon Prime Video's *The Marvelous Mrs. Maisel* is a period comedy-drama set in 1958 Manhattan, New York. It follows the self-discovery journey of Mrs. Miriam "Midge" Maisel, a housewife-turned-stand-up-comedian. It's created by Amy Sherman-Palladino who is best known for creating the cult classic *Gilmore Girls*. Since its initial release in 2017, the show has been well-received, most notably earning 34 Emmy nominations and winning 16. Believe me, it's definitely worth every hype.

The premise begins with Mrs. Maisel (played by Rachel Brosnahan), an upper-class Jewish American housewife whose husband has an affair with his secretary and leaves her, and from there unexpectedly stumbles upon a career in stand-up comedy. The story plays out as Mrs. Maisel faces immense pressure from her family to return to the so-called regular life all whilst she shows herself in a male-dominated industry. There aren't a lot of elements but the few that it has are fleshed out well

to always keep the plot interesting enough to move forward, coupled with absolutely delightful characters delivering witty line after line. There's always something to look forward to in the story, but the highlight of the show has to be the characters.

The character of "Midge" is an interesting one - it's so natural to fit every expectation of an elegant 50's lady without being overly stereotypical. She is likable from the very beginning - smart, chatty, graceful, and unbelievably hilarious. Sherman-Palladino's sharp writing has molded a multidimensional character with incredible one-liners, and Brosnahan's superb acting brings this character to life. I especially love how the theme of feminism is explored through the lens of Mrs. Maisel, where she seeks feminism not

for the sake of it but is rather motivated by her passions. This perfectly captures the essence of the awakening social movement fueled not by sudden revelations but simple everyday matter.

The supporting cast also shapes this show in many ways - I love how each and every single

"Social movement fueled by simple everyday matter"

one of them is portrayed. First I was beyond thrilled when I saw Lenny Bruce (played by Luke Kirby) appearing in the first episode. If you didn't

know, Bruce is a well-known stand-up comedian of the time in real life. In the show, Bruce serves as a friend and champion of Midge. I can understand why Sherman-Palladino could not resist incorporating such a character - and I'm all for it. Second of all Susie Myerson (played by Alex Borstein) is Midge's manager; every scene with both of them is a definite laugh-out-loud. Midge's family - her husband Joel (played by Michael Zegen), Rose Weissman (played by Marin Hinkle), and Abe Weissman (played by Tony Shalhoub) all are such fun and characteristic roles that helps build a necessary layer to the show.

Another favourite theme of mine explored in *The Marvelous Mrs. Maisel* is the idea of "tragedy fuels comedy," which I feel like we have

all known all along but no one really points it out. Midge's monologue hits so close to heart and best summarises the rising genre of tragicomedy, "Comedy is fueled by oppression, by the lack of power, by sadness and disappointment, by abandonment and humiliation. Now, who the hell does that describe more than women? Judging by those standards, only women should be funny." This is also exemplified by Phoebe Waller-Bridge's *Fleabag*.

Last but not least, we cannot have a review of this show without shedding light on its outstanding costume design. Let's have a round of applause for the costume designer Donna Zakowska, who took the extra mile and custom-made all of the costumes to stay true to the 50's fashion. Midge's

wardrobe stars the timeless, classic "New Look" silhouette that accentuates the hourglass figure with an emphasis on the shoulder line and the waist. I love Midge's top-to-toe rouge pink outfit with a tea-length dress and monochrome coat and matching beret and purse. Every detail comes together to shape to the role of Mrs. Maisel, where through fashion we can see how she's still putting her best foot forward, embracing life with confidence and cheer.

The third season premieres on December 6, 2019, on Amazon Prime Video. It's currently at the top of my binge-watch list, and I am in desperate need of a healthy dose of the fifties comedy, fashion, and charm. To quote Mrs. Maisel, "Thank you and good night."



Mrs. Maisel (Rachel Brosnahan) as a stand-up comedian // Amazon

TELEVISION

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Best of the decade: Editor's choice

Television editor Ozbil ranks ten of his favourite TV shows of the decade

TELEVISION

Ozbil Ege Dumenci
Television Editor

Let me start this by saying this is by no means an exhaustive list. I'm sure there's shows that I haven't got around to seeing yet that are just as great or even better than the stuff on this list. So, before you get all angry at me for not including Breaking Bad or Westworld on the list, it's only because I didn't include anything I haven't seen every episode of. I do seem to be partial to a good comedy (a fact I hadn't quite realised until I had to make this list). Another running theme in this list seems to be that all these shows have made me... feel? Not necessarily feel anything in particular... just, all the feels. Without further ado, here are the shows that I really enjoyed the last ten years.

1. Schitt's Creek (2015 - present)

My love for this show is something else. I'll admit that I was late to the party, having started to watch the show just as its fifth season was about to conclude. Now, fully caught up, I am doing a complete rewatch of the series ahead of its final season, premiering in January. Schitt's Creek is perhaps the funniest show I've ever seen, putting its characters through the most ridiculous situations, although still finding a way to remain real and grounded. The first few seasons are pure comedy gold. However, starting with its second season finale, the show evolves

into something so much more, displaying character growth across the board that is unparalleled. If you're still not on board, please be my guest and jump on.

2. Parks and Recreation (2009-2015)

Parks and Rec is probably the first sitcom that I fell completely in love with. Set in a fictional town in Indiana called Pawnee, the show focuses on the employees of the Parks and Recreation department of the local government. Each character in Parks and Rec is iconic. As if that's not enough, it's given birth to one of my favourite sayings in the entire universe; Treat Yo' Self. Finally, unlike other entries on this list, the ending of the show was absolutely perfect, with just enough fan service to please the viewers, and a 100% commitment to everything the show has been over the years.

3. Fleabag (2016 - 2019)

Having been born as a one woman stage show at first, it's no surprise that its TV show adaptation has become a complete hit. Phoebe Waller-Bridge navigates the character effortlessly, and explores that it truly means to be human. It's a special show. Even the funniest jokes has a deeper meaning that gives the show its unique tone - one which makes you and breaks you at the same time.

4. Veep (2012 - 2019)

Chronicling the adventures of Selina Meyer, the Vice President of the United States (VP, Veep for short), the show has

been vastly popular on the other side of the pond. Adapted from the British comedy, The Thick of It, Veep is a display of the cutthroat culture in politics. Julia Louis-Dreyfus has pretty much won every single award under the sun for her performance as the fictional vice president, and deservedly so. Veep is a show with no likeable characters, who are at worst horrible human beings, and at best, absolutely incompetent. And it is glorious.

5. Orange is the New Black (2013 - 2019)

I always think of Orange as the OG Netflix original show. Although the initial hype around the show died down long before the series concluded, it has made a mark in my brain, mainly for its poignant storytelling. Despite its occasionally annoying characters, the show found a way to keep touching on important, extremely relevant issues sensitively yet with a firm standpoint. I may not always agree with them, but I commend them for doing and saying things most would be scared to.

6. The Good Place (2016 - present)

Following her untimely death, Eleanor Shellstrop finds herself at the Good Place (in other words, heaven), only to quickly realise that she doesn't belong there. For the majority of the first season, despite wondering where they'd take the show, I was convinced that the show would remain a simple study of what makes humans good or bad. There could only be so much trouble in paradise, you know?



I didn't know I could care so deeply about these Schitt's Creek characters... and deeply flawed ones at best // Pop TV

(See what I did there?) I was wrong. With what I can only describe as a genius twist, the show became something else. Another shocking twist at the end of season two also changed the game for the viewers. Although the third season was slightly wonky, it did have some of the highest highs of the entire series (Janets, anyone?). Set to conclude in the next few months, The Good Place has been a pleasure to watch. Who doesn't love Kristen Bell anyway?

7. The Crown (2016 - present)

I've always had a mild fascination with the Royals. Turns out, so has everyone else, given the popularity of this show. Now in its second cast (following the conclusion of season 2, Olivia Colman and Tobias Menzies took over the roles from Claire Foy and Matt Smith to portray older versions of Queen Elizabeth II and Prince Phillip respectively). Overall, the show is breathtaking and elegant. It has some of the best acting on television, with both iterations of the Royal Family delivering

a masterclass in acting. I for one cannot wait to feel like I'm peeking into the Buckingham Palace.

8. Game of Thrones (2011 - 2019)

On one hand, it hurts me to put this show this low on the list, but also hurts me to put it this high. While it was still being adapted from books, the show was excellent. Had the quality been kept up, it would have easily topped this list. However, once the showrunners surpassed the source material at the end of season 5, the quality of the show went downhill. The final season specifically was so rushed that it left pretty much every viewer dissatisfied. At its best, though, the show delivered some of the biggest moments of TV history. I don't regret watching it one bit, but I regret watching that finale.

9. Black Mirror (2011 - present)

This is a weird one, as it doesn't follow the structure of a conventional show. Each episode is independent of the rest, and they all touch on the

impact of technology on people's lives in one way or another, mostly leaving the viewers feeling terrified or broken. Its recent, 'choose-your-own-adventure'-type episode was pretty much revolutionary, and honestly quite fun. Obviously, some of the stories they opt to tell are better than others, but when it's good, it tends to be excellent.

10. The Big Bang Theory (2007 - 2019)

One of the longest running sitcoms on American TV, The Big Bang Theory is one of the defining shows of the decade, providing an enjoyable glimpse into the lives of a group of scientists. As the show started to focus more on relationships and to abandon the science jokes and character building, the quality did suffer slightly. However, having recently concluded its run, the ending felt true to what the show has always been about. Friendship.

TELEVISION

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Best of the decade: Editor's choice

Television editor Jia ranks ten of her favourite TV shows of the decade

TELEVISION

Jia Qi Tan

Television Editor

Choosing and ranking the best TV shows of the decade might have been the most daunting task especially in the era of "Peak TV" where every provider churns out quality pieces at an unprecedented rate. But I've managed to narrow the list down to ten. I'm sure I have missed many gems, and this list is not the most objective (I do have a soft spot for comedies), but here we go:

1. Fleabag (2016 - 2019)

Fleabag as previously mentioned is undoubtedly my favourite show of all time. What Phoebe Waller-Bridge has created can only be described as a masterpiece - every second of it delivers something unexpected. The way it breaks the fourth wall is a necessary touch but also incorporates the sort of ambiguity that I thought was exclusive to literature - each sentence carries a different weight. You get to delve deep into the character's mind while the narrative continues. If there's a textbook on the history of television shows, I firmly believe that Fleabag deserves its own section.

2. Breaking Bad (2008 - 2013)

I went in for the premise of high-school-chemistry-teacher-turned-drug-dealer (honestly who wouldn't?), and little did I know what I was in a ride for. I can't even pinpoint the best part of the show

because every aspect is simply perfect. Very few shows have managed to achieve this level of character development to the point that the first and last seasons feel like they belong to two completely different shows, yet the plot moves so naturally and builds such a convincing backstory. Every episode leaves you pondering where it will go next. It also takes brilliant acting to bring life to the complex characters. In short, AMC's Breaking Bad lives up to its hype as "one of the greatest TV shows of all time."

3. The World Between Us (2019)

I hesitated for a moment whether to include HBO Asia's The World Between Us in this list - but I figured I had to for its impact on the Asian TV scene. It is a Taiwanese series that explores the aftermath of a mass shooting, skillfully intertwining perspectives of all parties involved. It holds a special spot in my heart - my buckets of tears are all the evidence you need. The characters are exquisitely crafted; the dialogues are written and delivered with such emotional precision. I want to applaud the show creators for their brutally honest take on the uneasy topics of morality, mass-killing, human rights, and mental health. It's certainly the Taiwanese show of the decade.

4. Sherlock (2010 - 2017)

BBC's Sherlock is the modern take on Sir Arthur Conan Doyle's Sherlock Holmes detective stories, and it's the perfect balance between old and new. It's



Phoebe Waller-Bridge is transcendent both as a writer and an actress in Fleabag // Amazon Prime

a rather difficult task to put a twist on a well-known classic, but Steven Moffat and Mark Gatiss execute it flawlessly, staying faithful to its source material while adding a refreshing and inventive flare. Benedict Cumberbatch's and Martin Freeman's superb acting bring life to the classic duo. Although the last season falls short of my expectations, I still regard it as one of my favourites of the decade for its witty lines and impeccable chemistry.

5. Westworld (2016 - Present)

Diving into Westworld I was initially uncertain about the cliché AI uprising trope, but thankfully it did not disappoint - setting it in a western theme park is kind of a genius move. The highlight for me is definitely the visual stimulation - be it the meticulous special effects or the set design. Undeniably Westworld is multilayered and fascinatingly explored, brought out by its critically acclaimed cast. For all the violence and misogyny, Westworld still remains within the acceptable boundaries and nevertheless presents an interest-

ing case of humans losing humanity and androids gaining it.

6. The Marvelous Mrs. Maisel (2017 - Present)

This period-drama comedy is set in 1950's Manhattan centered around Miriam "Midge" Maisel (played by Rachel Brosnahan), an upper-class Jewish American housewife who's pursuing a career in stand up comedy after her husband has an affair and leaves her. It's simple, delightful, energetic and has an upbeat optimism that puts a smile on my face any day. There's a cheerful elegance to the fifties tied in with the universal theme of a woman finding her own voice that makes the show work.

7. Modern Family (2009 - Present)

Modern Family is a mockumentary capturing the trials and tribulations of the Pritchett families, three very different yet interconnected families. Although I have to admit that there is a decline in the later seasons, it's still neurotic, hilarious, and heartfelt. It's also very

reflective of a typical American family and is decade-characteristic, which was why I related the show in the first place when I moved to the States. It's the sort of "pick-me-up" or "feel-good" show that's a staple on everyone's rewatch list.

8. The Big Bang Theory (2007 - 2019)

The twelve-year run The Big Bang Theory tells the story of two CalTech physicists and their new neighbor next door. While many cite an inconsistency in the quality of each season, it finished with a strong ending that beautifully wraps up the twelve seasons. The geeky dynamics and nerdy references were nicely played out (except when the writers fell into the trap of stereotyping). Nonetheless, this show has accompanied me through many stages of life and can be framed as a decade-defining sitcom.

9. Killing Eve (2018 - Present)

Here we have yet another gem from Phoebe Waller-Bridge. Killing Eve is a thrilling cat-and-

mouse tale between MI6 operative Eve Polastri (played by Sandra Oh) and psychopathic assassin Villanelle (played by Jodie Comer). There's unbelievable chemistry between the pair that defines the show. Every aspect - plot, character development, set design, costume design, cinematography - is simply excellent. Unquestionably Waller-Bridge has mastered the art of storytelling.

10. Chernobyl (2019)

HBO's Chernobyl is a five-part miniseries based on the catastrophic 1986 nuclear accident in Chernobyl. It's gripping, disheartening, painfully honest, and can be best summarised with the question "What is the cost of lies?" Its focus on humans is what sets it apart from other documentaries and what makes it all the more horrifying and blunt. It's era-defining, paradigm-shifting, and well-deserved of its nineteen Emmy nominations. It's a story that needed to be told, and I'm glad HBO found the right people to tell the story.

TELEVISION

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Binge of the Week: *The Crown* (Season 3)

TELEVISION

Season 3



Creator: Peter Morgan
Starring: Olivia Colman, Tobias Menzies, Helena Bonham Carter

Ozbil Ege Dumenci
 TV Editor

Upon the initial release of the first season back in 2016, it was made very clear that the audience should not get too attached to the cast, as they would only be playing the Royal Family for the first two seasons. However, Claire Foy, Matt Smith and Vanessa Kirby, who played Queen Elizabeth II, Prince Phillip and Princess Margaret respectively, were so incredible in their roles that a large chunk of the audience, including me, dreaded to return to the show with a completely different cast.

Three years down the line, Olivia Colman, Tobias Menzies and Helena Bonham Carter have taken over the lead roles respectively, and they are absolutely wonderful.

Colman, who was announced to take over the role some months before her unexpected yet well-deserved Oscar win for playing another queen in *The Favourite*, completely nails her role. It's honestly weird how she finds a way to sound both exactly like the Queen and like Claire Foy at the same time. Most importantly, her facial expressions are priceless. Each curl of her lip, each lift of an eyebrow conveys feelings and messages very clearly. It's honestly quite magnificent. Her take on the Queen is slightly more unlikeable compared to

Foy's, though, given the source material, seems justified to me.

Bonham Carter, who has always been one of my favourite actresses is nothing short of magnificent. Usually known for her more 'out-there' roles (Bellatrix Lestrange in *Harry Potter*, Ms. Lovett in *Sweeney Todd*), this role is quite a departure for her. She is absolutely magnetic in her role, portraying the eccentric princess with surprising amount of elegance. A very prominent part of her arc this season is her bitterness - towards always being in the queen's shadow, to her lack of purpose in life. Unfortunately, though, halfway into the season, Bonham Carter sort of disappears, not really having much to do until the final episode of the season, which is my only grievance with this season. I just wanted more of her, goddammit.

It's no surprise to anyone that Colman and Bonham Carter excelled in their roles. However, the real surprise of the season is how magnificent Josh O'Connor and Erin Doherty are as Prince Charles and Princess Anne respectively. They capture the young royals with so much emotion and poise that it was hard to take one's eyes off of them every time they were on the screen. These young actors may only be a part of *The Crown* for two seasons, but given the amount of sheer skill they demonstrated with this season, I don't think we'll have to wait long to see them in more projects down the line.

One other thing that *The Crown* always excels in is its cinematography, which is once again off the charts. Each episode looks and feels like a movie, and an expensive one at that. Each shot is so



The Crown (Season 3) starring Olivia Colman // Wikimedia

gorgeous that I wish I was a royal. Then two minutes later, the show makes me realise how shit their lives must be despite the wealth, the fame and the palaces.

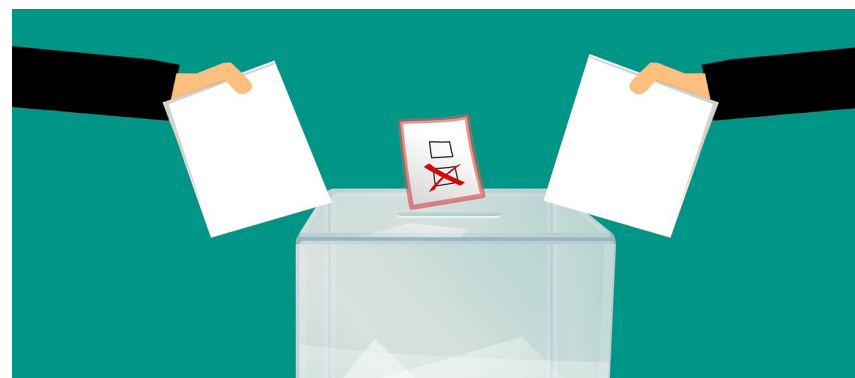
Overall, compared to the previous seasons, season 3 of *The Crown* has a slower pace. However, it is as strong as ever, and I genuinely can't wait for the next season which

will undoubtedly contain juicier content, including and not limited to the introduction of Princess Diana and Margaret Thatcher into the equation. Although the cast change took a second to get used to, each member of the new cast has managed to perfectly embody the real-life individuals that they so successfully bring to our screens.

Quick side note: over the last few weeks, there has been speculation that Imelda Staunton (Dolores Umbridge in *Harry Potter*) was tapped to replace Colman and play the queen in her 60s. This rumour has been denied by Netflix, but I am holding out hope that this comes to fruition. Staunton is perhaps one of the most underrated actresses of her

generation, mainly known for her role in the *Harry Potter* movies, which she executed so perfectly that half the world hates her guts. However, given her stage credits in the West End, and my own experiences seeing her live on stage, she would be a perfect fit.

Union Page



Winter at the Union

Come and celebrate the last day of term at the Union! On Friday 13 December from 15:00, we'll be transforming Beit into a festive funhouse. You can enjoy a boozy hot chocolate from our exclusive Baileys Winter Bar, pick up delicious food truck treats, and take a ride on the Rodeo Reindeer!

From 20:00, Winter Carnival will be kicking off across all of the Beit Bars, where you can catch the incredible Patrick Nazmi headlining.

Early bird tickets to Winter Carnival are sold out, however you can still pick up Standard Release tickets for just £4 at: imperialcollegeunion.org/wintercarnival19

General Election Hustings

With the UK general election on Thursday 12 December being described as the most important election of our generation, Imperial College Union and Imperial College Ahlul-Bayt Society have come together to host a general election hustings at Imperial.

There will be representatives from the major parties for the areas around Imperial. The debate will begin by the candidates first making their case after which we will open to questions. There will also be a chance for open questions from the floor at the end.

To find out how to submit a question in advance and to register your attendance, go to imperialcollegeunion.org/general-election.



How do you experience Imperial?

The Student Experience Survey is your opportunity to tell us about your experiences at Imperial. Whether you are a non-final year Undergraduate or a first year taught Postgraduate student, we want to hear from you.

Your responses will give College and the Union a better idea about what we're doing well, what can be improved and what else can be done to enrich student life and your experience here at Imperial.

In the past years, we've used the data collected to make real change. Ethos was refurbished and replaced all gym equipment, and the Library received funding to improve ventilation and aid cooling during the hot summer months - this was all due to your responses.

Complete the survey now and enter a prize draw to win of the 22 vouchers up for grabs at imperial.ac.uk/student-experience-survey.

Welcome Back Week

In January, the Union will be bringing the very first Welcome Back Week to Imperial. During this week, you can expect a range of activities and events to kick off the start of the new term, and to say goodbye to exams.

From Spanish Wine Tasting, to Burns Night food and drinks promotions at FiveSixEight, there's a little something each day. On Wednesday 22 January, 11:00-16:00, we will be holding our Welcome Back Fair. Come down and meet a selection of your Clubs, Societies & Projects, as well as some of our commercial partners, including Papa John's (free pizza), Little Moon's (free mochi), Contiki and Target Jobs, and see what they have to offer.

Keep up with what we have in store for you all at: imperialcollegeunion.org/wbw



09 December, Monday

Port Tasting
Union Bar | 17:30 - 19:00

11 December, Wednesday

CSP Wednesday
Beit Bars | 19:00 - 01:00

10 December, Tuesday

Super Quiz
FiveSixEight | 20:00-22:00

Games Night
h-bar | 19:30-23:00

12 December, Thursday

Festive Pub Quiz
h-bar | 19:30 - 21:30

13 December, Friday

Winter Carnival
Beit Bars | 20:00 - 02:00

Jukebox Karaoke
h-bar | 19:30- 01:00

Bop
Reynolds | 20:00 - 02:00

[f](#) [beitbars](#) [f](#) [hbarpub](#) [f](#) [reynoldsbarcx](#)



Imperial College Union

Welcome Back Fair

22 January 2020

Wednesday 22 January, 11:00 - 16:00
South Kensington Campus



ICSM LIGHT OPERA PRESENTS

CURTAINS

A COMEDY MUSICAL
WHODUNNIT





**FELIX
PUZZLES**
PULLOUT

PUZZLES

fsudoku@imperial.ac.uk

Welcome one and all, to the 70th anniversary edition of Felix! This week, we are giving you the best Christmas present ever: an 8-page puzzles pullout! Enjoy!

Also, have you been paying attention to the last few issues? We've hidden a secret word - email fsudoku@imperial.ac.uk for no points at all.

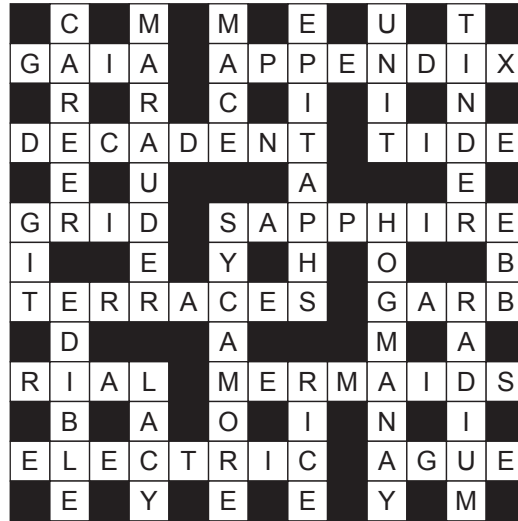
Hint: This pullout has been an absolute 3 18 7 19 to make!

FUCWIT (as of this term)

1	TNT	193.5
2	O1G	187
3	RIPPCR	186
4	F***URhys	175
5	Lochy Monsters	170
6	RIP Pat	169
7	GodBlessHK	160
8	StandWithHK_Fight4Freedom	151
9	DQ	148
10	MB	73
11	Péché	65.5
12	McL-DJ	47
13	soyboi	44
14	Carrie_with_masks_x7M	25
15	GID	23
16	CMC	21
17	DarlanB**ches&TraitorChris	14.5
18	Eléonore	3

Send your solutions to fsudoku@imperial.ac.uk before <hidden date within pullout> noon to take part in the leaderboard! (Check other side for points available)

Last week's solutions



☀	1			1	1	☀		1	☀
1	1	1	☀			1			
			2	2		1		1	
1	☀		1	☀			☀	1	
	1			2	2				
	1	1			☀			1	☀
1	☀		1	2	1			2	2
		2	☀				1	☀	



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

INSANE CRYPTOGRAM

The letters of the alphabet have been scrambled and numbered 0 to 25! A (very long) movie quote has been hidden for you to decode. A grid has been provided to help you out!

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	

Trivia:

1. The Wives of Henry VIII (by surname)
2. The War of the Worlds
3. Netball
4. Art Institute of Chicago
5. Femicide
6. They all have plays-within-plays

17 18 24 19' 9 11 19 24 10 10 3 24 13 24 16 5 6 1. 17 18 24 19' 9 11 19 24 10 10 3 5 9 13 24 16 10 5 19 9. 17 25 13 24 16' 6

1 14 24 24 11 17 19 8 25 24 6 6 5 19 20 24 12, 17 22 5 19 9 1 14 14 13 24 16 17 18 24 19' 9 3 5 23 1 12 24 19 1 13...

21 16 9 10 3 5 9 17 18 24 3 5 23 1 5 6 1 5 23 1 6 13 2 5 6 9 17 22 16 14 5 6 20 1 9 24 25 20 11 17 14 14 20.

20 11 17 14 14 20 17 3 5 23 1 5 22 4 16 17 6 1 18 24 23 1 6 5 23 1 6 13 14 24 19 8 22 5 6 1 1 6.

20 11 17 14 14 20 9 3 5 9 12 5 11 1 12 1 5 19 17 8 3 9 12 5 6 1 25 24 6 2 1 24 2 14 1 14 17 11 1 13 24 16.

17 25 13 24 16 14 1 9 12 13 18 5 16 8 3 9 1 6 8 24 19 24 10, 9 3 5 9 10 17 14 14 21 1 9 3 1 1 19 18 24 25 17 9 -

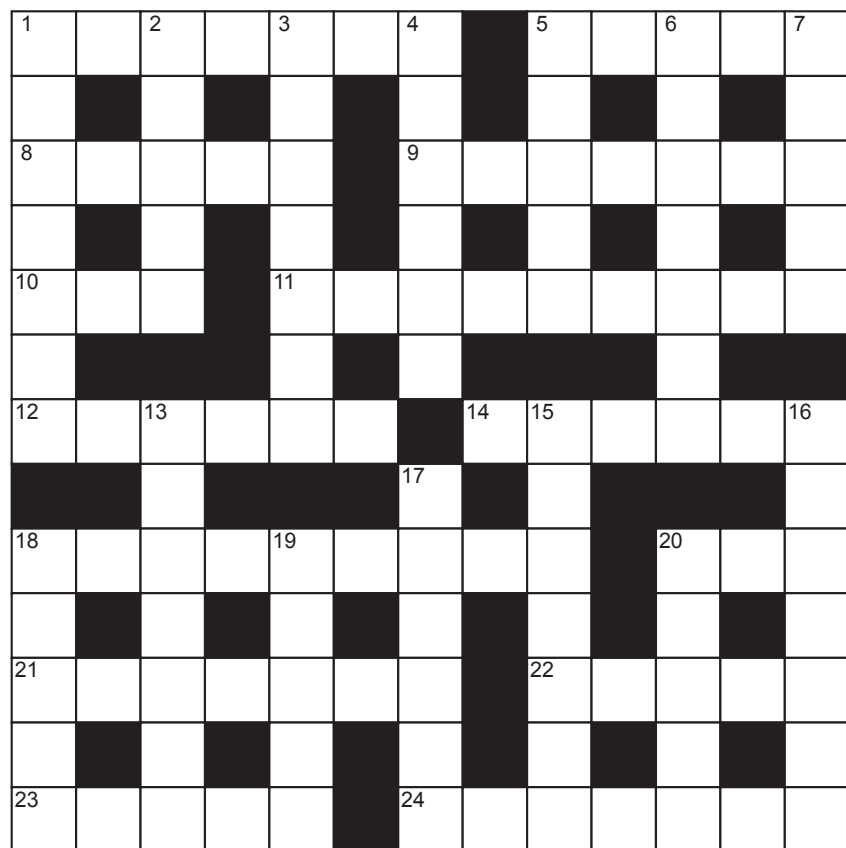
17 10 17 14 14 19 24 9 14 24 24 11 25 24 6 13 24 16, 17 10 17 14 14 19 24 9 2 16 6 20 16 1 13 24 16... 21 16 9 17 25 13 24 16

18 24 19' 9, 17 10 17 14 14 14 24 24 11 25 24 6 13 24 16, 17 10 17 14 14 25 17 19 18 13 24 16...

5 19 18 17 10 17 14 14 11 17 14 14 13 24 16.

PUZZLES

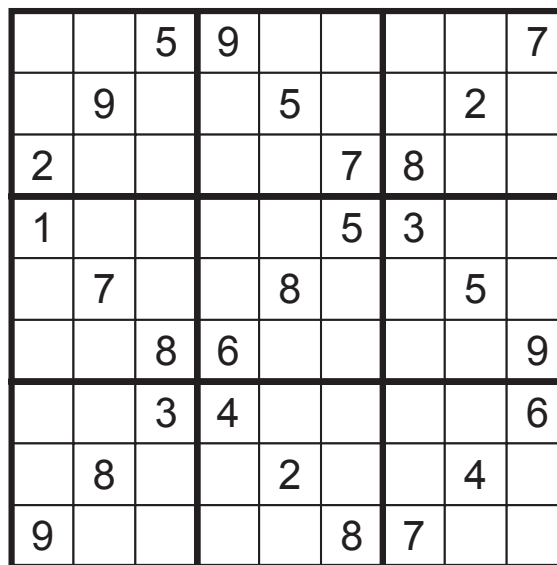
fsudoku@imperial.ac.uk



SUDOKU (by RIP Pat)

Fill all the boxes with a number between 1 and 9. A number can only appear once in a row/ column, and only once in each sub-box.

Special thanks to RIP Pat who contributed this week's puzzle!



Points available

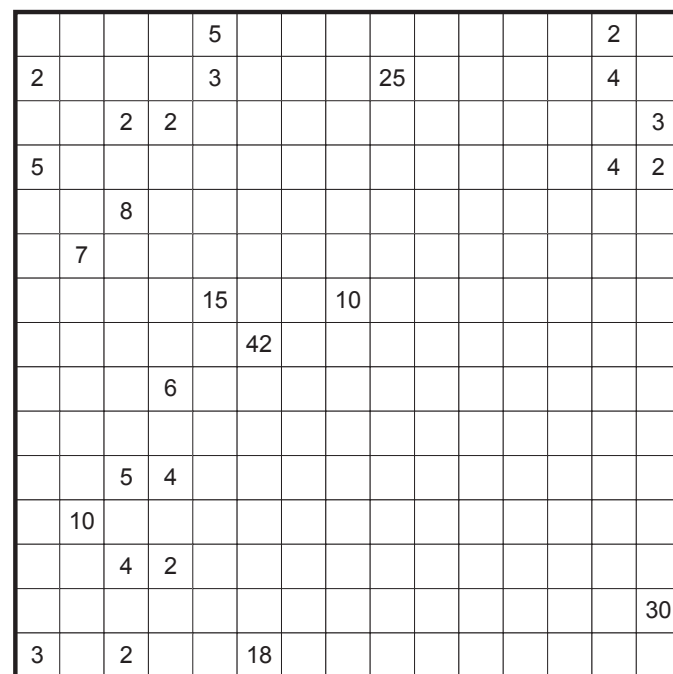
Nonogram (page 5)	1
Wordsearch (page 6)	1
Hexadecimal sudoku (page 4)	1
Total	3

This week, please note that points are only available to the first 2 people to submit and the very last person to submit before we mark at noon on a date hidden within the pullout! Winners would be submitting completely solved solutions to ALL THREE puzzles.

Send your solutions to *fsudoku@imperial.ac.uk* before < hidden date in pullout > noon to take part in the leaderboard!

SHIKAKU

Divide the square into rectangles, such that each rectangle contains exactly one number. The numbers given represent the area of the containing rectangle.



Across

1. Praise given to dark green glossy leaves (7)
5. Adjective to compare little tots (5)
8. I wish I could sleep like this rosy princess (5)
9. (slang) ghosts (7)
10. Sounds like someone visited by a smooth criminal (3)
11. Government ruled by a despot (9)
12. Cotton kimono (6)
14. Numbskulls, or dingbats (6)
18. Conglomerate, or cabal (9)
20. Sound when blood stops flowing from atria to ventricles (3)
21. ICU, CGCU, DoC, JMC, for example (7)
22. Rests in King's Valley or a museum (5)
23. What a 4th year is to a fresher (5)
24. Rhythmic flow of a sequence of sounds or words (7)

Down

1. A place amassing knowledge (7)
2. Requirement of rent-strikes (5)
3. Flying woman (7)
4. Japanese religion (6)
5. Hater (5)
6. Dorothy's windy teleporter (7)
7. The vocal consequence of smoking (5)
13. Connected, similar (7)
15. Fantine _____ of the past in the first act (7)
16. A subset of some group (7)
17. Cement (6)
18. Deathstroke's alter (5)
19. Endo- (5)
20. Light unit (5)

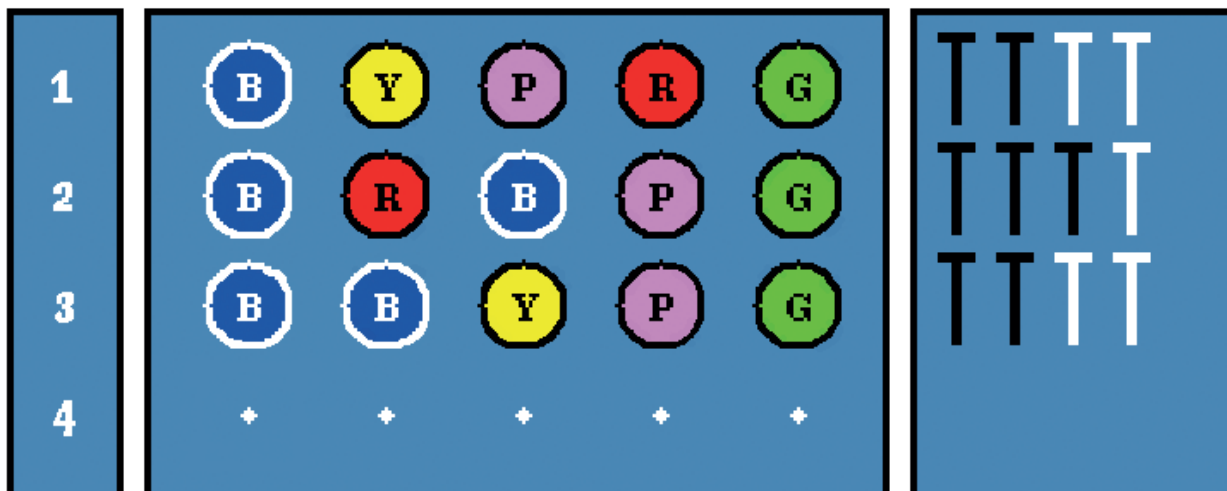
MASTERMIND

Another puzzle contribution, this time by DoC's Duncan White - Mastermind! (The puzzle, not the movie or TV show!) Do be warned though, this is a hard one! Try out easier variations here:

<https://www.doc.ic.ac.uk/~dcw/Mastermind.pdf>

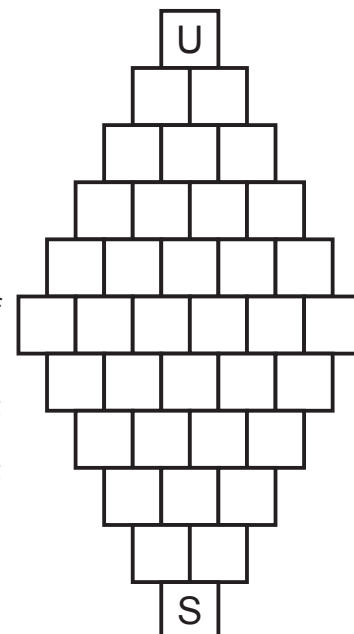
Instructions:

Try to guess the secret 5-colour code, made up of 5 colours, Blue, Yellow, Purple, Red or Green. A black peg means an exactly correct colour - the correct colour in the correct place. Of course, you are not told which position(s) contain the correct colour, simply how many positions contain the correct colour. You are given a white peg for a misplaced colour - the correct colour but in a different place! We have already gone ahead and given you 3 guesses, which will lead you to a unique solution! (Try the easier ones first!)



WORD PYRAMID

Each row is an anagram of the previous, plus or minus one letter. Clues: What we haven't left yet (2) - Regret (3) - Consumer (4) - 3Rs (5) - Reboot (6) - Protein-rich part of blood (5) - Inspiration (4) - Conjunction (3) - We (2)



PUZZLES

fsudoku@imperial.ac.uk

WORDSEARCH

27 Imperial buildings (departmental buildings, landmarks, hospitals and accomodation) have been hidden in the grid. Find them if you can!

Hint: Queen's Tower used to be called _____ Tower

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

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

PUZZLES

fsudoku@imperial.ac.uk

TRIVIA

10 categories of trivia, with special thanks to Imperial College's QuizSociety. Thank you very much for your contributions throughout this term!

Events of 2019

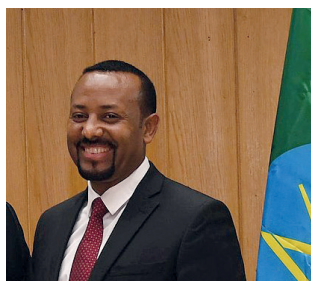
1. What did the Conservative Campaign Headquarters change their Twitter account name to during the ITV debate between Jeremy Corbyn and Boris Johnson?

2. Which celebrity, married to a footballer, ended an Instagram post with the phrase "It'sRebekah Vardy's account"

3. What was photographed in the galaxy Messier 87 in April 2019?

4. Which former French Prime Minister, who served under Presidents Giscard and Mitterrand, and went on to become President, died in September of this year?

5. This man, Abiy Ahmed, won the Nobel Peace Prize in 2019. What country is he Prime Minister of?



PM Ahmed // Wikimedia

History

6. Which country was the first to grant all women the right to vote?

7. Which King of England reigned from 1135 to 1154 and was the last King of the House of Normandy before Henry II became installed the House of Plantagenet?

8. Which group of French Calvinist Protestants were the victims of the St Bartholomew's Day Massacre in 1572?

9. What is unique about the Roman Consul Incitatus?

10. What was the name of the Dominion of the British Commonwealth which existed between 1922 and 1937? Its establishment ended the war of independence in that country.

Sport and Games

11. Which Premier League football team recently replaced manager Pochettino with Mourinho?

12. Which tournament was held at venues such as Parc Olympique Lyonnais and the Stade des Alpes in June and July 2019?

13. The Galar Region in Pokémon Sword and Shield is based off which real-world country?

14. Which board game, first published in German in 1995, contains a board of hexagonal tiles?

15. What is the full name of the Olympic Athlete who won gold at the 1968 Olympics for High Jump and popularised this pictured jumping technique?



What a flop! // Wikimedia

Science and Nature

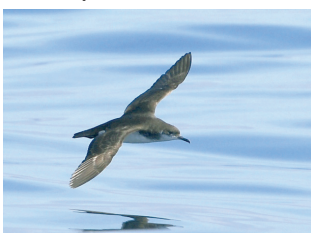
16. Which Italian born inventor is credited with the invention of wireless communication and radio?

17. What is the name for the distance function where the distance is the sum of the lengths in each direction, i.e. the path the title vehicle would take to get from A to B on a square grid?

18. What Christmas-themed word can be made by taking the first letters in order of the capitals of Spain, Ethiopia, Guatemala and Pakistan?

19. Which element has an etymology from the Greek for "artificial"? It is the lightest occurring element with all radioactive isotopes?

20. Which species with binomial Puffinus Puffinus is pictured?



Some bird // Wikimedia

Film and TV

21. Which TV show created by Michael Schur recently aired the mid-season finale of its final season?

22. Which film contains a scene where the title character runs up the steps of the Philadelphia Museum of Art?

23. Which actress won Best Actress for her role in Howard's End, and Best Adapted Screenplay for Sense and Sensibility?

24. What line from a cult 1984 movie is directly preceded by "Look, it may take a while, if you wanna wait, there's a bench over there"?

25. Which TV series features these FBI partners?



Music FBI agents // Flickr

26. Which rapper's fourth studio album cover features part of the CN Tower?

27. Which band, named for two of its original members, wrote the song "The Chain"?

28. In Guys and Dolls, the character Sky Masterson sings about which concept being 'a lady'?

29. Which jazz clarinetist and populariser of "Sing, sing, sing" premiered Leonard Bernstein's Prelude, Fugue and Riffs?

30. Which composer wrote programmatic works about the lover of Paolo Malatesta, a poem by Byron, and a Hoffmann story about Marie

Stahlbaum?

Lifestyle (food, fashion, celebrities)

31. Which fashion house famously created the "new look"?

32. In which country would you be most likely to be served tourtière and butter tarts?

33. Which member of the royal family also has the titles Countess Dumbarton and Baroness Kilkeel and lives in Frogmore cottage?

34. What drink, with a man's name, would you get from serving a mixture of gin, soda water, lemon, and caster sugar over ice in a glass that shares its name?

35. Which pastry is used to make croquembouches, gougères and religieuses?

Art and Literature

36. What image is hidden on the floor in Holbein's painting "The Ambassadors"?

37. Which author's real name was Mary Ann Evans?

38. Who is the protagonist of JD Salinger's Catcher in the Rye?

39. Which literary figure is possessed at age 11, and goes on to marry the title character? She has six older brothers.

40. Who is this painting by?



A painting // Wikimedia

Common Links

41. What profession links Jimmy Cobb, Art Blakey, Roger Taylor and Keith Moon?

42. What title links the colloquial titles of the poet of "The Lady of Shalott", Justin Welby, and the founder of the Monster Raving Loony Party?

43. What animal links the form of Zeus when impregnating Leda, the flag of Buckinghamshire and a piece for cello by Saint-Saens?

44. What item links a possession of Brünhild stolen by Siegfried and Odin's Draupnir with something that Hugo Weaving asks to be "cast back into the fiery chasm from whence it came"?

45. What links the four previous answers? (Hint: it's to do with Christmas)

Christmas!

46. What food is traditionally made on Stir-up Sunday?

47. Which carol was originally sung in Latin with the words Adeste Fideles? The last verse 'ye Lord we greet thee' is only allowed to be sung on Christmas Day.

48. The Maccabean Revolt is celebrated in which non-Christian Festival?

49. What Christmas gift does the United Kingdom receive annually from the city of Oslo?

50. What is the name of the third Sunday of advent, in which it is customary (but not required) for the priest to wear rose?

Liked this quiz? Email quizzesoc@ic.ac.uk to find out more!

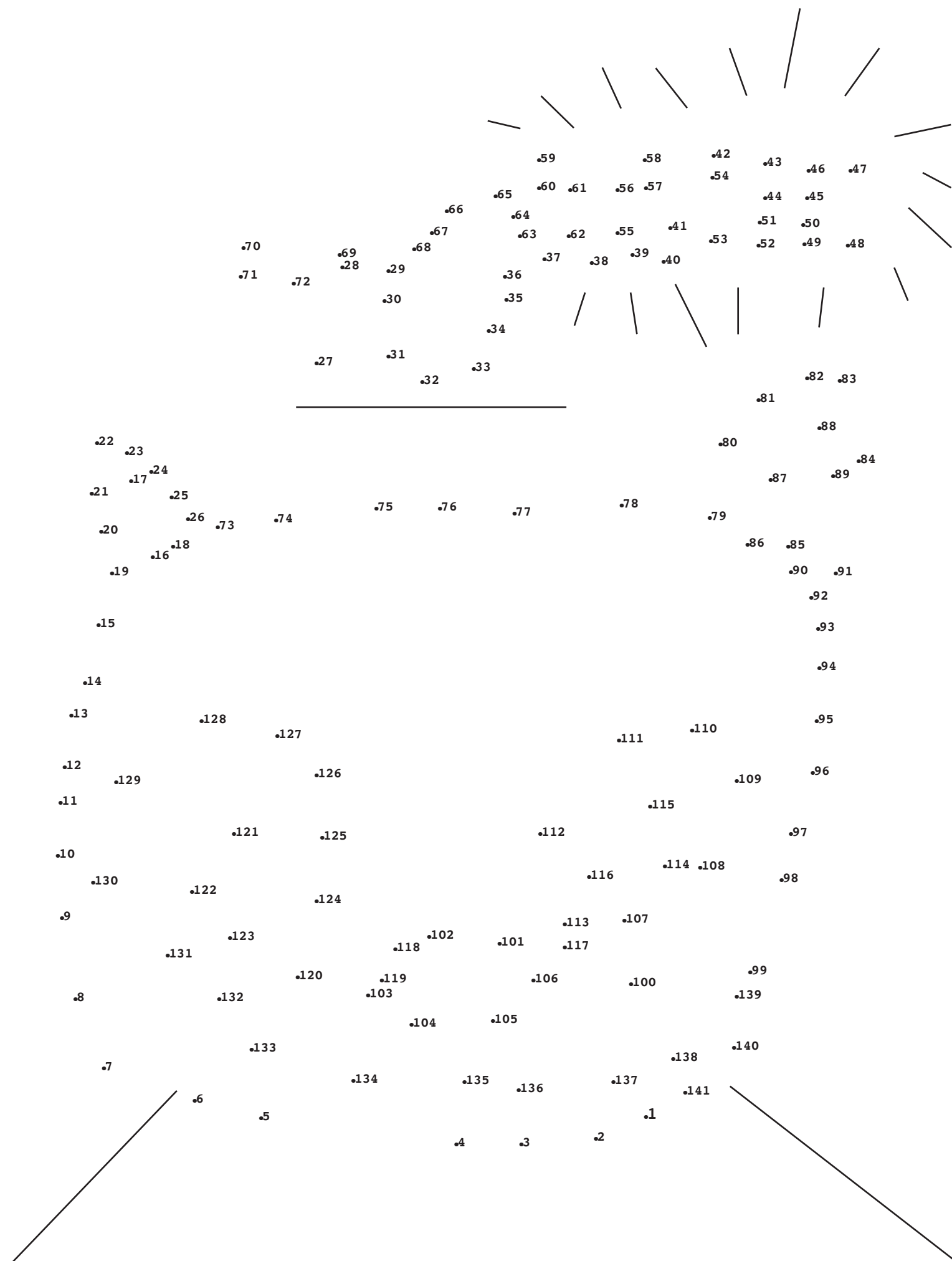
CRYPTOGRAM

The letters of the alphabet have been scrambled and numbered 0 to 25! A (wholesome) movie quote has been hidden for you to decode. A grid (to the left) has been provided to help you out!

20 4 16 1 24 3 13 16 22 20 4 23 20 17 24 3 3 11 25 9 19 23 15 5 16 22 25 9 20 6 9 25 20 4 16

11 3 25 20 22 23 22 16 23 19 15 17 16 23 10 20 9 1 10 24 3 1 23 24 24.

This is the end of the pullout (rather disapointing, I know!, and the end of the decade! We are so very glad to have ended up here with you, revising steadily for the New Year. This has been a challenging week, and many more are imminent, but we believe we can get through it together, one puzzle at a time.



11TH - 14TH DECEMBER

UNION CONCERT HALL



MUSIC

music.felix@imperial.ac.uk

A brief history of jazz

This week, to celebrate Felix's anniversary, the music editors take us through the history of popular genres, starting with jazz

MUSIC

Miles Gulliford

Music Editor

By the time this newspaper came into existence, jazz was already old – or at least middle aged. Louis Armstrong had defined improvisation, swing had already been and gone, replaced by frantic bebop, cool jazz and eventually fusion. Genres like rock and soul had begun to rear their heads, offshoots of jazz blended with blues. The fact that jazz is a force to be reckoned with years later, is a unique feat.

To newly emancipated black Americans, music represented a chance to escape poverty, as an employment unaffected by segregation. This created an armada of black musicians that would shape the music of the 20th century, and an attitude to music that can still be seen in impoverished US communities.

It is unsurprising then, that African drumming, blues and work songs of ex-slaves formed the cornerstones of what would later be labelled “America’s classical music”. Born in New Orleans, and fittingly played on instruments left over from civil war marching bands, jazz passed through the typical cycle of public outrage and eventual acceptance while incubating in prohibition era speakeasies. By the time the 30s rolled around, swing jazz was in full ... swing.

A highly danceable (and therefore popular) style, swing was built around big

bands, the most famous of which was led by Duke Ellington; these groups were characterised by their juggernaut sound and uneven, swaggering rhythms. Solos were a key component of the style, with soloists building on the foundations laid by Louis Armstrong, delivering intricate rhythms and interpolations of well-known melodies in feats of sheer virtuosity.

At the outbreak of WWII, big bands became difficult to sustain, as musicians were conscripted in droves. Smaller bands became more common, pioneered by innovators like Charlie Parker, Thelonious Monk and Dizzy Gillespie, these groups adopted increasingly complex harmonies, featuring dissonance, modulations and passing chords.

The music was significantly faster, drumming focused primarily on the ride cymbal, punctuated with off-beat snare hits and vigorous walking basslines. This was the birth of bebop, a style to be listened to, not danced to.

Whilst critically successful, and hugely influential, bebop lacked the public appeal of swing, and so gradually seceded to encroachments from a variety of other styles.

Enter Miles Davis, whose string of singles that became *Birth of the Cool* were a blueprint for a more laid-back, sweet style of jazz, which balanced harmonic intrigue with listenability – literally giving the word ‘cool’ its meaning. Developed by the likes of Stan Getz, Dave Brubeck and Paul Desmond, it wasn’t until 1959 that this relaxed style would take its next



A bebop band // Wikimedia

step forward. Davis’ *Kind of Blue*, recorded in only 2 sessions, is widely considered as the greatest jazz album of all time, here Miles revolutionised the genre for a second time. ‘Modal jazz’ focuses its improvisations on a specific scale or mode, rather than fitting each chord individually. This helps build long, rich melody lines, modals jazz also features sour chords and harmon muted trumpet, with its distinctly whispered and seductive tone. Artists like Grant Green, Wayne Shorter and Bill Evans, whose ambiguous chords created a sedate style of his own would perfect cool and modal jazz into the 60s.

Meanwhile influences from classical, distilled through the music of Duke Ellington’s one-of-a-kind big band in the 30s, was informing many artists, most notably band leader and bassist Charles Mingus, whose raucous, and frankly terrifying harmonies found success on records like *Mingus Ah Um*. John Coltrane,

after building his name on Davis influenced work, would push the boat out

“I’ve changed the course of music five times. What have you done except fuck the president?” - Miles Davis to Nancy Reagan

further, joining the like of Ornette Coleman and Don Cherry to create works of Free jazz, that defined much of the later 60s. These records are often interesting, but defy listeners to return to them, proving largely too chaotic to enjoy.

Legend has it, that while having dinner at the whitehouse, Nancy Reagan asked Miles Davis why he had been invited to the Whitehouse, to

which Davis replied:

“I’ve changed the course of music five or six times. What have you done except fuck the president?”

It was with exactly this spirit that Miles Davis set out blending funk and rock into jazz, on his seminal records *In a Silent Way* and *Bitches Brew*. These records sparked a jazz fusion renaissance, with a fascinating range of sounds, yielding classic records like *The Weather Report*, *Head Hunters* and *Red Clay*. Other artists would incorporate these influences, as well as pop into their improvisational styles, over softer backdrops. This resulted in a growing number of accessible, commercially successful records that would earn artists like George Benson the label ‘sellout’, and an awful lot of money.

Whilst notable artists: Wynton Marsalis, Roy Hargrove, Vijay Iyer were active throughout later decades and acid jazz, smooth jazz and hip-hop, a genre which heavily

sampled jazz were all around during the intermittent decades, there is notably less to be said for the late 70s through 00s.

Recently however, artists like Thundercat, Christian Scott and Kamasi Washington have sprung up, taking cues from the changed musical landscape, to deliver electronic-tinged, rhythm-driven jazz, finding a market of their own. London is notable for its thriving, jazz scene, with artists like Jacob Collier, Ezra Collective and Alfa Mist rising from a sea of promising faces. Fresh and exciting music, with a distinctly British, sensibility is still flowing in abundance, readers are advised to take note. These acts take cues from afrobeat legends like Fela Kuti and hip-hop, focusing more heavily upon rhythm, than the radical harmonies of artists like Chet Baker, in the last year alone a vertiable feast of music have been released. But that is an article for another day.

MUSIC

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Rock throughout the ages

Felix looks back at everything rock-related in the last 70 years, from rock and roll to pop-punk, heavy metal to new wave, we have it all in our (extremely) condensed summary of rock!

MUSIC

**Emily Freeman
Guthrie Ruby**

Music Editors

The roots of rock as a genre are buried deep in the other sounds of the 50s: blues, jazz, R&B and country, amalgamated together to form its own unique genre, known as rock and roll. This began in the deep south of the states, where the first electric guitars began to make a heavy impact on music. Generally, the accepted “first” rock and roll number one was Bill Haley’s ‘Rock Around the Clock’, a classic example of the laid-back boogie-inspired beat, easy enough to recreate in any modern music classroom. Whilst noticeable rock and roll artists of the 50s would also include Little Richard and Chuck Berry, the mid-50s hailed the introduction of the iconic Elvis Presley, quite possibly the first “pop star” in the world.

Whilst Presley still dominates the early years of 60s, rock music is now firmly in the charts, held there by the British invasion of legendary bands such as the Beatles and the Rolling Stones. Gradually rock and roll evolved into different genres of rock: psychedelic rock, pop rock, blues rock and folk rock. Rock started to become more expressive, and as such more political. Towards the end of the 60s with opposition to the Vietnam War picking up, artists such as Bob Dylan gain popularity. In the UK the streets are ravaged with

battles between Mods and Rockers. The first live music festivals happen and at the end of the decade the infamous summer of love has its soundtrack riddled with artists such as Jimi Hendrix, Pink Floyd, the Who and the Doors.

The start of the 70s are marked by the Beatles breaking up and Hendrix, Janis Joplin and Jim Morrison all dying at the age of 27, which relates to a decline in psychedelic rock and an insurgence of hard rock, made prominent by bands such as Led Zeppelin. The 70s would mark the introduction of the bona fide rockstar, with acts made big in the 60s suddenly touring the world in private jets. Queen played their first gig in our very own union. Hard rock has a brief ebb into glam rock, where David Bowie and T-Rex

“Rock started to become more expressive, and as such more political”

crop up, before settling down into heavy rock with bands such as Black Sabbath and Deep Purple. Anger at prog rock fuels the introduction of punk, as made famous by the Sex Pistols, which then calms down into new wave as synthesisers hit the market.

Stemming from the late 70s, the 80s showcased many of the rock genres we know and love today. New wave continued with the Joy Division



The Beatles - one of the first bands to revolutionise rock into the mainstream // Wikimedia

spin-off New Order before morphing into new romanticism and the plethora of bands which accompanied it including Roxy Music and Adam and the Ants. Post-punk appeared, fuelled by bands such as Siouxsie and the Banshees, with the genre then splitting into goth and heavy metal. The latter genre notably brought forward many bands still current today: Iron Maiden, Metallica, Slayer and Anthrax amongst others.

Throughout the decade post-punk went through a change, with underground bands such as the Smiths and the Cure finding great success and hitting the mainstream. Towards the end of the decade alternative rock and its sub-genres pop-punk and grunge began to expand, paving the way for the sound of the 90s.

In the early 90s grunge bands such as Nirvana and Pearl Jam began emerging from the pacific northwest of America. A sound heavy with distorted guitars and little polish were an evolution of the post-punk era

from the previous decade. In the UK bands like Pulp, Oasis and Blur took on the grunge genre and developed into the beginning of britpop. After the unfortunate death of Kurt Cobain, the grunge genre began to wane in popularity transforming into the more commercially acceptable form post-grunge. Skate/pop-punk exploded mid-decade thanks to independent labels giving the genre a new platform, most notably Green Day and Blink-182. Indie rock bands continued in the underground scene with legends including Pixies, Sonic Youth and Pavement.

The pop/post-punk genre had taken main stage at the end of the 90s and remained a titan for the first half of the 00s. Most of us have memories of screaming along to ‘Sk8er Boi’, ‘All the Small Things’ and ‘American Idiot’. Garage and new wave revival took hold at the same time. The Killers, The White Stripes and Interpol dominated the scene with legendary albums – *Is*

This It, White Blood Cells and Turn On the Bright Lights. Lateralus by Tool is still championed as one of the greatest heavy metal records in history. In the latter half of the decade pop was crushing rock in the charts. Independent internet radio stations and blogs helped indie rock rise from the underground and become the height of rock with stars such as Arcade Fire, MGMT, and Vampire Weekend.

This decade indie rock has become the mainstream of rock music, with a much softer and refined sound than decades earlier. However, with streaming platforms democratising the music

“A sound heavy with distorted guitars, as an evolution of the previous era”

industry all sub-genres are still surviving. Psychedelic rock in particular has taken off with Tame Impala, Mac DeMarco, King Gizzard & the Lizard Wizard, and Homeshake. Additionally, the longer standing artists of years gone by have been putting out spectacular music too, including Radiohead, David Bowie (rip), AC/DC and Nick Cave. A resurgence in post-punk led by bands like Idles and Slaves has led to modern punk, which may well be the future of the genre. No matter what, rock has endured over seventy decades and brought with it a plethora of timeless albums, fashions and memories.

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How Computers took our music away

Following the brief histories of jazz and rock, Felix now takes a look at the history of electronic music

MUSIC

Martin Flerin

Music Editor

Putting the history of a whole genre of music to paper is a mammoth task, especially for a genre as fluid and diverse as electronic music, so please forgive any oversight I may have made in trying to accomplish it. It is a story of technical innovation, experimentation, and of people coming together.

Laying the groundwork

Music has always been an art-form whose boundaries have been set by the tools that musicians had at their disposal. 500 years ago, medieval towns would wait for ages for troubadours to swing by to dish out some simple harmonies. In the following centuries, music played on carefully crafted instruments remained a luxury contained in swanky ballrooms, danced to by old men with powdered faces and wigs.

The explosion of popular music (music for the PEOPLE) in the

20th century coincided with the new-found mass-production of instruments, which made them affordable. This unprecedented availability of music for the people meant that instruments were no longer only a medium for routinised recitals of age-old melodies but also a platform for experimentation. The tried and tested was to be eschewed for fresher sounds, something which both the spirit of jazz, which took off long before electronic music, and atonal chamber compositions, whose composers began to rise at the turn of the 20th century, laid the foundations for.

Early experimentation with electronic music was limited to creative uses of the newly invented electric tape. This allowed for layering of instruments in a different way (now not solely by synchronous playing), controlling the speed and pitch of the sounds, and overall showed a glimpse that electronic recording of analogue sounds allowed for creation of sounds that traditional instruments couldn't fashion. This was followed by the invention of sine-wave oscillators, modulators, filters, mixers, and a



The TR-808 is still an icon to this day// Wikimedia

whole host of other audio manipulation equipment. Studios centred in Cologne, Tokyo, Paris, as well as the USA began to be filled by these, and the inventions eventually began to filter through to the bands of the time. Whether it was using the Theremin to add a new dimension to their sound, speeding up recordings made on tape to play with tonality (see George Martin and Strawberry fields forever), these inventions allowed for sonic experimentalism that had not been seen before. Without them, Psychedelic and Progressive rock, as well as Krautrock, would not have been possible.

But the most important invention of the 60s for the future of electronic music was the Moog modular, one of the first in a long line of synthesisers manufactured by Robert Moog. It defined the interface that synthesisers still carry to this day, and its wealth of modular sound building possibilities indirectly spawned a whole host of musical genres. Moog's name, along with Don Buchla's (Moog's brother in arms in the field of modular synthesisers), forms an important part of the lore of electronic music. Creation of completely novel

sounds was now at the fingertips of anyone with a synthesiser, and these were becoming cheaper and more ubiquitous by the day...

A tale of two cities

Modern electronic music has its roots deep in two cities of America's rust belt: motor city Detroit and windy city Chicago. The mere mention of these names brings associations to a plethora of sounds, and it was the soundscapes of these two cities that proved to be the most fertile ground for a musical revolution in the 80s.

On Chicago's side, it all started with "The Godfather of House" – Frankie Knuckles. Originally from Bronx, Frankie moved to Chicago to spin disco, soul and R&B at The Warehouse, the club which gave House music its name (because Warehouse music just doesn't sound as cool). This is also where the beautiful story of electronic music's connection with LGBTQ and minority communities begins - the warehouse was a safe space for what was initially a clientele of black gay men. Even though the genre came to encompass many communities, its roots will never be forgotten, and

its message of equality will always proliferate.

It was not just in the melodic aspect that house borrowed (or rather extensively sampled) from Disco. Disco was the soundtrack to the cocaine epidemic and the lever which lifted the ban on sexuality on the dancefloor, and it would pass on both the use of intoxicants and the emphasis on free expression through dance to its Chicago fledgling. Along with Jesse Saunders, Knuckles utilised newly commercially available drum machines in order to make disco bouncier and even more suitable for dancing. The hypnotic beat programming of the Roland TR-808 would become the rhythmic paradigm of the decade, inspiring early Hip-Hop MCs amongst others.

Jumping across lake Michigan to the border with Canada, techno was being born around the same time. It was inevitable that Detroit would be the setting for another musical explosion. Having given birth to so many great musicians just two decades prior, motor city was beginning

to lose its sparkle. The motor industry was slowing down, and the hard-edged industrial surroundings, with many warehouses going empty, was the perfect place for hard-hitting tunes to be introduced to large crowds of moody youths.

Instead of taking cues from American disco, this grittier cousin of House drew inspiration from European and Japanese synthpop, and the darker reaches of funk (ergo some of the funkier early Detroit techno took on the name Electro Funk). It was three high-school friend messing around with these robotic rhythms which came to define the genre. Juan Atkins, Derrick May and Kevin Saunderson – collectively known as the Belleville Three - would go on to make some of the most important music of the decade, found labels, and inspire millions. But first the music had to cross the Atlantic.



Look how many buttons and plugs I have, says the Moog Modular// Wikimedia



Larry Heard, another legend of Chicago, was the man who made house music deep // Merlijn Hoek

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The acid smiley epitomised a whole generation of ravers // Bob Eine

The second summer of love

When house and techno came to the UK, they very quickly caught fire. Like the British invasion of the American rock scene twenty years prior, American sounds now conquered Britain, and offshoots of the original sounds – most prominently acid house, hardcore and rave – fuelled what became known as the second summer of love. MDMA, abandoned warehouses in late-Thatcherian Britain, fields in Somerset, and masses of youths with a point to prove started a movement which still resonates in the hearts of every diligent clubgoer today.

The mud is up to your ankles, some guy named Fred keeps telling you he loves your shirt and asking you for gum, and the soundsystem spreads like a giant, throbbing spider all around the ant-colony mass of people. There are tens of thousands of you. Maybe hundreds of thousands. Why did you drive half the way across the country to jump wildly for one night only with strangers to music which sounds like it could be the score to an alien invasion? Because this is what being human is about. Seeing other people go just as nuts as you and revelling with them in the unadulterated spontaneity of the moment. As if you were naked, you are you in

your purest sense. You do it for the ecstasy.

To talk about the path of electronic music in the UK from that point on, I would need a whole new article. For the record, most noteworthy new genres over the next two decades originated here. From jungle, via DnB, garage, and finally to dubstep (almost coming full circle to a warpedly bassy version of what originally came over on the reverse techno Mayflower), the genres spawning from that first impact are both diverse and exciting.

“The mud is up to your ankles, some guy named Fred keeps asking you for gum, and the soundsystem is like a giant, throbbing spider”

When the curtain falls

No overview of the electronic music story would be complete without its current spiritual home. No city in the world has an electronic scene as vibrant

as Berlin’s. Drawing parallels with Detroit, what allowed Berlin to become the mecca of electronic music was the post-industrial landscape following the fall of the iron curtain and German reunification. The positive energy which accompanied the fall of the wall helped propel many movements for equality and peace. And whether it was love parades or protests against needless wars – the anthem of the marching in Berlin was most likely techno. The smooth and coldly melodic sound of German electronic music is one of the most vital components of the burgeoning scene.

Getting into Berghain: is it worth it or not? Standing out in the cold for hours at a time only to be told to get lost with a simple shake of the head? Getting intimidated by the mighty shades-at-night-and-white-tuxedo-wearing, face-tattooed snake charmer that is Sven (Berghain’s inimitable head bouncer)? Nervously holding your breath as he decides whether you’re worth letting in? Many have their objections.

The key to the success of Berlin’s clubs is the atmosphere that rules inside them. It is an incredible feat that they were able to translate the German nous for perfection and efficiency into something as ephemeral as clubbing. To sum up, I’ll share what a couple

who apologetically said they don’t speak German got told by some bouncers in Berlin: “Stop telling people where you’re from or who you are. *Nobody gives a fuck.*”

Electronic music is freedom: freedom of experimentation, freedom of expression, freedom of love. It is the apex on the mountain of proof that there is nothing as powerful in this world as music. In a world where little makes sense, music always holds the torch – may we march to the beat of four to the floor.

In the spotlight

Many will say that the best days of electronic music are now behind us, and that the world is in need of a new and exciting form of music. Even Nina Kraviz, the techno queen herself, has said that the last truly original new genre invented was dubstep, and that most of modern house and techno is made up of rehashing old sounds: nothing truly fresh has happened here since times of Chicago

“Electronic music is about freedom: of experimentation, of expression, and of love”

and Detroit.

I for one, disagree. The modern day beatmaker can be anyone, and we are currently experiencing a revolution of bedroom musicians. Lo-fi house especially has seen a whole everest of musicians flock to Youtube to flaunt their compositions over some faux-nostalgic VHS footage.

Indeed, it seems that electronic music is experiencing some form of revival. It has been popping up in mainstream culture with an air of reverence, and perhaps even a little bit of nostalgia. Good examples of this are Gaspar Noe’s film *Climax*, the soundtrack to which was basically a best-of album of everything from very late disco to acid house and 90s rave and breakbeat. Similarly, Saatchi Gallery, in the heart of London’s poshest neighbourhood, ran an exhibition on rave culture this past summer, which covered the second summer of love in great detail and with heartfelt sincerity.

These are examples that show that society has largely come to accept that electronic music is here to stay, and has come to appreciate the cultural significance of its roots.



Exit festival is just one example of the many electronic megafestivals in Europe // Wikimedia

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Amnioverse: a perfect album listening experience

MUSIC

Amnioverse



Artist: Lapalux. **Label:** Brainfeeder. **Top Tracks:** Momentine, Earth, Limb to Limb. **For Fans Of:** Four Tet; Bicep; Barker. *46 minutes*

Guthrie Ruby

Music Editor

I don't think I'd be offending anyone by saying that most listeners of electronic music focus more on singles than albums. When you listen to Hybrid Minds or Bicep you normally wouldn't play the whole album start to finish. However, there are electronic albums that actively

work against this listening style.

Amnioverse is an album that rewards patient listeners. I've gone through *Amnioverse* probably over 20 times now and am still enjoying the progression of motifs and sonic themes. Lapalux (aka Stuart Howard) created this project inspired by ideas of the amniotic sac, creation and the universe. Pretty grandiose ideas, but he's not claiming he has the answers. Stuart's goal was to create an album where the evolution of these ideas was explored in a consistent flowing narrative. "For me the real focus was that the whole record flowed," he says. "I worked on each song sequentially and wouldn't stop working on a session

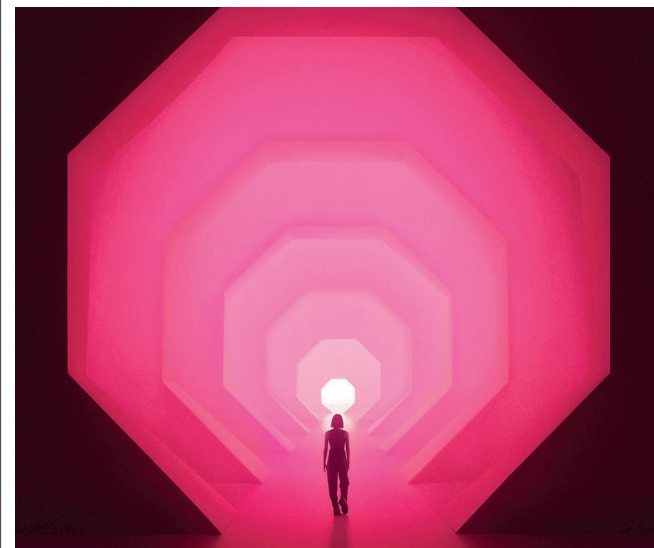
until they fitted together and told the story that I wanted to tell."

The first track "Oblivion" opens as an introduction into the world the album inhabits. The sounds used here persist and adapt throughout. Thematically, this opener is the primordial ooze from which the album grows. Shifting into the next track, "Voltaic Acid", the drums are introduced. The beat is volatile, unstable. On a first listen almost everything seems to happen at random, but the more you hear it the more you find patterns and repeated dynamics. An erratic set of drum fills will culminate in a clear hit as the beat ebbs and flows.

From track to track, motifs are repeated but

are always developed. An element from a previous track will return in a more contained and precise way. "Earth" or "The Lux Quadrant" are perfect examples. The few tracks prior to both are wonkier, less predictable and could be (depending on your taste) not as enjoyable. But the introduction of new sounds or the maturation of old ones makes for a more harmonious listening experience. In particular, "Earth" becomes the perfect microcosm of the tracks prior, it's the most single-like track on the whole album as it's just so darn lovely.

As though the spectacular narrative, growth and flow wasn't enough, all the other elements of the album excel. The production is so clean,



After a decade of Lapalux's music we get an album about creation... ironic, no? // Bandcamp

nothing sounds messy or unintended. Despite being few in number, the voice samples used are impactful and never appear unless something is gained. There are well choreographed peaks and troughs in the energy of the album, it

never becomes boring. Honestly I find it hard to fault this album.

Amnioverse is the current peak of Stuart's discography, and it seems like a pretty fitting way to finish off the first decade of his music career.

FKA twigs - Live

MUSIC

FKA Twigs



Venue: O2 Academy Brixton. **Date:** 25/12/2019. **Price:** £30.

Miles Gulliford

Music Editor

FKA twigs' gig didn't start until 9:30, by which point a large portion of the audience frustrated, having waited for over 2 hours. The curtains raised bit by bit, riling the crowd further. "This show had better be good" muttered someone behind me, thankfully, it was.

Twigs' vocals were

often restrained, she leaned on her backing track throughout the performance, typically this would be a cause for criticism, but here the choice was artistically motivated. FKA Twigs unleashed her incredible vocals at emotional climaxes of songs, and what a voice it is. Whether whispering or reaching angelic high-notes, Tahliah Barnett's voice is a force of nature, leaving concertgoers at Brixton Academy in no doubt of her vocal prowess, or the passion behind the voice. A vocal highlight came which was a vulnerable performance of 'Mirrored Heart', where twigs' voice trembled with emotional, even stifling, sobs before the final line "They just remind me I'm without

you".

An impressive element of the performance was that each song had been tweaked, with drums and percussion amplified as well as extended instrumental sections allowing for choreographed dances. Rather than relying on a backing track each instrumental was created by a trio of musicians, playing cello, electric drums and a variety of other instruments. The trio resourcefully reconstructed each track with the resources they had, giving the audience a somewhat fresh interpretation of each track. Enough praise cannot be given for this approach, a laudable effort from a primarily electronic artist to keep their live performances organic and human.

Anyone familiar with FKA twigs will be aware she came into the world of music as a dancer. With a small team of backup dancers, she executed impressive routines featuring Capoeira and at one point, pole dancing. FKA twigs rocked a series of ornate costumes throughout the evening, even the set changed halfway through the night, with a cloudy backdrop falling to reveal a scaffold like structure, atop which her backing band was playing.

FKA twigs added impressive depth to her tracks, creating one of the best shows I've seen.



A collection of Twigs' Costumes // Alison Mango



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Hip Hop: The Genre Of The Decade

MUSIC

Asad Raja
Music Editor

Undeniably, hip hop dominated this decade, having established itself as one of the most diverse yet hereditary forced in modern culture. I asked Hip Hop Soc members to pick their top 20 albums of the decade. This pretty banging consensus list is the result:

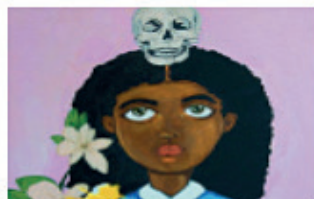
20. *Barter 6* - Young Thug (2015)



19. *4:44* - Jay-Z (2017)



18. *Telefone* - Noname (2016)



17. *Atrocity Exhibiton* - Danny Brown (2016)



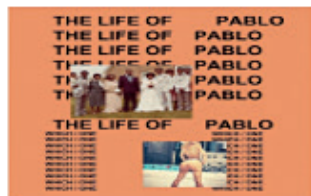
16. *Run The Jewels 2* - Run the Jewels (2014)



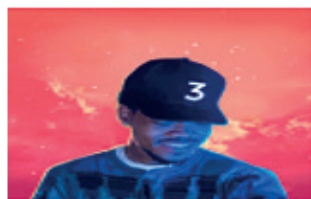
15. *DAMN.* - Kendrick Lamar (2017)



14. *The Life Of Pablo* - Kanye West (2016)



13. *Coloring Book* - Chance the Rapper (2016)



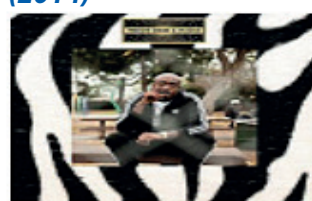
12. *DAYTONA* - Pusha T (2018)



11. *2014 Forest Hills Drive* - J. Cole (2014)



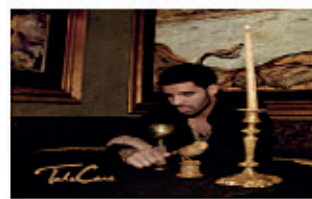
10. *Piñata* - Freddie Gibbs and Madlib (2014)



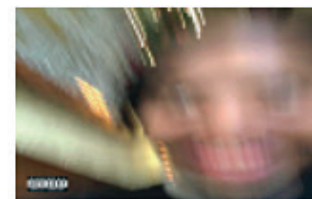
9. *Flower Boy* - Tyler, the Creator (2017)



8. *Take Care* - Drake (2011)



7. *Some Rap Songs* - Earl Sweatshirt (2018)



6. *Yeezus* - Kanye West (2013)



5. *IGOR* - Tyler, the Creator (2019)



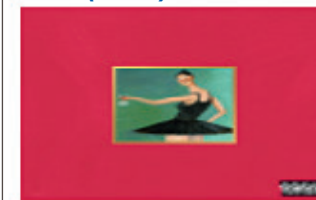
4. *KIDS SEE GHOSTS* - KIDS SEE GHOSTS (2018)



3. *good kid, m.A.A.d city* - Kendrick Lamar (2013)



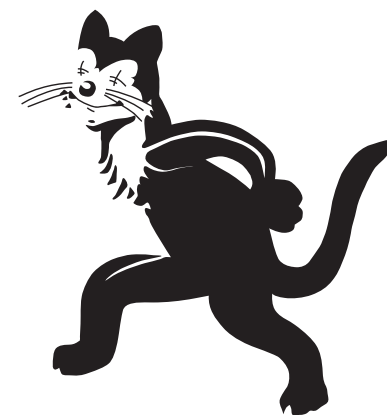
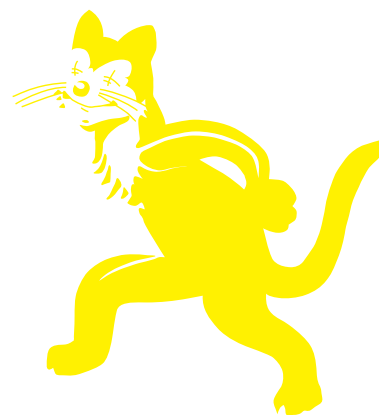
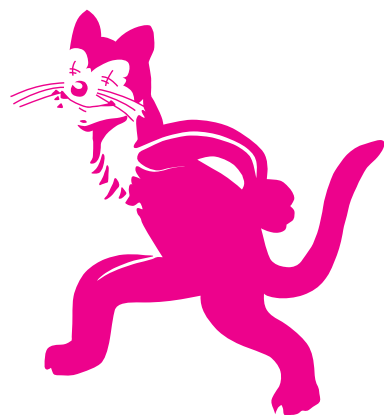
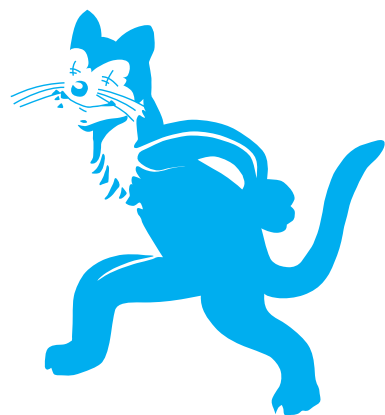
2. *My Beautiful Dark Twisted Fantasy* - Kanye West (2010)



1. *To Pimp A Butterfly* - Kendrick Lamar (2015)



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GAMES

games.felix@imperial.ac.uk

The Game Awards: Nominees, Discussion and Editor's

The Game Awards. The Oscars of video games. If you want the low-down on all things gaming this year, well you've come to the right place! This is our biggest issue in Felix yet! Three pages of celebration of the best games of the year. Death Stranding, The Outer Worlds, Resident Evil 2 Remake and plenty more coming your way!

GAMES

Freddie Ugo

Games Editor

Shitty weather, extreme fatigue and incessantly annoying Christmas music. There are many signs that the end of the year is upon us, but one that is much cheerier – and a great topic of discussion – is The Game Awards. Effectively the Oscars of video games, The Game Awards celebrates the best games of the year, with many categories from best strategy game, to best music score and of course the big daddy of them all: Game of The Year. This week we will take a look at the nominees, I will

give my opinion on what I think will win, as well as what I would personally like to see win the award.

Quick disclaimer! When it come to the Esports scene, I'm not as involved as I used to be – so I won't be covering those categories. If you want to see them for yourself, this year's nominees are available on The Game Awards website.

VR/AR Game

“For the Best Game Experience Playable in Virtual or Augmented Reality, Irrespective of Platform.”

Nominees: Asgard's Wrath, Blood & Truth, Beat Saber, No Man's Sky and Trover Saves the

Universe. As someone who does not own VR (yet), I can only speak for which games I have played at conventions. Beat Saber is an absolute blast to play especially if you love rhythm games. It is innovative and unique – I would love to see it win. I also think that Beat Saber will take the award this year as it is simply the most well-known game as well as, from what I gather from friends, the most loved game. Although with the recent surge in support for No Man's Sky I wouldn't be shocked to see it snag the victory.

Strategy Game

“Best game focused on real-time or turn-based

strategy gameplay, irrespective of platform.”

Nominees: Age of Wonders: Planetfall, Anno 1800, Fire Emblem: Three Houses, Total War: Three Kingdoms, Tropico 6 and Wargroove.

I love strategy games. This year has been great for all types, from Anno 1800's CIV-like gameplay to Fire Emblem's deep story-based gameplay. My personal favourite of the year was Wargroove. A spiritual successor to the Advance Wars' games of yore, this indie game has it all. Beautiful art, engrossing gameplay and plenty of replayability. However, I believe that Fire Emblem: Three Houses will take the award. It was a huge hit, loved by all varieties of gamers – even bringing in people that aren't typical fans of strategy games. That combined with the massive 100+ hour sink makes for the perfect award winner.

Sports/Racing Game

“For the best traditional and non-traditional sports and racing game.”

The nominees are:

Crash Team Nitro-Fueled, Dirt Rally 2.0, PES 2020, F1 2019 and FIFA 20.

I'm not going to lie, I do not like F1, FIFA, or PES, so that's off the table. The choice is between Crash and Dirt Rally. Personally, I'm on the Crash side because I have always loved battle-racing games and this is no different. Although, I can see the side of Dirt Rally lovers, it is realistic but still maintains that arcade-like charm (just don't smash into anything or you'll fuck yourself). I think Crash will win

“I would be shocked if Cadence of Hyrule didn't win the award, what a great soundtrack”

overall, mainly because it holds that bit of nostalgia (being a remake), that just elevates it slightly above Dirt Rally 2.0.

Score & Music

“For outstanding music, inclusive of score, original song and/ or licensed soundtrack.”

Nominees: Cadence of Hyrule, Death Stranding, Devil May Cry 5, Kingdom Hearts 3 and Sayonara Wild Hearts.

Music is usually what I remember the most about games, whether it's the classic do-do-dos of Cadence of Hyrule or the fast-paced beats of Devil May Cry, I still catch myself humming it from time to time. Without a doubt my favourite score was Cadence of Hyrule. The Modern remixes of the classic themes from Zelda's past are catchy, uplifting and really hit that nostalgia beat (pun intended). Being a rhythm game, I would be shocked if Cadence of Hyrule didn't win the award, what a fantastic soundtrack it has, truly.

Role-playing Game

“For the best game designed with rich player character customisation and progression, including massively multiplayer experiences.”

Nominees: Disco Elysium, Final Fantasy XIV, Kingdom Hearts 3, Monster Hunter World: Iceborne and The Outer Worlds.

Role Playing Games are really what gaming was made for. You can fully immerse yourself in a world with fully customisable characters to create and deep lore to explore. As an avid fan of the Fallout series, The Outer Worlds (developed by the original creators of Fallout), has to take the cake for me. It really allows you to play the game any way you want without punishing you for prioritising smooth-talking over combat ability



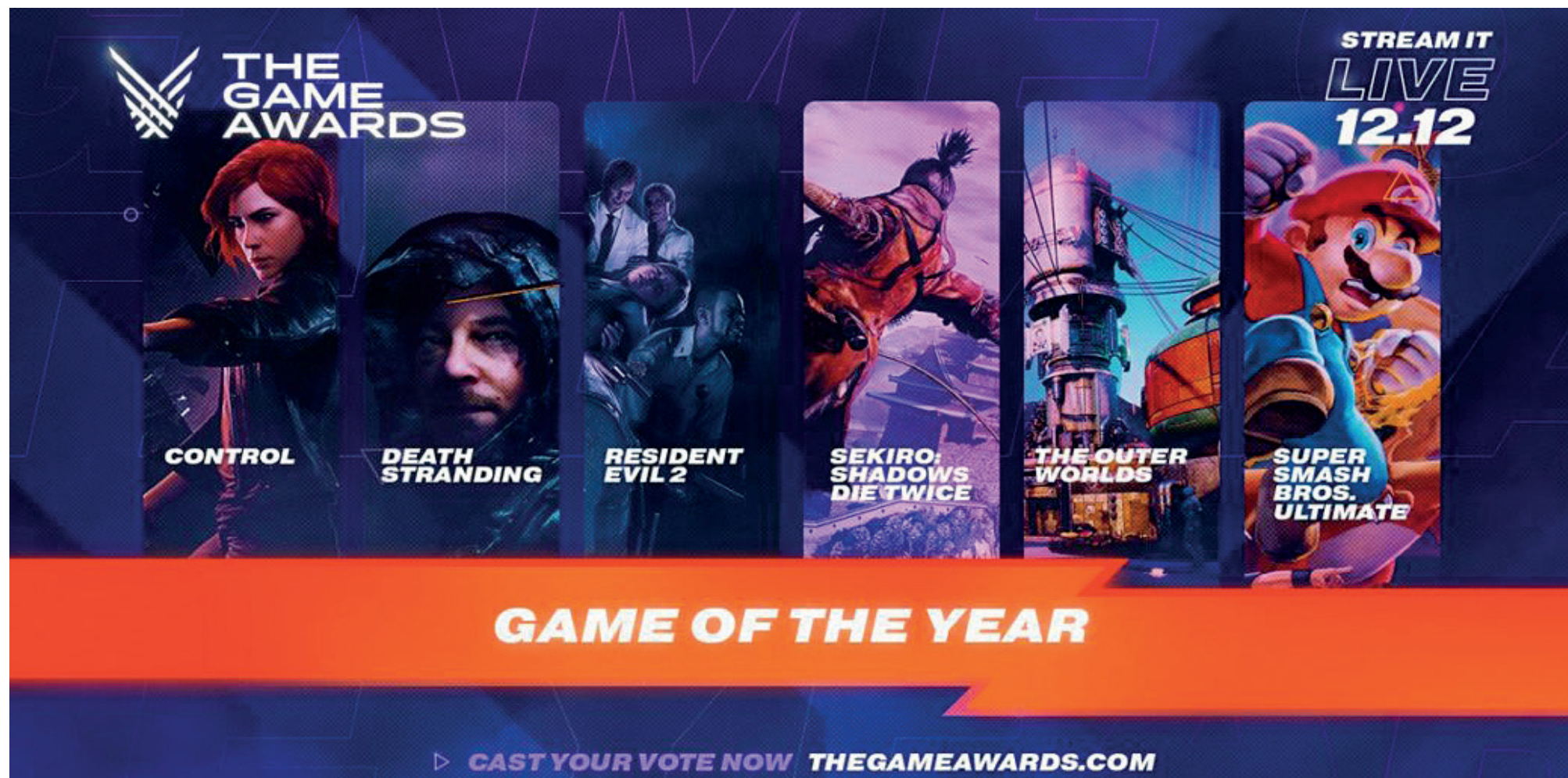
THE
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Tune in live on Twitch or The Game Awards Website on December 12th to find out whether your favourite game won // AXS

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Top Picks of the Year. Time to get Hyped!



For the first time, a remake (Resident Evil 2) appears as one of the nominees. Do you think it can win it all?// Nintendosoup

– take notes Bethesda. This also seems to be the general opinion, at least online. The Outer Worlds is a recent smash hit, leading me to think it

“The Outer Worlds has to take the cake for me... it really allows you to play the game any way you want”

is going to win. Although one cannot forget Monster Hunter or Final Fantasy XIV, both which have very large fan bases that have easily sunk 1000s of hours into their respective games.

Narrative

“For outstanding storytelling and narrative development in game.”

Nominees: A Plague Tale: Innocence, Control, Death Stranding, Disco Elysium and The Outer Worlds. This category highlights games that show that gaming itself can stand out as its own creative medium. I am torn with my choice; while A Plague Tale: Innocence has some great narrative moments, the epic cinematic feast that is Death Stranding is equally tempting me. The Outer Worlds is also a strong contender, but much of the narrative is controlled by your own choices, which I don’t consider as actual “story-telling”. I think that Death Stranding is likely to win this award. Despite coming out only recently, it is such an anticipated game, and considering how dull the

gameplay can be at times, the fact that people still play really just shows the strength of the story that much more.

Multiplayer Game

“For outstanding online multiplayer gameplay and design, including co-op and massively multiplayer experiences, irrespective of game genre or platform.”

Nominees: Apex Legends, Borderlands 3, Call of Duty: Modern Warfare, Tetris 99, Tom Clancy’s The Division 2.

I do not play many multiplayer games. I much prefer to spend my time delving into a deep single player world at my own pace. But I will always have a soft spot for Tetris and Tetris 99 hooked me from day one. A battle-royale Tetris game seemed like an insane concept, but it really, really works and I

absolutely love it. Apex Legends and Modern Warfare have the mass appeal, especially Apex legends with the millions of players that it brought on within a couple days. I feel as though Apex legends will take the award simply from how successfully it managed to make an impact in the market despite it already being flooded with games like Fortnite and PUBG.

Mobile Game

“For the best game playable on a dedicated mobile device.”

Nominees: Call of Duty: Mobile, Grindstone, Sayonara Wild Hearts, Sky: Children of the Light and What the Golf. I do not have much to say about this, I am fond of some mobile games but I do not play them much and the only one listed here that I have played is Grindstone. It is

an oddly satisfying and highly addictive game to pull out on the train, but I don’t see many people discussing it. If I had to guess on the winner, I would say Sayonara Wild Hearts, simply because out of all of these games, it is the one with the most nominations.

“The Outer Wilds is an indie game, but it doesn’t feel like it. It has such a massive scope”

Indie Game

“For outstanding creative and technical achievement in a game

made outside

The traditional publisher system.”

Nominees: Baba is you, Disco Elysium, Katana Zero, Outer Wilds and Untitled Goose Game.

Indie games are a uni student’s best friend. They don’t take up too much time and they are relatively cheap. These are all amazing contenders and it is very, very hard to choose between them. Baba is you is so unique, Disco Elysium and Outer Wilds are beautiful, Untitled Goose Game is bloody hilarious. I would choose Outer Wilds though. It is an indie game but it does not feel like an indie game. It has such a massive scope that I didn’t realise it was by an indie developer when I first played it. Unfortunately, I think it will be overshadowed by Untitled Goose Game. Goose Game took the internet by storm and everyone, even non-gam-

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Game Awards (cont.) - That's Right, Three Pages for You All!

ers, knew about the crazy antics of this rude goose. Being House House's first game, they are deserving of the reward, it's just a shame that its likely success takes away from some absolute bangers that were available this year.

Games for Impact

"For a thought-provoking game with a pro-social meaning or message."

Nominees: Concrete Genie, GRIS, Kind Words, Life is Strange 2 and Sea of Solitude. Pffffff Concrete Genie is AMAZING. The art is beautiful, the gameplay is insanely enjoyable and most importantly the message really spoke to me. I urge anyone who hasn't heard of it to pick it up and give it a go. I love it and really hope it wins this award, getting more exposure. I think it is likely to win, although Sea of Solitude and Life is Strange 2 as far as impact goes are great contenders. Covering important issues in mental and physical health, both these games hit me hard in the feels almost as much as concrete genie did.

Game Direction

"Awarded for outstanding creative vision and innovation in game direction and design."

Nominees: Control, Death Stranding, Resident Evil 2, Sekiro: Shadows Die Twice and Outer Wilds. As much as I want Resident Evil 2 (my personal favourite remake ever) to win this, I feel as though Death Stranding is more deserving. The ability of Hideo Kojima to put together all the parts of Death stranding into a cohesive cinematic gem

is undeniable, and with Geoff Keighly (organiser of The Game Awards) being good friends with Kojima, I would be surprised if it didn't win this award.

Fighting Game

"For the best game designed primarily around head-to-head combat."

Nominees: Dead or Alive 6, Jump Force, Mortal Kombat 11, Samurai Shodown and Super Smash Bros. Ultimate. I literally snorted when I saw Jump Force nominated for best fighting game this year. It has been a mixed year for fighting games, but luckily MK 11 and Smash are absolute gems. MK 11 keeps everything the fans love about Mortal Kombat, but the slower than usual gameplay disappointed some. Smash

"I urge anyone who hasn't heard of Concrete Genie to pick it up and give it a go"

Bros. on the other hand has no haters. It has over 70 unique fighters, bringing back every fighter and almost every stage from previous games. It has a 30 hour+ story mode and it still gets DLC characters despite 5 already being released (this is amazing for Nintendo). I would be amazed if it didn't win, and being my favourite franchise of all time, I would be so happy to see



Geoff Keighly, the face of the whole event, seen here at last year's game awards //Variety

it getting the recognition it deserves.

Family Game

"For the best game appropriate for family play, irrespective of genre or platform."

Nominees: Luigi's Mansion 3, Ring Fit Adventure, Super Mario Maker 2, Super Smash Bros. Ultimate and Yoshi's Crafted World. Not much needs to be said here, Super Smash Bros. Ultimate deserves this, hands down. Although, it is funny to notice that every nominee is from Nintendo.

Action/Adventure

"For the best action/adventure game, combining combat with traversal and puzzle-solving."

Nominees: Borderlands 3, Control, Death Stranding, Resident Evil 2, The Legend of Zelda: Link's Awakening and Sekiro: Shadows Die Twice. As far as action/adventure games go, this year has been great. Despite lacking many traditional

feeling action/adventure games, all the nominees here brought something unique to the table. Borderlands 3 stands out as being a blast from start to finish, but I don't think it will win. Resident Evil 2 and Zelda are both remakes so despite being amazing, I doubt they have much chance either. I would love to see Control get some recognition as it mainly flew under the radar this year, but I have a feeling that Death Stranding will also take this just because of how popular it seems to be.

Action Game

"For the best game in the action genre – focused primarily on combat."

Nominees: Apex Legends, Astral Chain, Call of Duty: Modern Warfare, Devil May Cry 5, Gears 5 and Metro Exodus. Man, oh man do I want Astral Chain to win this. From the makers of Bayonetta, Astral Chain is 100% action and gameplay and I love it. It was a sleeper hit and personally I feel like it does a

lot more than many of the other nominees. I have a sinking feeling that Apex Legends will win though, simply due to the massive audience that it grew, as well as its addictive high-speed gameplay.

GAME OF THE YEAR

"Recognising a game that delivers the absolute best experience across all creative and technical fields."

Nominees: Control, Death Stranding, Resident Evil 2, Sekiro: Shadows Die Twice, Super Smash Bros. Ultimate and The Outer Worlds.

This is the kicker. What a hard choice. Super Smash Bros. is my favourite series of games but I cannot look pass how much fun I had with RE 2, Sekiro or The Outer Worlds. Equally, the general audience seemed very drawn towards Death Stranding and control this year. It is very hard but I feel like when considering which game "delivers the absolute best experience across all creative and technical fields", Resident

Evil honestly takes the cake. Despite being a remake, the music, art, direction and gameplay are all sublime and I struggle to flaw it in any way. My personal pick would be Smash Bros. But I honestly believe this will

"Astral chain was a sleeper hit and personally I feel it does a lot more than many other nominees"

be the first time a remake wins it all.

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Halo Reach on PC: A Perfect Port, but a Flawed Game

Eight years after its release on Xbox 360, the iconic game makes its way to PC with a port by 343 Industries. Felix Games breaks down the good and the bad, tinged by a sense of childish joy and nostalgia

GAMES

Henry Alman

Editor-in-Chief

Let me make one thing clear: I am absolutely biased. Halo Reach was a significant part of my teenagedom; I spent a frankly unhealthy amount of hours sprinting around the wide landscapes and vast alien structures of the original game. It defined my social life – I'd host huge all-night LAN parties with my friends, joined online fan groups where I made years-long friends across continents and oceans. We'd all rush home from school to play every night.

I don't say this as a disclaimer, but rather to highlight that this is one of those games which means more to me – and to many others – than just the quality of its mechanics and gameplay. It's condensed and purified nostalgia, splattered across my laptop screen in glorious high-resolution in an attempt to digitally recreate the feeling of childhood itself. So many people have been excited for so long to see this game re-release in an accessible format.

Does it live up to the hype? Well, yes. And no.

The story is as engaging as ever – it's not Dostoyevsky, but it does provide a significantly more compelling story than almost any other competitive-style FPS. This is what set aside Halo from the get-go in the early 2000s; its dedication to constructing a world, lore, and – in Reach at least – characters that are engaging

and capture the sense of wonder, scale, mystery, and often downright creepiness that defines the series. Technical issues do mar the campaign experience – while multiplayer has dedicated servers, campaign is only supported via player-to-player connections, resulting in high input lag even for players in the same country.

The game itself plays fantastically at standard settings. It's a marvelous port – it's broadly unmarred by the issues we associate with the word 'port' itself. I'm still scarred by my attempts to play Dark Souls on PC using a mouse and keyboard. Halo Reach contains few of those errors. Animations play smoothly, the gunplay feels fluid and true to the original, even despite the change to a mouse and keyboard input. Halo multiplayer was always defined by its unique feeling when compared to other competitors like Call of Duty or Battlefield, one that valued aspects such as consistent aiming and longer gunfights than instant reactions and snap headshots. They have successfully maintained that sensation, and it is a joy to experience.

The AI, too, has ported successfully. Bungie was famous for its AI back in the days of Halo: CE; the utilisation of different tactics or styles of combat by different enemies made combat dynamic and frenetic, with variation in gameplay that was fundamental to the quality of the campaign. And, as ever, where the AI stutters, there is always a Brute with a Gravity Hammer to kick things back up a

notch.

However, one core gameplay issue is the heavily magnetised aim assist. They've included support for both controller and mouse and keyboard, with the key differentiator being that using a controller bequeaths the player some of the strongest aim assist in modern shooters. It can make online games feel rather unfair when trying to enjoy the PC experience many people have been waiting for, and I anticipate that the aim assist will be nerfed in future – or, optimally, an option would be enabled to search for aim assist-disabled games.

The graphical smoothness also runs into problems if a player unlocks their framerate. Players have reported issues with screen tearing, as well as animations only running at a flat 60fps – meaning that at higher frames-per-second, animations will skip over frames or, in the worst case scenario, end up non-linear due to 'averaging out' the 60fps animation over an arbitrary fps set by the player. There are also very few customisation options for graphics: a failure to utilise one of the strongest advantages PC has over console.

However, naturally, with higher resolution and enhanced graphics, the game still looks ten times better than it did in 2011 – and I played that version until my fingers damn-near bled, so I have no qualms about diving into a visually improved port. The visuals get a thumbs-up from me, with the hope that they develop customisation further during the broader Master Chief Collection develop-



Halo Reach's campaign and gameplay are as much a joy as in 2011 // 343

ment.

Sound quality is, unfortunately, a let-down. Yes, booting it up and hearing that iconic soundtrack play through my headphones had me literally jumping for joy and, of course, singing along in a broken baritone. However, the SFX are, frankly, broken – they sound significantly worse than the original game. The sound of guns, vehicles, and other effects are muffled and lacking in impact, sounding woolly – it can, at the worst moments, feel as if you are playing underwater. Halo is, I would argue, one of the few shooters in which immersion and sound are important beyond the potential impact on competitiveness, precisely because of the brilliant world-building it employs. I would anticipate a future fix for this problem, but for the moment it's the largest downside the game has.

Outside of the game itself, 343 has completely

reworked every aspect – sadly, for the worse. The old progression system, in which levels unlocked cosmetic items which were then bought with credits earned in-game, has been replaced with a substantial downgrade. New cosmetic items are only unlockable in turn as one levels up, a predetermined item per level-up. This is objectively just worse than the original's system, and it is mind-boggling that 343 decided to implement it.

Menus have also suffered, with a clunky UI and unintuitive design. Again, key features have been removed – the original allowed players in a lobby to vote between several map and game mode options, whereas this is now randomised. Why?

As a final note – 343 did make one inspired decision, which was to release the game on Steam. The platform provides two major benefits: ease

of accessibility and popularity, and a decent infrastructure for mod support. 343 have enabled mod support on the game – and this might be pure genius. The highlight of many Halo players' experiences were the custom game modes and Forge map variants – the creativity of players was massively celebrated and enabled. Now imagine what we can do with mods!

With that said, where does the verdict fall? Overall, it's a fantastic port, but a flawed game. Every aspect kept and ported from the original game works like a charm, which is high praise in itself – ports are notorious for, in short, sucking. However, the places where 343 decided to override the original design or implement their own features (such as the framerate unlocking) are almost universally flawed in their implementation or fundamental concept.

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The Most Influential Games of the Decade: *Felix* Games

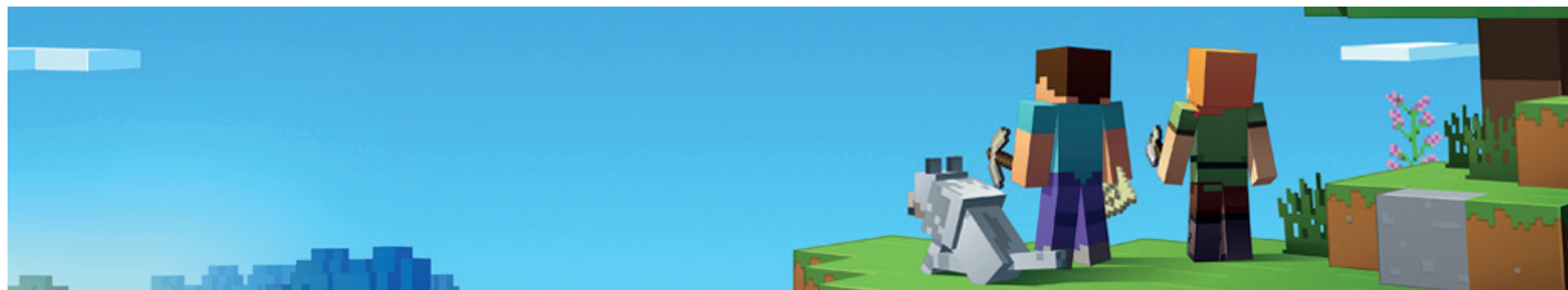
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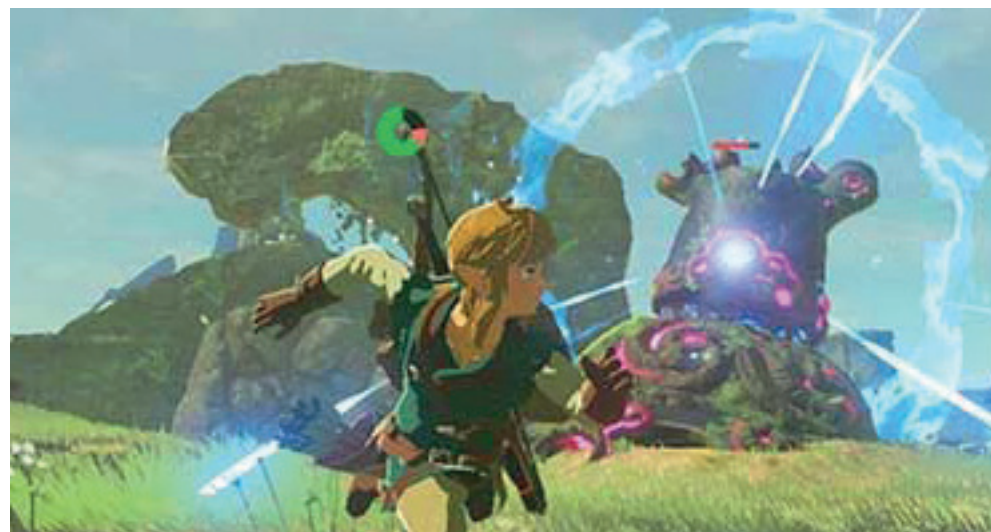
// Mojang

Shaping the Industry with Indie Genius: Minecraft

What is there to say about Minecraft? It effectively took LEGO and made a game out of it. Minecraft introduced gaming to an entire generation, while also introducing so many staple aspects of games to the industry. The ability to craft a plethora of items, explore the almost endless (randomly generated) map and build complex architecture were all huge innovations that pushed the entire industry to think differently about how they made games. It was also an indie game – one that shifted the perspective on how wildly successful they could be. Not only this, but the constant support both from Mojang, in the form of updates, and from the fan base, in the form of mods, created a rich and ever growing game that had never been seen before and will likely not be seen in the same

way for a very long time. Minecraft is the biggest selling game ever, selling over 176 million copies worldwide. I would challenge you to find anybody that does not know of the game, let alone played it... whether on phone, Xbox, Switch, PC... the list goes on!

Honourable mentions: Rocket League, Hellblade: Senua's Sacrifice, Undertale, and Celeste all also had a massive impact on the indie scene and helped to redefine what indie – and really, all – games could achieve, whether by breaking into the esports scene, addressing mental health competently, reaching AAA-quality high-fidelity graphics, or innovating gameplay mechanics.

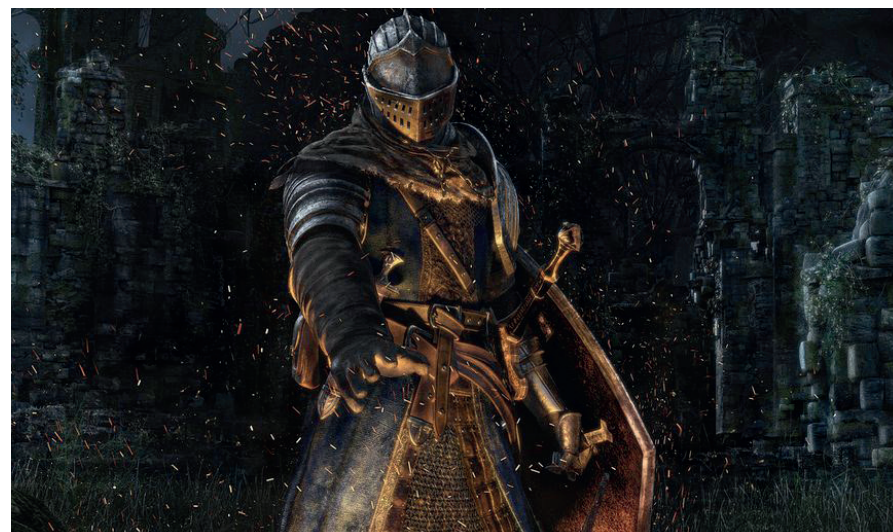


// Nintendo

Redefining Open World Adventures: The Legend of Zelda Breath of the Wild

Despite being one of a long list of amazing Zelda games, Breath of the Wild is set apart by its unique method of story-telling and its risky gameplay choices that definitely payed off. Breath of the Wild is unlike other Zelda games, or games in general, in that it lets you do whatever you want, whenever you want. If you were so inclined (as many speed-runners are) you can go immediately from the starting area straight to the final boss and beat the game. Of course, this is extremely difficult, but the very fact that you have that option, and that the difficulty of the game is self-imposed, makes for a brilliant game that no 2 people will play the same. However, everyone who does play Breath of the Wild can still bond over the beautiful story of the 4 heroes, the incredible scenery of a post-apocalyptic Hyrule and the plethora of shrines that really get your brain working. Even the somewhat questionable choices such as weapon durability can be praised for the way it makes you adapt to every new situation, such that the game always feels fresh – whether you're 2 hours in or 200.

Honourable mentions: The Witcher 3 and Mass Effect 2 both also contributed to the explosion of open-world games, and pushed the boundary in terms of immersion and scale of video game worlds.



// From Software

Genre-creator and Difficulty-definer: Dark Souls

Dark Souls is one of those games that does not come around often. It basically created an entire genre (or at least popularised it... sorry demon souls). Souls-like games are massive at the moment and it's all thanks to this gem. Putting aside the convention of modern games – being too easy – Dark Souls was BRUTALLY difficult. It honestly did require players to (sorry) Git Gud. Obviously, there is progression in the game story wise, but the real progression of the game does not come from your character becoming more powerful, but instead you, the player, becoming more powerful. As you play through Dark Souls you learn the ins and outs of the gameplay. Repetition is your best friends as you familiarise yourself with various boss' patterns and finally get that final blow. Even though the sequels are arguably better games, the original must be appreciated for the impact it had on people, the games industry and, of course, memes. Dark Souls is truly the Dark Souls of Dark Souls games.

Honourable mentions: Super Meat Boy, Bloodborne, and Cuphead all also contributed to reintroducing the concept of highly-challenging, single-player games to the gaming sphere.

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Breaks it Down

Big \$\$\$: Fortnite

Look, I'm sorry, I don't *like* Fortnite either. But its impact on the gaming industry cannot be understated. Firstly, it has popularised the Battle Royale genre leagues beyond what PUBG ever did. Secondly, it (similarly to Minecraft) encapsulated an entire generation to such an extent that simply uttering the word "Fortnite" will have 10 year olds flocking around you like an army of angry seagulls. It was influential not just for having millions of concurrent players, but also for the way it changed game monetisation. It popularised the use of a 'Battle-pass' system, where the game is free, but to get all the cosmetics you need to pay for a seasonal battle pass that can be levelled up, and as you level it up you gain rewards. This gives a sense of progression present in normal games, whilst also continually raking in cash. This is not a great thing for anyone but its influence on the industry is very noticeable, with games like Call of Duty, Destiny 2 and Apex Legends all using a very similar monetisation technique.

Honourable mentions: EA's Star Wars Battlefront, Candy Crush Saga, GTA V, and services such as Humble Bundle or the Xbox Game Pass have all – for better or for worse – drastically impacted discussions around and methods of monetising games in the last decade.



// Epic Games



// Valve

Video Games as a Storytelling Medium: Portal 2

How could a game be better than one of my favourite games of the 2000s? Well, being the sequel to one of my favourite games of the 2000s is a good start! Portal 2 exceeds in all ways, not only as a puzzle game, or a platformer game, but also as a narrative masterpiece. A key element of Portal 2's narrative success is in its premise. With the help of Wheatly, one of the funniest characters in gaming, you try to navigate yourself out of the clutches of GLaDOS and out of Aperture laboratories. It is one of the most sharply written games ever, which is not commonplace for puzzle platformers. It was so influential that there are many, many games which take clear inspiration from Portal 2, so much so that it could now even be seen as its own genre. Games such as The Talos Principle and The Turing Test would not exist if it weren't for Portal, and I think that that is truly amazing. Even putting all of this aside the gameplay is so unique and addictive that I completed the whole thing in one day, then again, the next day in multiplayer with my brother! Unlike many other games, Portal 2 is such a unique gem in its genre that you really can't play anything else like it.

Honourable mentions: too many to count. Video game narratives and themes have so wildly changed in scope, and prioritisation, in the last decade that it is impossible to isolate just a few examples of exemplary writing. Personal favourites include The Talos Principle, The Turing Test, The Last of Us, and Spec Ops: The Line.

Defining Esports, Video Games' 'Secondary Industry': League of Legends

It is hard to understate how massive League of Legends is and has been for the past decade, with player numbers and hours played maintaining industry-leading heights for longer than most games are even remembered. It single-handedly turned the MOBA genre into one of the most popular worldwide, and managed to appeal to players from every continent in a way that most prior games had abjectly failed to do. Its biggest impact, however, has been in driving the explosion of esports as an industry – one that has begun to emulate traditional sports leagues, with regulations, thousands of employees, high paychecks, franchising, and companies fighting for broadcast rights. None of it would have been possible without the fever-pitch of excitement that organically grew around League in its early years. League did not birth a genre, it birthed an industry.

Honourable mentions: Overwatch and DotA 2 also significantly contributed to the current shape of the esports market, in popularising a franchising system and venture capitalism investment, and in driving up prize pools respectively.



// Riot Games

TECH

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Tech Headlines

Your Weekly Tech News In Short Snippets

TECH

Sudarshan Sreeram
Tech Writer

Qualcomm XR2 - 5G Ready AR Glasses

At a special event in Maui, Hawaii, Qualcomm announced its new AR platform - XR2 5G, which succeeds the company's older XR1 platform that still powers a number of VR and AR experiences. According to Qualcomm, the XR2 is the world's first 5G-supported extended reality (XR) platform and that this new device would open up newer, never-before-seen experiences. The new platform takes advantage of the company's advancements in 5G and AI to reduce latency and improve the accuracy of environmental mapping. Further, the headset supports up to 8K 360 degree videos at 60 frames per second. The real highlight, however,

is the 5G aspect; with the rest of the world slowly adapting to this new, emerging technology, it's great to see that this device is already somewhat future-proof and can already handle high-resolution video streaming. The global rollout of 5G in the next two years will

"CIMON is like Google Assistant or Siri for astronauts."

dictate how these wireless mixed reality platforms evolve.

CIMON Returns To Space

The Crew Interactive Mobile Companion was the first ever autonomous free floating robot in space and the first astronaut assistant. To think of it, it's more like

Google Assistant or Siri for astronauts. Anyway, one of CIMON's purposes is to help astronauts actively cope with the lack of social interaction over extended periods of time. This seems to be an important aspect of the robot's job specification as living in space, thousands of kilometres away from home, friends, and family, can be pretty daunting. Furthermore, CIMON documents everyday life in space; to put it simply, CIMON does a lot of vlogging. CIMON-2, the next version, was delivered to the ISS with the hope to carry out more tasks aimed at helping astronauts tackle daily life from both a practical and emotional standpoint.

Reused Capsule Launched Third Time By SpaceX

As a part of the resupply mission that delivered CIMON-2 to the ISS, SpaceX has, for the third time, reused its Dragon capsule. With this launch



Nikola Tre // Nikola Motor

marking the company's 19th resupply mission, it looks like SpaceX is somewhat like an Uber for NASA. In addition to reusing the cargo modules, SpaceX has successfully recovered the first stage rocket booster, which was a part of this launch.

The New CEO Of Alphabet

Sundar Pichai, the CEO of Google has been appointed as the new CEO of Alphabet following the unexpected depart of

"SpaceX is somewhat like an Uber for NASA."

Google founders Larry Page and Sergey Brin from the company. Alphabet, for those who don't know, is a collection of companies, including Google, Waymo, Calico, Loon, and many more. The two founders would continue to be actively involved

as board members and shareholders. With this new transition, coupled with Pichai's interesting approach to products, we may soon see Alphabet's experimental projects come alive in the real world.

Qualcomm's Snapdragon 865 & 765

At the same special event, Qualcomm unveiled its new flagship Snapdragon 865 as well as the lower-end Snapdragon 765. Both processors have a focus on 5G and AI and are expected to rollout along with 5G enabled smartphones early next year. According to Qualcomm, the new 865 is "the world's most advanced 5G platform, delivering unmatched connectivity and performance for the next generation of flagship devices." It certainly looks like 2020 is going to be a big year for 5G.

Nikola Tre

In late 2017, Elon Musk unveiled the Tesla

Semi, an all-electric, futuristic-looking semi truck. It's the same event where the updated Tesla Roadster was unveiled. According to Tesla, the Semi is "the safest, most comfortable truck ever." Over the years after the Semi's unveil, a number of electric trucks have been unveiled, but one stands out - Nikola Tre. Nikola is a company that specialises in vehicles, mainly semi trucks, that operate on hydrogen fuel cells. The company announced its third semi — Tre, which is completely battery-powered and aimed at European markets. Tesla's Semi is already in production and Nikola's Tre is set for production next year. In addition to an all-electric battery powered Tre, Nikola is also set to produce a hydrogen fuel cell variant as well. With the Tesla's Roadster and a number of other electric vehicles set to release in the coming years, 2020 looks to be a big year for technology, let alone electric vehicles.



CIMON // Airbus

SCIENCE

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Sir Geoffrey Wilkinson: Imperial's honoured chemist & recipient of the 1973 Nobel Prize in Chemistry

If you're not a Chemistry student, or even if you are, you may have not heard of this famous Nobel laureate and Imperial alumnus. But you should.

SCIENCE

Arianne New
Science Writer

Any student who has been to the Chemistry Café would have seen the portrait of Sir Geoffrey Wilkinson at least once. Lying at the back of the café, with more pictures dotted throughout the building, and even his research paper framed right outside, he surely must be of importance. While most of us Chemistry students would know him, his legacy is less known throughout Imperial, and even less understood past the Department of Chemistry. Who really

was he? What did he actually do to contribute to science?

Sir Geoffrey Wilkinson was born and raised in Springside, a small village in West Yorkshire by Henry and Ruth Wilkinson, a master house painter and weaver. Since his youth, he developed an interest in chemistry through his uncle, who had started a company making Epsom and Glauber's salt for pharmaceutical companies, frequently tagging along to lab and company visits.

As a teenager, he attended secondary school in Todmorden: a school with an interesting history and eventual coincidence. He was educated by the same Physics teacher as Sir John Cockcroft,

who went on to receive a Nobel Prize in Physics in 1951, as Sir Wilkinson did himself in the field of Chemistry.

In 1939, he received a scholarship to study at Imperial, and eventually graduated with a PhD in 1941, during World War II. He continued his research at Imperial under the guidance of Professor Briscoe (whom the current Briscoe Lab in the Chemistry Building is named after), and joined the Atomic Energy Project in 1943, finding multiple new isotopes through the project. Having been advised against taking up an academic position in nuclear chemistry in England by Briscoe, Sir Wilkinson eventually returned to his original

interest of transition metal complexes.

Back at Imperial in 1956, he devoted nearly all of his time to transition metals, especially to ruthenium, rhodium and rhenium in unsaturated hydrocarbons and metal hydrogen bonds. This led to his first famous namesake - Wilkinson's catalyst - a rhodium-based coordinate complex with the formula $\text{RhCl}(\text{PPh})_3$, which Sir Wilkinson himself popularised the use of. His catalytic organometallic studies eventually furthered the development of such coordination complexes in these specific elements. This catalyst is also used widely in alkene hydrogenation, amongst others, such as hydroacylation or hydroboration, and even set the basis for ongoing asymmetric catalysis research.

His next finding, which won him the Nobel Prize in 1973, was regarding the structure of ferrocene - a compound consisting of one iron metal centre placed between two cyclopentadienes. Curious after reading about this newly synthesised mysterious compound in the news, Sir Wilkinson worked hard to determine its structure and synthesise other similar compounds, now known as metallocenes. Metallocenes are now used as active homogenous catalysts in specialized reactions, such as olefin polymerisation, with further applications being in rechargeable lithium batteries, food packaging and carbon nanotubes.

On a personal level, he is remembered as a

curious, driven and enthusiastic person. His love for Chemistry prevailed despite all setbacks, and while it may have seemed challenging to his peers and students, it proved well for his legacy.

Sir Wilkinson's story is one of passion, hard work, and eventual success.

“His contributions to the field are immense, pioneering countless catalytic processes and impacting a variety of applications”

This does not happen to everyone - in fact, it is quite unlikely to occur. It is the story of a young boy who had a passion for chemistry, chose to pursue it, and eventually achieved the prize of highest recognition in the field. He reignited interest and further developed the field of organometallics, spearheading it to become one of the major fields in chemistry and chemical research today. His contributions to the field are immense, pioneering countless catalytic processes, impacting both research and development of industrial applications. Yet, as impossible as it may sound, it truly

happened in this modern day and age. One may say that it requires a person of a certain calibre to achieve such successes, however, while knowledge and academic ability were certainly main factors, it was only made possible through his passion, perseverance, and drive to succeed.

As a fellow student, I find his story quite inspiring. There are times when all of us feel like giving up - some of us think of this occasionally, others much more often. Our degrees are also so different that it is quite impossible to compare them. However, whenever we feel down or have lost hope, it is stories like these which, be it by believing that success is more probable, or by reminding ourselves of our passions, will give us a little optimism, and just a small flame of hope that everything will eventually turn out alright.

As this issue of Felix celebrates our 70th anniversary, this article celebrated and remembered the contributions of one of our former members of staff to the field of organometallic chemistry. If you would like to know more about Sir Geoffrey Wilkinson, we recommend the piece he wrote on the official Nobel Prize website, or speaking to the many professors from the Chemistry department who remember him.



Sir Geoffrey Wilkinson at the Nobel ceremony // mediatheque.lindau-nobel.org

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Seven Decades of Discovery

From 1949 to the present day, a selection of the science that happens at Imperial

SCIENCE

Christine Parry

Science Editor

Julia Dabrowska

Science Editor

1949
Felix is launched, spawned from the University's arts and culture magazine, Phoenix, after a need for news amongst the student community.

1950s
After WWII, the scientific community realised the full potential of its possibility and power, and feels an increased need to understand the social context scientists operate in and the ethical implications of their science. Starting with an 'Ends and Means' lecture series, and moving on to one named 'General Studies', students are able to learn, debate, and discuss politics, philosophy and ethics through the early 1950s.

1953
Physicists Narinder Kapany and Harold Hopkins manage to transmit an image through a bundle of fibres, demonstrating that light can bend. Together with a development in optical cladding, this kick-starts the field of fibre optics.

1968
The HESO-1 satellite travels outside the Earth's magnetosphere for the first time. The mission of the European Space Research Organisation is headed up by Imperial Physics Professor Harry Elliott and his team, who contribute 23 instruments to the project to measure magnetic fields, cosmic rays, and other energetic particles.

1953
To meet the demands of society in supplying science and technology expertise, Imperial was required to double in size by Government, from 1953-1963. During this time, the college sees substantial expansion.

1957
The newly created Expedition Board for overseas exploration sends out its first trip to Karakorum. A student falls down a crevasse - eek! - but is securely roped-up and hauled to safety.

1966
Alan Bishop, soil mechanic pioneer alongside Alec Skempton, father of the field, leads the scientific inquiry into the failure of the Aberfan Dam. The disaster killed nearly 150 people, with over 100 of them children, as the dam overflow swept through a primary school. This leads to safety regulations within the mining industry that still apply today.

1956
Physicist Abdul Salam joins Imperial, setting up a renowned Theoretical Physics laboratory. He goes on to be made the youngest fellow of the Royal Society at the age of 33 in 1959, and in 1979 becomes the first muslim to be awarded the Nobel Prize.

1957
Imperial celebrates its 50th birthday, established in 1907 when it received its Royal Charter.

1971
Europe's first million volt electron microscope, a huge machine covering three floors in the department, is opened by Brian Flowers, Rector of Imperial College. It is used within the Metallurgy department, which changed its name to Material Sciences the same year.

1959
Helen Porter is appointed to Chair of Plant Physiology, becoming the first woman professor at Imperial. It was a while before she had company though: it was 1969 before the second female professor, Joan Woodward, was appointed; the third female professor was Janet Vida Watson in 1974, and in 1976 Anita Bailey was fourth.

1960
The first all-female overseas expedition to St Kitts by zoological students Shelagh Hocking and Anne Phillips takes place. David Attenborough gives them travel advice, although insufficient there apparently - local police refuse to allow unaccompanied women to camp in the open wilderness!

1967
The alpha-chymotrypsin enzyme's protein structure is determined by David Blow using X-ray crystallography. It joins vitamin B12 and haemoglobin as some of the first understood protein structures, with insulin following shortly after.

1974
The Imperial engineering degree is expanded to include 2 sandwich years in industry, following conclusions from the Government's Daiton report aiming to combat declining students studying STEM subjects at University, and the personal guidance of Imperial's Sir David Huddie and Hugh Ford, who foresaw an advantage for industry-prepared students. In 1978 this became the 4 year course with one industry experience year we recognise today.

2013
The first test of the iKnife in patients takes place. Invented by Imperial College's Dr Zolkan Takats, the knife is heated by an electrical current and cauterises as it cuts through tissue, reducing blood loss. However, this knife is simultaneously attached to a mass spectrometer to analyse the smoke, allowing the knife to tell the difference between cancerous and healthy tissue - in only 3 seconds!

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2015

Libby Jackson, Imperial Physicist alumnus, becomes Astronaut Flight Education Manager at the UK Space Agency during Tim Peake's launch to the International Space Station. Previously a flight director at the ISS, she is able to use her experience to run educational missions around space exploration and the launch.

2016

Imperial College opens the London DNA Foundry with investment from the Government to drive forward synthetic biology. Using a 'design, build, test, and learn' approach, the Foundry aims to provide genetic solutions to modern-day problems.

2018

Imperial research team lead by Bill Rutherford finds that photosynthesis happens 'beyond the red' limit - plants can use 'near IR' in specific conditions when supplies of IR are low. The finding shows that NIR photosynthesis is possible across many plants, and not just isolated species of cyanobacteria, (as previously thought).

2019

Applying a multidisciplinary approach to antibiotic resistance, Imperial researchers and alumni find that a small-molecule can inhibit the DNA repair mechanism in bacteria that is needed for introducing antibiotic resistance genes, thus reversing MRSA resistance to ciprofloxacin.

2006

The Membrane Protein Laboratory is launched, set up by Imperial College's Professor So Iwata, with Oxford University's Professor Dame Louise Johnson. Iwata finds the first clear evidence that proteins change shape to perform their functions, and the laboratory goes on to help determine the 3D shape changes of many proteins and drive research forward in areas including pain and photosynthesis.

2001-2002

Imperial College chemist, Professor Tom Welton, and colleagues' research finds solvents that allow for the restoration of the Japanese lacquer used on the Mazarin Chest, one of the best examples of exported lacquer in the world that formed part of the V&A museum's Japanese collection. Removed from display in 1999 to prevent further degradation, Welton's research allows it to travel the world again.

1997

Following the merger with St Mary's Hospital Medical School in 1988, Imperial College now merges with the Royal Postgraduate Medical School, and the Charing Cross and Westminster Medical School, forming the Imperial College School of Medicine.

1991

The first medical robot, PRO-BOT, is used to remove prostatic tissue from a patient in a clinical trial, developed by Professor Brian Davies, medical robotics specialist. He goes on to found medical robotics company AC-ROBOT, which specialises in hip and knee replacement.

2003

Imperial Immunologist, Professor Charles Bangham, discovers the virological synapse - the mechanism viruses such as HIV and murine leukaemia use to spread between cells.

2007

Imperial College turns 100!

2005

Professor Roger Kneebone sets up the UK's only Masters in Education course in Surgical Education. This is the first course to link up both the practical and theoretical elements of surgery with social sciences, exploring the connections between the disciplines in Biomedical Science.

1999

Imperial alumnus Andreas Mogensen graduates. He goes on to train as an astronaut, and in 2015, is the first Danish astronaut to go into space as part of the IRISS programme.

1996

Triumph! Imperial College wins their first University Challenge. After losing out to Jesus College, Oxford, in 1986, Imperial College returns 10 years later to take the title - and win it again in 2001.

1985-90

Dr. Amanda Fisher researches the molecular characteristics of the HIV-1 virus, allowing the immunosuppressive activity of the virus to be understood. Her research forms the basis for following antiretroviral treatments, and she is currently Imperial College's Head of the Institute of Clinical Sciences.

1970s-80s

Discussions of possible mergers with other institutions are mooted, including Royal Holloway and Westfield College. A humanities arm is opened in 1980, and in 1988, the college merges with St Mary's Hospital Medical School.

1986

Frederick John Perry, an aerodynamicist and Imperial College alumnus, is part of a team that capture the absolute world speed helicopter record. At Westland Helicopters, he also develops the BERP (British Experimental Rotor Programme) helicopter rotor.

1975

Richard (Dick) Selley is made Head of Geology; a leading sedimentologist who was part of the exploration team that discovered the Lyell, Murchison and Hutton oil fields. His later research also encompassed geoviticulture, or the sedimentology behind wine production. He reportedly advised on the creation of Denbies, an award-winning vineyard in Surrey, reachable within an hour's train ride out of Waterloo station.

1980

Physicist David Potter, together with ex-students, starts up PSION - Potter's Scientific Instruments Or Nothing, which goes on to become produce the Psion Organiser, the first pocket computer, in 1984.

1988

Professor Igor Aleksander becomes the Chair of Neural Systems Engineering in the Electrical Engineering Department. A leading thinker in computational consciousness, he also co-designs the first neural pattern recognition system.

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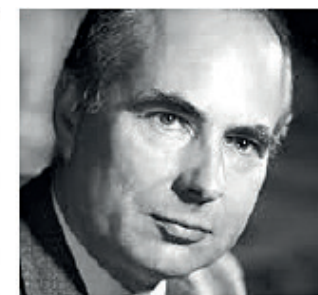
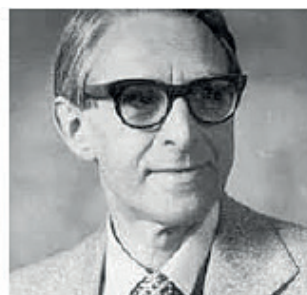
70 Years of STEM Nobel Prizes & Fields Medals

From 1949 to the present day, here are 70 awards, one per year and separated by decade, given to Imperial and non-Imperial scientists alike to celebrate their achievements in the natural sciences and medicine

SCIENCE

Christine Parry
Science Editor

Julia Dabrowska
Science Editor



1949: Walter Rudolf Hess & Egas Moniz; Physiology/Medicine; for mapping the areas of the brain involved in the control of internal organs

1950: Cecil Frank Powell; Physics; for his development of the photographic method of studying nuclear processes and for the resulting discovery of the pion (pi-meson)

1951: Max Theiler; Physiology/Medicine; for the development of a vaccine against yellow fever

1952: Felix Bloch & Edward Mills Purcell; Physics; for their independent discovery of NMR

1953: Hans Adolf Krebs & Fritz Albert Lipmann; Physiology/Medicine; for the discovery of the Krebs and glyoxylate cycles

1954: Linus Pauling; Chemistry; for his research into the nature of the chemical bond and its application to the elucidation of the structure of complex substances

1955: Hugo Theorell; Physiology/Medicine; for discovering oxidoreductase enzymes and their effects

1956: *Cyril Norman Hinshelwood & Nikolay Semenov; Chemistry; for their researches into the mechanism of chemical reactions*

1957: Daniel Bovet; Physiology/Medicine; for the discovery of drugs that block the actions of specific neurotransmitters

1958: *Klaus Roth; Mathematics (Fields Medal); solved the famous Thue-Siegel problem concerning the approximation to algebraic numbers by rational numbers and proved that a sequence with no three numbers in arithmetic progression has zero density*

1959: Emilio G. Segrè & Owen Chamberlain; Physics; for the discovery of the antiproton, a subatomic antiparticle

1960: Willard Libby; Chemistry; for the development of radiocarbon dating

1961: Melvin Calvin; Chemistry; for the discovery of the Calvin cycle

1962: John Milnor; Mathematics (Fields' Medal); for proving that a 7-dimensional sphere can have several differential structures, leading to the creation of the field of differential topology

1963: *Andrew Huxley, John Carew Eccles & Alan Lloyd Hodgkin; Physiology/Medicine; for their discoveries concerning the ionic mechanisms involved in excitation and inhibition in the peripheral and central portions of the nerve cell membrane*

1964: Dorothy Hodgkin; Chemistry; for the devel-

opment of protein crystallography

1965: Sin-Itiro Tomonaga, Julian Schwinger & Richard Feynman; Physics; for the discovery of the renormalization method in quantum electrodynamics

1966: Robert S. Mulliken; Chemistry; for the elaboration of the molecular orbital method of computing the structure of molecules

1967: *George Porter, Manfred Eigen & Ronald George Wreyford Norrish; Chemistry; for their studies of extremely fast chemical reactions, effected by disturbing the equilibrium by means of very short pulses of energy*

1968: Robert W. Holley & Har Gobind Khorana & Marshall Warren Nirenberg; Physiology/Medicine; for describing the structure of alanine transfer RNA, and linking DNA and protein synthesis

1969: *Derek Barton & Odd Hassel; Chemistry; for their contributions to the development of the concept of conformation and its application in chemistry*

1970: John G. Thompson; Mathematics (Fields' Medal); Proved jointly with W. Feit that all non-cyclic finite simple groups have even order

1971: *Dennis Gabor; Physics; for his invention and development of the holographic method*

1972: *Rodney Robert Porter & Gerald Edelman; Physiology/Medicine; for their discoveries concerning the chemical structure of antibodies*

1973: *Geoffrey Wilkinson & Ernst Otto Fischer; Chemistry; for their pioneering work, performed independently, on the chemistry of the organometallic, so called sandwich compounds*

1974: Albert Claude & Christian de Duve & George Emil Palade; Physiology/Medicine; for their innovations in electron microscopy and cell fractionation, laying the foundations of modern molecular cell biology

1975: David Baltimore & Renato Dulbecco & Howard Martin Temin; Physiology/Medicine; for work on oncoviruses and discovery of reverse transcriptase

1976: Burton Richter & Samuel C. C. Ting; Physics; for discovering the subatomic J/ψ particle.

1977: Rosalyn Sussman Yalow; Physiology/Medicine; for development of the radioimmunoassay technique

1978: Pierre Deligne; Mathematics (Fields' Medal); Gave solution of the three Weil conjectures concerning

generalizations of the Riemann hypothesis for finite fields.

1979: *Abdus Salam, Sheldon Lee Glashow & Steven Weinberg; Physics; for their contributions to the theory of the unified weak and electromagnetic interaction between elementary particles, including, inter alia, the prediction of the weak neutral current*

1980: Walter Gilbert & Frederick Sanger; Chemistry; for pioneering work in devising methods for determining the sequence of nucleotides in a nucleic acid & development of the Sanger sequencing method

1981: Kenichi Fukui & Roald Hoffmann; Chemistry; for their independent investigations into the mechanisms of chemical reactions

1982: Kenneth G. Wilson; Physics; for his work on phase transitions—illuminating the subtle essence of phenomena like melting ice and emerging magnetism

1983: Barbara McClintock; Physiology/Medicine; for the discovery of genetic transposition

1984: Carlo Rubbia & Simon van der Meer; Physics; for the discovery of the W and Z particles at CERN

1985: Klaus von Klitzing; Physics; for discovery of the integer quantum Hall effect

1986: *Simon Donaldson; Mathematics (Fields Medal); for his work on topology of four-manifolds, especially for showing that there is a differential structure on euclidean four-space which is different from the usual structure*

1987: Susumu Tonegawa; Physiology/Medicine; for his discovery of the genetic mechanism that promotes antibody diversity in the adaptive immune system

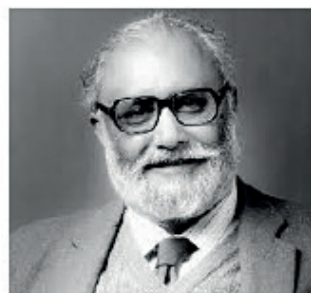
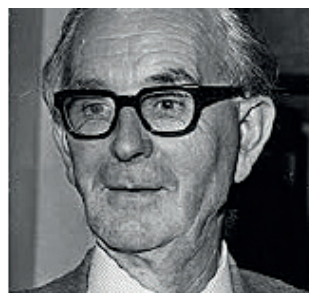
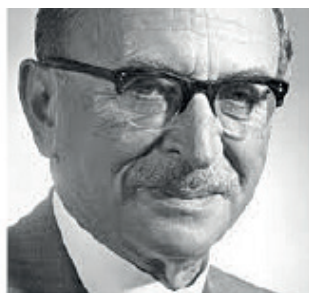
1988: Johann Deisenhofer, Robert Huber & Hartmut Michel; Chemistry; for determination of the first crystal structure of an integral membrane protein, a membrane-bound complex of proteins and co-factors that is essential to photosynthesis

1989: J. Michael Bishop & Harold E. Varmus; Physiology/Medicine; for discovering the first human oncogene, c-*Src* and then cellular origin of retroviral oncogenes

1990: Vaughan F. R. Jones; Mathematics (Fields Medal); for his discovery of an unexpected link between the mathematical study of knots and statistical mechanics, a form of mathematics used to study complex systems with large numbers of components

1991: Richard R. Ernst; Chemistry; for his contributions towards the development of Fourier transform Nuclear Magnetic Resonance (NMR) spectroscopy

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1992: Edmond H. Fischer & Edwin G. Krebs; Physiology/Medicine; for describing how reversible phosphorylation works as a switch to activate proteins and regulate various cellular processes **1993:** Kary Mullis; Chemistry; for his invention of the polymerase chain reaction (PCR) technique

1994: Alfred G. Gilman & Martin Rodbell; Physiology/Medicine; for their discovery of G-proteins and the role of these proteins in signal transduction in cells

1995: Martin Lewis Perl; Physics; for his discovery of the tau lepton

1996: Robert F. Curl Jr, Harry Kroto & Richard Smalley; Chemistry; for the discovery of a new nano-material form of carbon, buckminsterfullerene

1998: Richard Borcherds; Mathematics (Fields Medal); for his work on the introduction of vertex algebras, the proof of the Moonshine conjecture and for his discovery of a new class of automorphic infinite products.

1999: Gerard 't Hooft & Martinus J. G. Veltman; Physics; for elucidating the quantum structure of electroweak interactions

2000: Arvid Carlsson, Paul Greengard & Eric Kandel; Physiology/Medicine; for their discoveries concerning signal transduction in the nervous system, in particular dopamine

2001: Eric Allin Cornell, Wolfgang Ketterle & Carl Wieman; Physics; for synthesis of the first Bose-Einstein condensate

2002: Laurent Lafforgue; Mathematics (Fields medal); for his proof of the Langlands correspondence for the full linear groups $GL_r(\mathbb{F})$ over function fields.

2003: Paul Lauterbur & Peter Mansfield; Physiology/Medicine; for their work which made magnetic resonance imaging (MRI) possible

2004: Aaron Ciechanover, Avram Hershko & Irwin Rose; Chemistry; for the discovery of ubiquitin-mediated protein degradation

2005: John L. Hall & Theodor W. Hänsch; Physics; for contributions to the development of laser-based precision spectroscopy, including the optical frequency comb technique

2006: Andrew Fire & Craig Mello; Physiology/Medicine; for the discovery of RNA interference (RNAi)

2007: Albert Fert & Peter Grünberg; Physics; for their discovery of giant magnetoresistance, which brought about a breakthrough in gigabyte hard disks

2008: Osamu Shimomura, Martin Chalfie & Roger Y. Tsien; Chemistry; for the discovery and development of green fluorescent protein (GFP)

2009: Elizabeth Blackburn & Carol W. Greider; Physiology/Medicine; for the discovery of telomerase, the enzyme that replenishes the telomere

2010: Robert G. Edwards; Physiology/Medicine; for the development of in vitro fertilization

2011: Saul Perlmutter, Adam G. Riess & Brian Schmidt; Physics; for providing evidence that the expansion of the universe is accelerating

2012: John B. Gurdon & Shinya Yamanaka; Physiology/Medicine; for the discovery that mature cells can be converted to stem cells, creating iPS cells

2013: James E. Rothman, Randy W. Schekman & Thomas C. Südhof; Physiology/Medicine; for their groundbreaking work on cell membrane vesicle trafficking

2014: *Martin Hairer; Mathematics (Fields Medal); for his contributions to the theory of stochastic partial differential equations, in particular for the creation of a theory of regularity structures for such equations*

2015: Tomas Lindahl, Paul L. Modrich & Aziz Sancar; Chemistry; for mechanistic studies of DNA repair

2016: David J. Thouless, Duncan Haldane & John M. Kosterlitz; Physics; for theoretical discoveries of topological phase transitions and topological phases of matter

2017: Jacques Dubochet, Joachim Frank & Richard Henderson; Chemistry; for the development of single-particle cryo-electron microscopy (cryo-EM)

2018: James P. Allison & Tasuku Honjo; Physiology/Medicine; for their discovery of cancer therapy by inhibition of negative immune regulation

2019: Michel Mayor & Didier Queloz; Physics; for the discovery of an exoplanet orbiting a solar-type star

Imperial Awardees: A Summary

SCIENCE

Christine Parry & Julia Dabrowska

Science Writers

Now that you've seen the past 70 years worth of noteworthy awards, in recognition of our affiliated Imperial scientists, here's a summary of our awardees & what they achieved:

1956: Cyril Norman Hinshelwood; Chemistry; for his research into the mechanism of chemical reactions

1958: Klaus Roth; Mathematics; solved the famous Thue-Siegel problem concerning the approximation to algebraic numbers by rational numbers and proved that a sequence with no three numbers in arithmetic progression has zero density

1963: Andrew Huxley; Physiology/Medicine; for his discovery concerning the ionic mechanisms involved in excitation and inhibition in the peripheral and central portions of the nerve cell membrane

1967: George Porter; Chemistry; for his study of extremely fast chemical reactions affected by disturbing the equilibrium by means of very short pulses of energy

1969: Derek Barton; Chemistry; for his contribution to the development of the concept of conformation and its application in chemistry

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SUSTAINABILITY

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Tragedy of the Commons: A Drama That Our Planet Is Not Enjoying

SUSTAINABILITY

Xiuchen Xu

Sustainability Editor

You may have heard of the term tragedy of the commons before, or you may have even studied about it. It is an important economic concept and is extremely relevant to many of the prevailing environmental issues. The problem stems from deep within human nature and is at the heart of corruption and exploitation in this world. This article aims to provide a better understanding of this issue, focusing on the perspective of the environment.

Tragedy of the

commons occurs when there are common access resources (CARs), natural resources over which no private ownership has

“The problem stems from deep within human nature and is at the heart of corruption and exploitation”

been established due to the difficulty of excluding people from using them. CARs include forests and

pastures, fisheries, oil and gas fields, grazing lands, irrigation systems and much more. To examine one example further: with the case of oceans, it can be noted that their bodies of water are so incredibly vast that it is impractical for one fishing company to establish control of an entire ocean and stop others from using it. Economists have hypothesised that with the lack of ownership of resources, private producers will act in their own self interests and exploit common access resources to maximise profit. This exploitation is unsustainable, and will lead to the depletion of resources; this is known as the tragedy of the commons. In other words,

common access resources provide an opportunity for individuals to create profit, while spreading

“Producers will act in their self interest and exploit those common access resources to maximise profit”

negative externalities to everyone else. Indeed, the economist view of humans being completely

selfish beings is extreme and grim, however, it seems that this view is correct in the case of humans exploiting CARs.

Tragedy of the commons is at the core of a widespread range of problems that are relevant and threatening to natural resources, environments and human health. In the case of overfishing, fishing companies are not responsible for the state of the ocean, and continue to fish as much as possible to maximise revenue. Today, 90% of fish stocks are depleted. Furthermore, to save on fuel money on their return journeys, fishing boats discard their giant heavy nets into the ocean, which has accumulated to account for 50% of ocean plastics. These nets, known as “ghost nets”, cause many animals to become entrapped in them and die.

Trawling is the practice of dragging large fishing nets across the ocean floor, which is extremely damaging to marine habitat. Due to the number of animals unintentionally getting caught in massive fishing nets, there is a horrific practice of discarding the unintentionally caught animals back into the ocean, even if they’re dead. From the point of view of a single fisher, this is just what they have to do in order to be offered competitive prices on the market and compete with corporations engaged in unethical business practices.

Another important resource is forests. For example, the Amazon is considered to be the lungs of the planet, but is currently being exploited and deliberately burnt down to make land for cattle farming. In August alone, there were 30,000 fires in

the Amazon, showing the horrific nature of cooperate greed and extreme consequences of resource exploitation.

Clean air can be considered a common access resource too, as everyone have equal access. So, unless you choke someone (non-consensually, which is very illegal), you can’t exclude someone from air. Companies have no incentive of protecting clean air, and will pollute as much as they want for their own gain. The same is happening with many clean freshwater resources, which is being polluted at alarming rates.

The same concept also extends to the problem of antibiotic resistance. This is not a physical resource, but abusing the use of antibiotics is profitable for farmers to boost production and increase their number of livestock. This abuse leads to antibiotic resistant superbugs for which the consequences are suffered by all of humanity. Indeed, animals

“Amazon was burnt down for cattle farming, which demonstrates the horrific nature of cooperate greed.”

in the US consume twice as much antibiotics as humans, this statistic shows just how much antibiotics are misused in the farming industry.

The reason for such a diverse range of problems



Image of sea turtle entangled in a ghost net. Ghost nets make up 50% of all plastic pollutions in oceans and are a result of a lack of regulation // Wikimedia

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is because there is an environmental cost for everything. The fact that every resource is limited on this planet, coupled with the rising level of demand for these resources, tragedy of the commons is the outcome. These issues are large-scale and require laws, policies, and international cooperation.

However, governments are not doing their part, focusing instead on profit over protecting the planet. For example, the far-

“Current regulations for the mentioned issues are not proportionate to the threats to our planet”

right president of Brazil, Bolsonaro encouraged the exploitation of the Amazon. As part of his campaign, he promised to fundamentally subvert the country’s long-standing commitment to protect the Amazon. He encouraged and fuelled the Amazon fires, threatened indigenous communities, and is currently trying to shift the blame of the Amazon fires onto NGOs and Leonardo Di Caprio (how dare he?). The tyranny of Bolsonaro has been particularly prominent recently, with the arrests of volunteer firefighters and others who are trying to protect the Amazon.

Current regulations for the forementioned issues do not come close to opposing the threats they pose to our planet. Indeed, there are laws and regulations for fishing, but they are badly implemented, and the UK government has not done as much work as NGOs such as Greenpeace to investigate

the practices of the fishing industry. Currently, there is a fishing quota, but young cods are still being illegally discarded on an industrial scale (to make space for other more profitable catches), with the result of legal catches in UK seas likely to have been exceeded by one-third. The government also claims that 36% of England’s waters are “safeguarded as marine protected areas”. However, a recent paper in the Science journal found that the trawling intensity in European protected areas is actually higher than in unprotected places. Thus, the claims of the government are to deceive the public into believing that something is being done, while in reality, (surprise, surprise) they do nothing.

Another interesting thing to note is that those industries actually benefit very few people, and is not providing as much for the average person. Greenpeace discovered that 29% of the UK’s fishing quota is owned by only five families, all of whom feature on the Sunday Times Rich List. The meat industry is also quite monopolised, with almost all meat coming from 4 companies in the US; it is likely that the companies not only exploit animals, but also their workers, and the money ends up going to the people at the top.

As members of society, we can refrain from buying products that are contributing towards resource depletion and global pollution. This includes beef (and other animal products) which is the main cause of deforestation. British beef, which often uses soy feed imported from Brazil has huge amounts of carbon emissions. We can also choose to stop eating fish to stop contributing to the demand for an industry that is killing our oceans. There are alternatives to eating beef and fish:



The Amazon is an common access resource that is being exploited by President Bolsonaro // Flickr

many fish and chips shops in London have actually converted to being fully plant-based and as for beef, there have been businesses such as Impossible Foods Inc and Beyond Meat that provide alternatives. These companies have generated immense interest, with Beyond Meat having the world’s biggest IPO pop since 2000. Consumer choices really matter, as one person’s actions often influence those around them, a snowball effect occurs. As new ethical consumer trends are

“Many of those issues need to be targeted on an international scale ”

created, unethical companies become less competitive on the market.

There is also an urgent need for governments to

act, as this issue needs to be targeted on an international scale in many cases. We need to spread awareness of the issues of tragedy of the commons, as governments are more than happy to ignore them, since GDP and profit is all they care about. We need to sign petitions (currently paused for general elections, but do sign them later), join protests, and have our demands heard. Without regulation, businesses and producers will always act in their own self-interests, and their selfish decisions will lead to horrific environmental consequences that harm everyone else. For the government, there are two main ways of combatting the problem: they can either assign ownership and enforce that so the producers take into account the long-term sustainability of their businesses, or the government can enforce regulations, quotas and laws better. It is atrocious that governments are currently doing nothing. Protecting common access resources and preventing

tragedy of the commons is an important initiative, and governments must act now.

It is not impossible to

“The ozone has started to recover, because there were international agreements, laws and regulations combatting this issue”

correct the problem of common access resources. In the past, when the ozone layer was depleted due to the use of CFCs as refrigerants, international agreements, laws and regulations were put into place to combat this problem, and the ozone has started to recover. Right now, there is an urgent

need for governments to do the same thing with all the issues mentioned in this article. We are on the brink of mass extinctions, and we are at a point of no return. As citizens, we can all play our part in pressuring the government and reducing demand for unethical industries. If we all work together, maybe we can stop catastrophic tragedy of the commons before it is too late.

Felix Sustainability was founded to create a platform for discussion about environmental issues and sustainable development. We are open to articles from all points of view.

Please get in touch if you would like to write for us using the email address in the header.

INVESTMENT

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Are we headed for a new DotCom Bubble?

INVESTMENT

Marios Papadopoulos
ICIS
Investment Student Writer

The entry of the new millennium was accompanied by a major stock market crash caused by a bubble known as the Dotcom bubble. The last decade of the 20th century saw the advent of

“...astonishing success of firms such as Amazon and eBay led several entrepreneurs to believing that the creation of a web-based company was a path of guaranteed success”

the World Wide Web and the Personal Computer. These technological developments led to the creation of numerous startups, many of which had a “.com” attached at the end of their name.

Continuous investment into these companies resulted in an exponential rise of their equity valuations by the end of the 1990s. That can be easily confirmed by Figure 1, depicting the variations in the value of the technology-dominated Nasdaq



Fig 1. Looking at around the year 1999, the NASDAQ leaped from below 3000 to the peak of 5048.62. It has taken 15 years for the NASDAQ to recover to that high. Will history repeat itself? //MarketRealist

index. In the span of five years, Nasdaq grew from just under 1,000 units in 1995 to 5,000 in 2000. Its peak of 5,048.62 was recorded on March 10th, 2000. Various factors are considered responsible for making the bubble finally pop, including a raise of interest rates by the US Federal Reserve along with analysts’ belief that investing in technology sector should no longer be prioritised.

By March of next year, the US economy had entered a recession. Following the tragic events of September 2001, the era of the dotcom companies officially ended, as no Initial Public Offerings (IPOs) from technology firms were filed.

Underlying Causes of the Crash

The most important question is, what were the underlying causes of the crash? The investing community’s persistence in pouring money into

unprofitable Internet start-ups appears as the root of the problem. The astonishing success of firms such as Amazon and eBay led several entrepreneurs to believing that the creation of a web-based company was a path of guaranteed success, which explains the overly large number of dotcoms entering the stock market.

Aspiring wealth-creators were not the only ones captured by that belief; this sentiment governed investors’ thinking to a large degree. Consequently, they began to disregard the basic rules of invest-

“It had been reported that some devoted more than 90% of their budget to advertising!”

ing, including analysing business plans and price to earnings ratios. Instead of focusing on how start-ups could generate revenue, analysts instead focused on irrelevant aspects of their operation and derived unrealistic models related to future cash flow.

As expected, the overabundance of capital resulted in an unreasonable number of “dotcoms” going public. In order to become successful, these companies sought to differentiate themselves from the pack through marketing. It has been reported that some devoted more than 90% of their budget to advertising! This approach was unsustainable as the majority of these firms had yet to form a sustainable business model. Even more astonishing, some had not finalised their products upon issuing their IPOs!

The combination of these tendencies constituted a recipe for disaster. What is perhaps

more unfortunate is that certain voices had realised the boom could not be sustained, such as Alan Greenspan, the then Chairman of the Federal Reserve. He cautioned against over-investing in the technology sector at the end of 1996. However, his choice to adopt a lax monetary policy until early 2000 was heavily criticised by multiple analysts as it only helped accelerate the formation of the Dotcom bubble. According to their thinking, a tighter monetary policy could have helped contain the situation.

Will a new bubble burst?

Many people are also wondering, will a new tech bubble burst? There are definitely signs which could be interpreted as a warning for a new Dotcom bubble. Just like in the 1990s, a large number of tech companies are going public with overly high valuations. Some of them

“A large number of tech companies are going public with overly high valuations”

have filed for IPOs despite the fact they have not yet been able to generate profits.

For instance, Survey Monkey, a well-known business software company, issued an IPO in August of 2018 seeking to raise close to \$100 million. In the first half of the year, it recorded a net loss of \$27.18 million. Similar cases include the cloud provider Dropbox and the firm DocuSign, which creates software for digitally signing documents, among others. It is also worth noting that 2018 became a record

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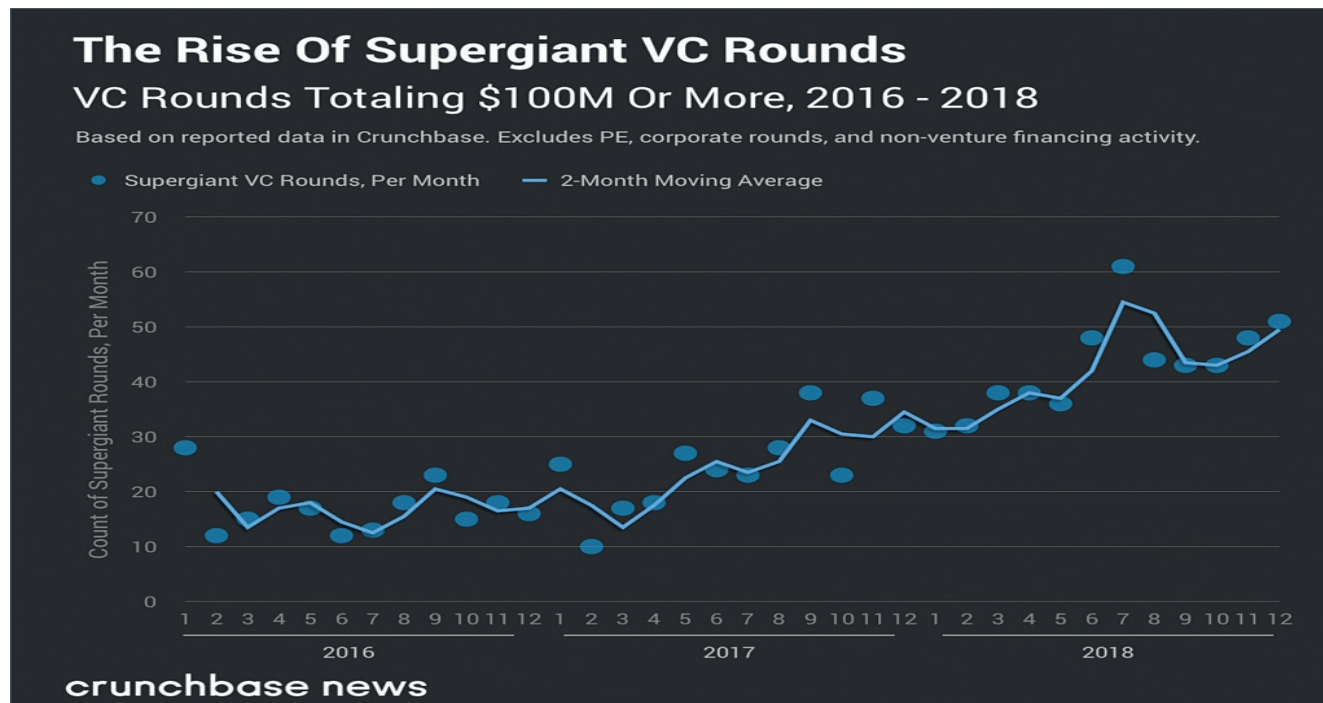


Fig 2. Some companies are raising the sort of money venture capital firms raise for a single fund in a single funding round, termed Super Giant VC rounds //Crunchbase

year for venture capital markets. It was the year that the largest amount of money on record was used to invest in the highest number of tech companies ever. More companies than ever before were able

to raise capital in the range of hundreds of millions in a single round, as seen in Figure 2.

These developments paint a picture with several parallels to the situation established before

the Dotcom crash.

However, a strong counterargument can be offered to justify why we are not headed towards a new bubble: Internet usage is growing at a staggering rate. As of

January of this year, over 4.3 billion people use the Internet. To put that in perspective, the number of users was 147 million in 1999, a year before the stock market decline. It is not hard to argue that an

“The fundamental practice of examining profit margins, debts and sales forecasts, among other metrics, should not be ignored”

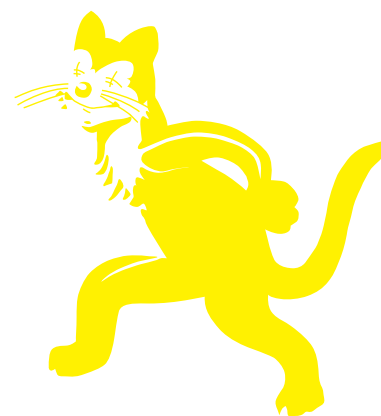
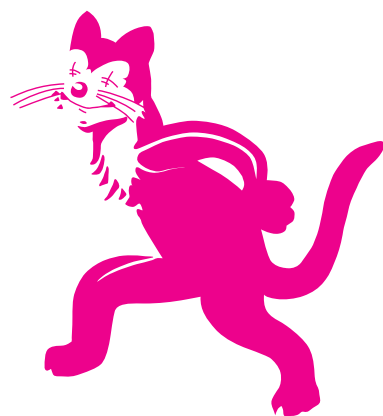
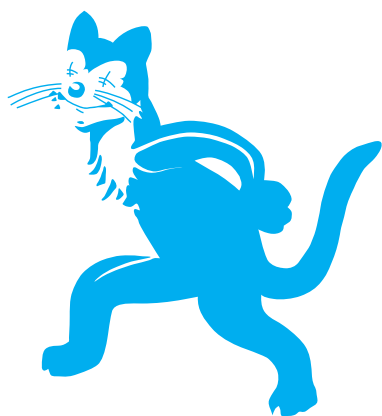
increase in users leads to a rise in online buyers, which represents an opportunity for companies to profit. Consequently, the founding of new firms active in the technology sectors should not be surprising.

Conclusion

The stock market is notoriously difficult to predict. Currently, it appears that we are not heading for another tech bubble given the significant growth of the web’s user base. However, this does not mean that investors should not remain alert. The fundamental practice of examining profit margins, debts and sales forecasts, among other metrics, should not be ignored even if the company’s business plan appears theoretically good enough to lead to profitability. If user growth stagnates, investors without a diversified portfolio will likely be once again exposed to major losses.

As Alan Greenspan warned the investing community, it should avoid “irrational exuberance”.

Felix is recruiting!



We want you – yes, you! We’re looking for writers, photographers, editors, illustrators, reporters, computer experts and grammar nerds to join our team. No experience needed – we’ll teach you everything you need to know. If you’re interested, send us an email on felix@ic.ac.uk

TRAVEL

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7 Must-See Destinations for Under £70

Felix saves you time (and money!) by giving you our top 7 destinations for under £70 - all that's left is for you to book those flights and pack your bags...

Travel

Eva Tadros

Travel Editor

Student life is hard enough as it is, but travelling on a tight budget is a whole other struggle. Finding the perfect getaway only for your bank balance to shatter all your dreams is top two most heart-breaking feelings, and hint – it's not number two. That's why for our 70th anniversary (OMG, RIGHT), we've decided to round up our favourite places to go for under £70, so prep yourself and start booking your next fun (and affordable!) adventure!

Bulgaria

Return flights to Bulgaria's capital Sofia are currently about £30 in January (£25 in February and March!) and we couldn't possibly be more excited about this! Considered one of Eastern Europe's main hubs for both art and history, Bulgaria has so much to offer and if you choose to stay in Sofia, or what is called the city that "grows but doesn't age", get ready for some vibrant nightlife, and endless entertainment.

Food is relatively cheap in Bulgaria, with street vendors selling pizza, Mekitsas (deep fried kneaded dough, usually stuffed with feta cheese) and local banitchka (pastry). Accommodation can be a little expensive



Copenhagen, Denmark // Eva Tadros

if staying in central Sofia, but moving a little further out will save you loads, with decent Airbnb's starting at about £15/night. Anything stopping you from going right now?

Italy

Fly to some of Italy's

most famous cities and towns for less than £20 return! If you fancy a slice of history, then Pisa is the place for you. Located in Southern Tuscany, this beautiful city is not only home to one of the world's most famous buildings, the Leaning Tower, but also holds some of the most breath-taking churches and palaces in Europe.

If you want a holiday with some hustle-and-bustle and days full of exploration, then Milan is the place to go. With many fashion designers basing their brands in Italy's fashion capital, it's no secret that the streets are full of fashionistas window-shopping, so get ready to step into a real-life magazine as you take the streets of Milan.

Accommodation in both Pisa and Milan can be quite expensive, but when booked in advance, Airbnb's and hostels tend to offer competitive prices, with a two-night stay costing about £45 on average, meaning you can easily book a trip to one of these cities for under £70.

Denmark

Now we're sure you've come across the famous sights of Copenhagen, especially the canals and views along the waterways of Nyhavn, so what's stopping you from booking your next holiday to Denmark? Flights in January are about £28 return, and you've guessed it – booking accommodation in advance will save you about £35, making your stay there cost about £20 per night, even if you end up going for a nice hotel. Copenhagen is also famous for its Little Mermaid statue, which attracts thousands of tourists every year.

Make sure you pack your stretchy pants if you decide to visit Denmark because the food there is to-die-for. If you like Danish pastries here, wait till you try the authentic ones in their local bakeries – never ever has a combination of butter and flour tasted so good. Nordic countries like Denmark are also famous for their rye bread, and whether you try it as a loaf or in a Danish open-face

sandwich, you're bound to love this popular food. So, get ready for one of the most relaxing vacations of your life, and book that flight to Copenhagen...

Luxembourg

Don't be fooled by Luxembourg's microstate status – this beautiful country has so much on offer, and you don't want to miss out on this one. As one of the European Union's capitals, Luxembourg's capital Luxembourg City is one of the most beautifully multicultural cities in Europe. With return flights about £35 between January and March, experiencing this charming part of Northern Europe doesn't have to break the bank. While there, you might want to pay Château de Clervaux a visit. This castle in the north of Luxembourg is home to "The Family of Man" exhibition, curated by Edward Steichen, which toured the world for 8 years and attracted over 9 million visitors before being archived in Luxembourg. If you're looking to save some money, go



Veliko Turnovo, Bulgaria // Eva Tadros

TRAVEL

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for a weekend escape here in the summer, as that's when the accommodation rates in the city are lowest, and then you can splash out a bit more on food and pay a visit to one of the city's remarkable Michelin-starred restaurants.

Germany

Visiting Germany doesn't just mean paying a visit to Berlin. We've decided to explore our options a little more and Hamburg, Germany's second-largest city, has certainly caught our eye. The red light district, Reeperbahn, is one of the most famous in the world, and is full of bars and shops that are bound to set your spirits alive. As a maritime city, the waterfront has so much to offer – from parks and seaside restaurants, to boat tours and shopping, Hamburg is a world of its own. Looking for hearty German food and beer? Try Cologne. This city, which sits by the Rhine river, is one of Germany's culture gems with over thirty museums and some of the most authentic German restaurants. Want to experience something a little different? Try their famous Dunkelrestaurant, where you can dine in pitch black, which is meant to simulate blind-



Cologne, Germany // Deena Elomrarabi

ness, and is the experience of a lifetime.

If all of this sounds tempting but you're worried about finances, fear not – flights to both Hamburg and Cologne are about £30 return, and hostels are abundant and quite cheap all over both cities, so get your bags and let's go!

Poland

Want a picturesque destination that is bound to spice up your Instagram? Look no further. Book that £24 return flight and pay a visit to Europe's largest medieval marketplace, located in Kraków, Poland. As one of the cities that escaped the worst of the WWII bombings, Kraków has a certain old-world character to it, and its

Jewish district is packed with lively art galleries, buoyant restaurants and cute little cafes. Whilst there, you'll have to pay a visit to the Wawel Royal Castle, which is a symbol of the independent Polish state, with gothic-style architecture that is absolutely jaw-dropping. Fancy staying in the capital and exploring more of Warsaw? Also a fantastic decision! The Polish capital has a dynamic nightlife, but even more impressive is the decades of wartime

history that is evident everywhere, from all the renowned museums and memorials to the striking cobbled streets. Hostels and budget hotels are dotted around the city, especially in the Old Town, and start from about £20 a night for a single. Time to get booking...

Belgium

One thing – Belgian waffles. That's it. That's all we have to say. Okay, maybe we'll try and persuade you a little more but honestly the waffles will make you never want to leave when you get there. Or maybe the fries will do that (did you know French fries originated in Belgium, not France?). Or maybe the Belgian chocolate will. Basically, any and all food you try in Belgium is guaranteed to be absolutely incredible, and yes you might gain a million pounds whilst you're there, but it will be so worth it. Looking

for something to help the food go down? Some fine Belgian beer is always just around the corner, and with over 1000 breweries, you're bound to find the beer that sits just right with you. Walk it all off by exploring one of Belgium's beautiful cities such as Brussels, or the dreamy town of Bruges, both of which have such rich history and are riddled with jaw-dropping art. Return flights to Brussels are about £29 each, and hostels tend to cost around £17 a night, meaning you could easily spend a weekend there on about £70, and it's worth saving up and taking a bit more because you're going to want to try everything in sight!



Brussels, Belgium // Eva Tadros

“Yes, you might gain a million pounds whilst you're there, but it will be so worth it..”

FOOD

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The Do's and Don't of a Student Christmas Dinner:

FOOD

Syon Lee
Zahra Abiola
Food Editors

Deck your halls with boughs of holly because Christmas is fast approaching! As everyone knows, the true meaning of Christmas is gorging yourself into a calorie-induced coma. Unfortunately, faced with a student budget and limitations of halls-based kitchen apparatus, recreating this festive moment can seem a daunting task. Well Felix is here to save your bacon (or facon) and equip you with the principles of a perfect Christmas dinner.

THE BIRD

A whole roast turkey is the usual fare for a Christmas dinner but unless you are ready to buy way ahead, have an inordinate amount of oven space, and you don't mind the lengthy brining and cooking process, I would steer clear. A poorly cooked turkey is way worse than no turkey at all. Similarly, other large birds like geese may be beyond the capabilities of a novice student chef. Chicken is a safe choice, its relatively bland flesh a good blank canvas for any spice rubs or seasoning mix you want to employ. For larger birds, consider cooking it spatchcock. By removing the backbone and squashing the bird flat, you can season more of its surface and reduce the cooking time! Duck is a good substitute for chicken if you want to go up a level in terms of flavour. If you're cooking for a crowd, small birds such as poussin or guinea fowl may be preferred and can be easily sourced from



// Pixabay

supermarkets. Not only do they cook quicker and give you time to focus on other parts of the meal, they're also easier to split than carving your way through a single large bird and trying to divide up the spoils evenly. Seasoning and flavouring is up to you. A simple rub-down with olive oil, salt, and pepper before cooking will suffice for most but if you want to ensure loads of flavour and plenty of crispy skin, I recommend a dry brine. Dry brining is basically salting the meat in advance to impart flavour and draw out some moisture. Rubbing the bird all over with salt and some sugar before placing in the fridge (overnight for a large bird or a few hours for smaller birds) can make a world of a difference in the finished prod-

uct. Before roasting, just rub some butter, thyme, and crushed garlic and you're all set to go. In terms of actually cooking your bird, the instructions on the packaging will do a pretty good job in telling you how long the meat should take to cook. Obviously, a food thermometer would be handy in making sure you have a perfectly cooked bird all the way through but simple tricks like stabbing to the bone and watching to make sure the juice runs perfectly clear will work for most cases. And if the meat is unfortunately still pink in the middle after carving, you can always just return it to the oven for another half hour or (in a pinch), pop it in the microwave.

NON-BIRD CENTREPEICE

I have to confess at this stage that I don't believe in Christmas dinners without a bird at the centre. But for the ornithophobes out there, we have a couple of options. A whole roast ham can be a good shout but a good cured, smoked bone-in ham can be difficult to find at the best of times. To be honest, any roast meat will do but I find that beef is too fiddly for an already stressful venture. If you're up for the challenge, a rack of ribs (beef or lamb), are a fancy and relatively

inexpensive addition to the table.

For the vegetarians, the much-maligned nut roast is an option for sure (check out Felicity Cloake's Guardian article, How to cook the perfect nut roast) but there are definitely better options out there. While a mushroom wellington or similar vegetables-in-pastry are a delicious treat, making one from scratch can be difficult and ultimately risky (pastry may fail, vegetables may release too much steam or stay undercooked).

A simple alternative is a roast gourd like a lovely stuffed and roasted butternut squash. Easy to do with minimal prep, a drizzle of olive oil and some seasoning along with a healthy topping of quinoa, pine nuts, and peppers may be all you need to make a beautiful rainbow-coloured main.



// Pixabay

POTATOES

The only acceptable form of starch for this dinner is potato. And a good roast potato is important to master for any other roast dinners you may want to make going forward. The potato choice is important as you want something nice and starchy to crisp in the oven. You'll see all sorts of potato varieties mentioned online but faced with a Sainsbury's Local, you're

not likely to be faced with an overwhelming amount of choice. For your purposes, anything that isn't a new potato or salad potato will serve you well. Just remember to give the potatoes a good shake in a colander after par-boiling to give you the rough edges for browning in the oven. Mashed potato is also a good choice, especially with limited oven space. You can play around with textures by



// Pixabay

adjusting the amount of milk or cream you add. Just remember to salt liberally and use an excess of butter. Top with some parsley to add some colour to the dish.

FOOD

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How to Keep the Festive Mood on a Student Budget

VEGETABLES

Brussel sprouts get a lot of hate but that's only because it's usually cooked poorly. A well-cooked side of brussel sprouts is a thing of wonder. I like to render some bacon lardons (or pancetta if you're fancy) and then throw in my brussel sprout halves, letting them fry without disturbing them so they can develop a delicious char. Seasoned with fennel seeds and a pinch of paprika, these brussel sprouts will really change your world for the better. Carrots and parsnips are also pretty traditional and I like to cut them into sticks and roast them with a honey glaze. Peeling a mountain of carrots and parsnips with friends can prove



//Pixabay

surprisingly fun if you have the right festive atmosphere going. Treat yourself to some carrots by dipping them in hummus for a snack because preparing all this food will definitely make you peckish but you don't want to fill up before dinner.

"A well-cooked side of brussel sprouts is a thing of wonder"

OTHER SIDES

What takes a good Christmas dinner to a great Christmas dinner is the variety and quality of sides. While it may impress your guests to make everything from scratch, we feel that this is where you can slack off and seek help from the supermarket overlords. Pick up a packet of pigs in blankets or paxo stuffing - honestly, it tastes fine

"This is where vegetarians can rejoice as well. Let your imagination run free!"

and is just so easy to make. This is truly where

vegetarians can rejoice as well. Let your imagination run free! Stuff those mushrooms with cheese and top with breadcrumbs or stick some peeled-and-halved onions in the oven while you're roasting your main to get a sweet and unctuous caramelised onion. Toss some chopped-up walnuts with apple pieces along with nutmeg and other christmassy spices for a festive salad or, to go full fancy, do a baked apple with chestnut and sage.



//Wikimedia

DESSERTS



//Wikimedia

Now it's time to finish the night off on a high note. If you've followed our advice, there should be a sea of unbuckled belts and undone buttons just under the table. As tempting as it is to end with a bang, now may not be the best time to flex your triple chocolate cake recipe. Fruit-centred treats are the more suitable choice after such a filling meal. An apple crumble is a tried and tested hit in situations like this. They are easy to make from scratch and also work great as comfort food after

"Sometimes it's best to keep it simple and just go with a fruit salad and bring out the cream"

one too many plates of seconds. Just make sure you have custard. Lots of custard. Don't bother making from scratch, there's a pre-made custard for every budget out there and now's not the time to risk making sweet scrambled eggs by accident. Sometimes it's best to keep it simple and just go with a fruit salad and bring out the cream. You've been slaving over a hot stove all day so this would be a dream to make and consume. Of course, we've got to mention the traditional desserts like Christmas pudding or a decorated yule log (think giant mini-rolls). These are delicious but difficult to do right. If you really want to attempt these, make in advance! I would warn against making Christmas pudding purely because you'll have to buy extra equipment which rarely comes in useful otherwise.

DRINKS



//Pixabay

There are two drinks synonymous with Christmas in England: eggnog and mulled wine. Because I'm not a massive fan of wine, I don't have much to say regarding the latter. The former, previously known as "milk punch", requires careful cooking. A mixture of hot milk steeped in spices is slowly added to egg yolks beaten with sugar to temper the eggs and the resulting liquid has to be heated (but never boiled). Although a

little bit annoying to make, it's a decadent treat for Christmas. Just make sure to add a generous amount of cinnamon and ginger to either recipe to warm everyone up because baby, it's cold outside. You see what I did there. Other than that, you can have any drink you'd like. Just remember you're in halls and no one wants to be subject to a Jägerbomb-fuelled rampage in the corridor!

BOOKS

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Editors' Top Picks of the Decade

Might be an odd mix of titles, but Felix Books Editors present to you their top picks of the decade

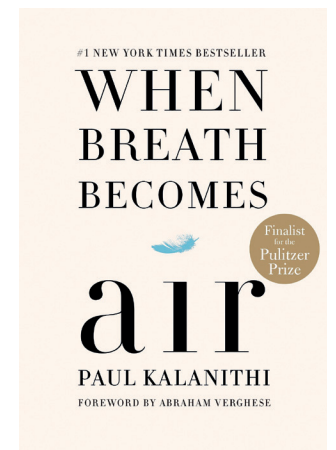
BOOKS

Anushka Kulkarni
Books Editor

& Jia Qi Tan
Books Editor

When Breath Becomes Air by Paul Kalanithi

Poetic, poignant, and profound, Paul Kalanithi's memoir as a neurosurgeon diagnosed with Stage IV metastatic lung cancer is unbelievably powerful in Kalanithi's quest to answer the difficult question of what makes a life worth living. It's a strange perspective on human identity and mortality when your role constantly switches between being a doctor treating the dying and a terminally ill patient - is death still so chilling and unsettling? What matters and what doesn't? It encompasses many themes from religion to philosophy to medicine but it maintains some sort of coherence. Kalanithi has expressed his love for reading and writing - he majored in English Literature - and it definitely shows in the book. It's lyrical, precise, philosophical, and hits so close to the heart. At first glance it may seem like a rather straightforward read, but once you dive in, there's so much packed in his words. It's something that I constantly go back to, where I can get something out of it in every reread, and I can say that it's the book that hit me the hardest in the past decade. Let me leave you with an excerpt from the book, "You can't ever reach perfection, but you can believe in an asymptote toward which you are ceaselessly striving." -*Jia Qi Tan*



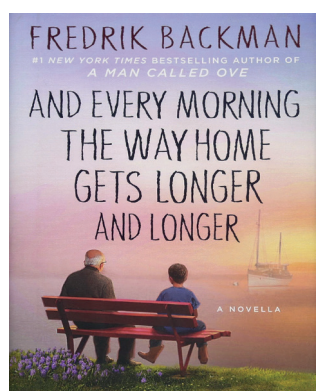
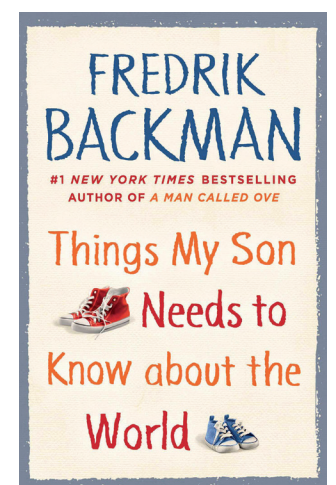
The Divergent Trilogy by Veronica Roth

There might be a big question mark as to why the Divergent trilogy is on this list, but I feel its impact, be it on the young adult literary scene or on my personal love for reading, has earned it a spot on here. It's been almost a decade since I first laid eyes on the first instalment of the series; I can't quite comment on its literary values the same way I once did but as a teenager I thoroughly enjoyed it. The story is set in post-apocalyptic Chicago where citizens are pre-defined and sorted into one of the five factions as the society sees fit, with the protagonist Beatrice "Tris" attempting to make a sense of her "divergence." The series, along with Suzanne Collins's Hunger Games Trilogy and James Dashner's The Maze Runner Series, are unquestionably quintessential of this genre. The themes of self-discovery, transition into adolescence, and choices and consequences echo throughout and are what primarily appeal to the teenage audience. This series has garnered commercial success (6.7 million copies were sold, and \$700 million in box office) and to a certain extent prompts the return of dystopian fiction (resurgence of classic dystopias like George Orwell's 1984 and Aldous Huxley's Brave New World). This genre continues to dominate the YA shelves and is definitely characteristic of this decade, and The Divergent Trilogy is certainly the most representative work of the genre. -*Jia Qi Tan*

Things My Son Needs To Know About This World by Frederick Backman

While looking for books to read this summer, I came across one called 'Things my son should know about the world' by Frederik Backman, and immediately fell in love with the writing. I started to follow the author, and read more of his books. So when I was asked to list my favourite books of the decade, I knew I had to write about Frederik Backman's books. Each of his books develop the characters so well, that it is as if you are present there right next to them as you learn about their life. I read four of Backman's books over the summer, but I will only write about two of them: one that left me smiling long after I had finished it (the one mentioned above), and one that actually made me cry. The latter one is called 'And every morning the way home gets longer and longer', and despite being a rather short book, it leaves you with more emotions than the longest of novels.

In this book, Backman addresses his one or two year old son as he shares and reflects on the experiences in his own life, right from his childhood to his present life. Each chapter is like a new letter to his son, discussing a different aspect of life. Since it is a father talking to a child, the writing style is rather candid, and instantly engaging. The most charming aspect of this book, however, is the fact that though the writer is sharing his life with his son, there is a certain fairy tale quality to each experience that makes it hard to decide whether it is fiction or non-fiction. I say charming because since it is real, it is highly relatable, and since it is dream-like, it is not boring at all! As a young female university student I can guarantee that even if you are not a father who is writing this book, or a son who is meant to read it, it is an enjoyable journey, and definitely worth a read. -*Anushka Kulkarni*



And Every Morning The Way Home Gets Longer and Longer by Frederik Backman

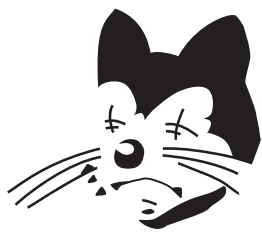
I am sure that this short novel will remain one of my favourite ones because it is the most creative one that I have read. And it is one of the very few ones that have made me cry. It is the story of an old man desperately trying to hold on to his memories as they fade away faster every day. And it is the story of a young boy helplessly watching his grandfather forget a little more of himself every day. Backman takes us (and the young boy) inside the grandfather's mind (a square), and we observe the square getting smaller and smaller each day, which the old man can feel, but cannot control. This rather heart-breaking journey takes us through the different, random memories that are still left inside that square - both happy and sad, and full of love. It is one of those novels that is so full of emotions that we find ourselves unable to contain our own as we reach the end. In our very busy, very work-centred lives, this novel is great to get in touch with our emotions, especially ones that we forget we can feel. -*Anushka Kulkarni*



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Hangman



Suprising lack of apocalypse, almost suspiciously suprising // Geograph

Students Surprised at Lack of Apocalypse

HANGMAN

Negafelix
Editor-in-Chief

Waiting for the apocalypse? So are the rest of us. Negafelix talks to some students about what they're waiting around for.

Students across Imperial are in shock this week at the lack of an apocalypse following such a turbulent decade.

As the 2010s draw to a shaky close, Imperial College students are

expressing surprise at the apparent failure of the decade to conclude with a satisfying ending, that being the extinction of civilised society and the demise of the human race. Zhisabelle Ing, an invertebrate specialist, told Felix, "I've been waiting for the end of the world since 2012, when it was promised by the Mayans. Since then, I was told that if Trump was elected, we'd go down in a nuclear fireball courtesy of North Korea, and that Brexit would reduce the UK to a pile of ashes. Now we've got Greta Thunberg constantly on the microphone, telling us that the climate catastrophe is just

around the corner. I just want to know when I'll be granted the sweet release of not having to listen to prophesies that never come true. Just for once, I want to be a Make-a-Wish Foundation kid."

"Surprise at the apparent failure of the decade to conclude with a satisfying ending"

Other students have been complaining about having to go home to their politically polarised houses. Mechanical Engineering student, Fomas Thisher, claimed, "If there was an apocalypse, I wouldn't have to see my grandparents at Christmas. Following the mandated generational split according to polling data, they're aligning to political positions that fuck younger people out of homes, jobs, and a future on this cursed planet. Naturally, to share that spirit, I've bought them tickets to an all-expenses paid resort in Switzerland for Christmas. One-way of course." Negafelix

understands that the grandparents in question have bought Fomas a life-times supply of condoms. Upon shaking, no noise was heard.

A further interviewee told Negafelix, "I mean what do you expect from a decade that was the bastard child of an economic crisis and political mismanagement and exploitation? I'm mega disappointed that the ending was so anticlimactic. Personally, I'm excited for the 2020's. I've learnt the Mandarin for 'I surrender' and 'Glory to Xi Jinping!' I think I'm pretty prepared."

One 3rd year Computing student told Negafelix,

in confidence, that students should not yet give up hope. "After multiple conversations with the Mormons across the road, I'm more convinced than ever that this the time of the rapture will coincide with the end of the decade. All I need to do is become polygamous in between now and the 31st of December." Negafelix witnessed the same student complaining about how women wouldn't date him, even after he promised that they could be his first wife.

HANGMAN

negafelix@imperial.ac.uk

Dickensian Street Urchins Predicted to be Hit Particularly Hard by Tory Victory

HANGMAN

Negafelix
Editor-in-Chief

A recent poll has given Boris Johnson's Conservatives a 20-point lead over Labour in the run up to Thursday's election, and this has prompted analysts to raise concerns over what such a victory could mean for the growing population of British street urchins. This group has been a forgotten part of the

electorate for decades, with the majority subsisting on an annual salary of just tuppence and "whatever the good Mr. Pumperwinkle has to spare". Some observers had initially speculated that this economic reality would drive urchins to vote for Labour in droves, but this has yet to materialise, partly because robust child worker laws would render the majority of the contingent unemployed.

Conservative policies which are thought to be most damaging include the removal of subsidies

for workers in the chimney cleaning industry, an increased police presence in Whitechapel, and a blanket ban on unlicensed shoe-shining. A spokesperson for the group was approached for comment, but before Felix's reporter could ask anything, he was robbed to the tune of what sounded like Chim-Chimney. One of the biggest issues that Dickensian urchins face is adapting to changes in the labour market. After the recent closure of Fizzlenack's Opera Hat Co. many former employees were turned away from

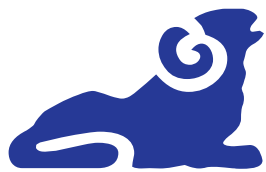
new jobs, with many surprised to learn that being "sharp as a thistle, clean as a whistle" was not sufficient as a transferrable skill. Workplace etiquette is also sometimes lost on urchins, with potential bosses saying they felt "uncomfortable" with being referred to as a "guvnor".

For many, the woes of the street urchins are not a cause for concern. Among these are stockbrokers, who celebrated the FLI (Flat Cap Index) being up 96 points at market close the day the poll results were released. Butchers

are also optimistic, with record forecasts for turkey sales reported, but only for those that are "the biggest in the shop, there in the window". Initially,

"Potential bosses saying they felt 'uncomfortable' with being referred to as 'guvnor'"

business leaders were reluctant to come to the defence of the urchins, but they have since been led in this cause by Amazon CEO Jeff Bezos. This represents a U-turn in opinion for the initially anti-urchin Mr. Bezos, who unrelatingly was visited by three ghostly apparitions the night before the poll was announced.



ARIES

This week you are shocked to discover that people have free will. Yours is a £2.99 monthly subscription.



TAURUS

This week you sign yourself up for a time management course.
-
You arrive twenty minutes late to the first session.



GEMINI

This week the Ghost of Christmas Past haunts your dreams to tell you that actually, the College does care very much about you...r money.



CANCER

This week you're the rent price of South Kensington halls.
-
High as fuck and about to get even higher.



LEO

This week you realise that the Aries, Libra, and Scorpio horoscope logos look kind of a different style from all the other logos.
-
You'll never unnotice it.



VIRGO

This week you realize that Movember wasn't really why you're still single this year.
-
It's actually because you're a shit person.



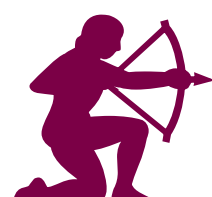
LIBRA

This week a strange man offers you some free drugs.
-
You say yes, obviously. Drugs are expensive.



SCORPIO

This week students at Moscow State University attack the Mentimeter polls used in Union Council.



SAGITTARIUS

This week it's your birthday.
-
You start a Facebook fundraiser for the Children with Large Noses Foundation.



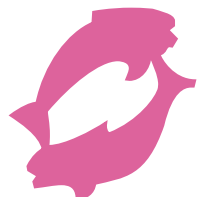
CAPRICORN

This week you're the CGCU Davy lamp.
-
You're lost and realise that nobody actually cares about you.



AQUARIUS

This week you think that voting doesn't matter so you don't bother.
-
You deeply, sincerely regret this because you know that it actually does matter. GO VOTE!



PISCES

This week you're just a lame editor left to do the horoscopes because the usual people are too busy actually having a life over the weekend. You wonder if you are okay. Are you? Do you need help?

CONSTITUENT UNION

felix@imperial.ac.uk



CGCU: A Retrospective

CGCU

 Guilds Media Group

It's remarkable to see how much engineering at Imperial has developed over the past 70 years. The College's Rector (now "President") was Sir Roderic Hill, a Royal Airforce commander during WWII, and Alfred Pippard was Dean of the

"A whistle-stop tour of what some departments were like in 1949"

Faculty.

In the year 1949, 95 engineering degrees were awarded (compared to the ~1400 that were awarded this year). There were 227 students, of which

16% were international (today, there are ~4,200 undergraduate engineers, of whom 64% are international). Felix was also started by two Guildsmen, E.M. Hughes (the first editor) and D.C. Howe (then CGCU President). To celebrate this, we're going to give you a whistle-stop tour of what some departments were like in 1949.

Computing, Bioengineering and Design Engineering didn't exist - the courses only being 55, 17 and 5 years old respectively.

Aeronautics was founded in 1909, with Sir Arnold Hall as Head of Department. In 1949, he introduced a new aeronautics course in which the students would spend their first two years studying mechanical engineering and only specialise in aeronautics in their 3rd year (though this is no longer the case).

The structure of the Electrical Engineering degrees was also different back then - with first



The central technical Institute building, the site of what is now Mechanical and Aero and the Business School
// Imperial College London archives

year being broader than it is now with students only being allowed to specialise only in the third and final year. It was even possible for students to study 1 day a week at the LSE!

Chemical Engineering consisted of a single building, Bone. In 1949, a pilot plant lab was

fitted and a lift of 9sq ft installed into the stairwell. D.M. Newitt, director of scientific research at the UK's Special Operations Executive, began major experiments to extend enthalpy data for steam to 1000 bar and 700 degrees - this data being in the steam tables you know and love today.

In Civil Engineering, Prof Pippard was Head of Department, having a major influence in modernising the teaching of structural analysis. Environmental and Water Resource Engineering began in 1949 following a visit to London by a Harvard Professor. With 3 years funding from the Rockefeller Foundation this academic, F.E. Bruce established a joint Public Health Engineering course with the London School of Hygiene and Tropical Medicine.

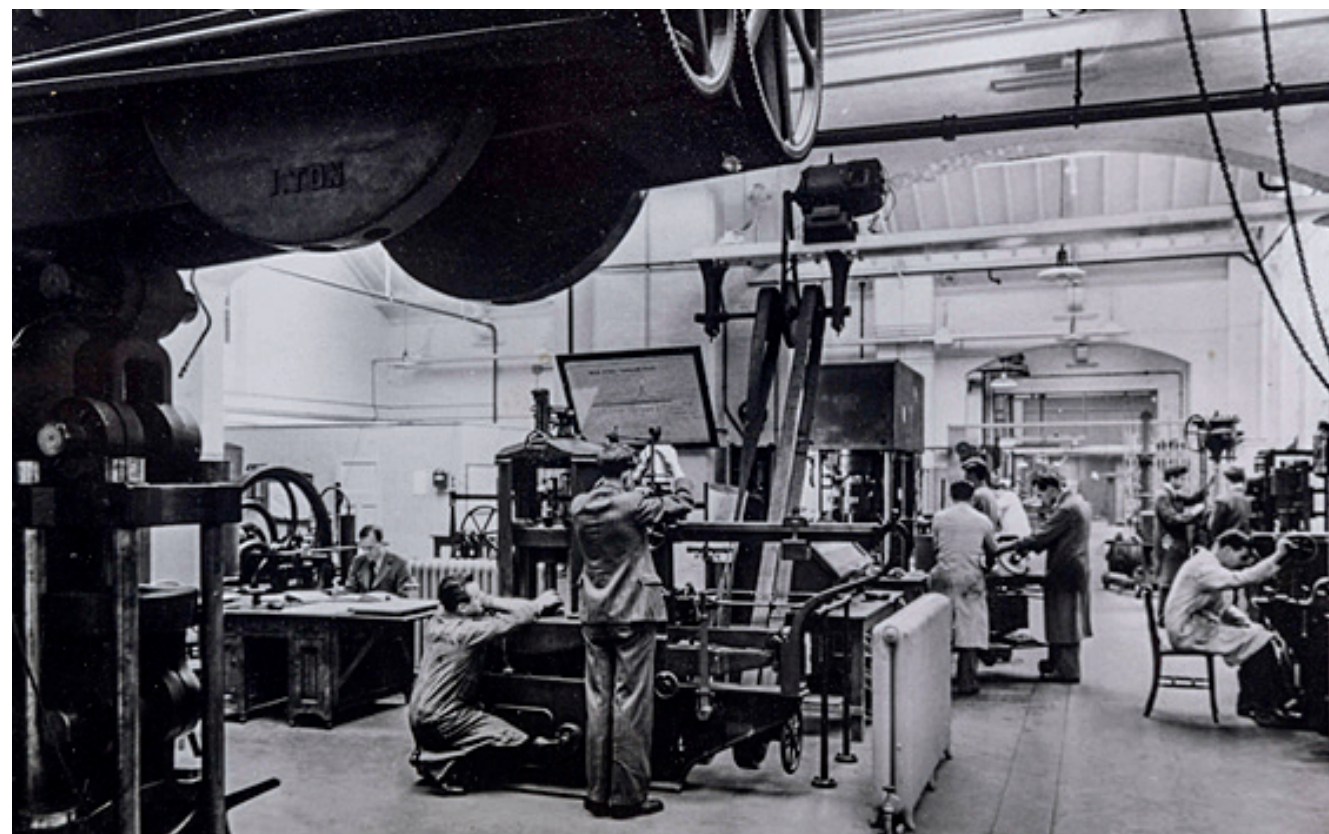
The Mechanical Engineering department suffered heavily as a result of WWII. Many staff from the University of Warsaw stayed on, and equipment from German research centres was installed. Industrial

contacts were established with Rolls-Royce and D. Napier & Son, focussing on the super-charging of piston aircraft engines and the development of the jet

"Numerous influential professors and alumni have walked through the buildings we often complain about"

engine.

It's important to sit back and reflect on the history that underpins our departments today; numerous influential professors and alumni have walked through the buildings we often complain about. If we have piqued your interest and you'd like to learn more about College history, plan a visit to the College Archives, which has a wealth of history for you to browse.



Mecheng workshop circa 1950 // Imperial College London archives

"It was even possible for students to study 1 day a week at the LSE"

CONSTITUENT UNION

felix@imperial.ac.uk



Why do we even Volunteer for the Union?

RCSU

Aishy Chidambaram & Alex Auyang

Mathsoc President & RCSU President

After a few weeks of some pretty glum articles from Alex, he finally decided to rope in some help, in the form of me, Aishy, to bring life back to the RCSU column. So, please cherish this morsel of positivity amidst what has been a sea of Union despair.

After a 2.5 hour council meeting, last minute room bookings for the Science Challenge, and a 4 week wait for Fifi's signature on a contract (in addition to 100 other things we won't bore you with), you might be wondering why we put up with all of this Union shit on top of our already high workload.

Juggling degrees with our roles is no easy task (unless you study biology like Alex). Sometimes we forget why we're at

Imperial and the degree ends up taking a backseat. This week we both fell into the deadly trap that results in coursework getting neglected in favour of Presidential work, and believe us, it only ends in regret.

But how did we get into this position in the first place? Well, we both had very different routes into our roles. Alex ran for RCSU President on a whim and was fortunate to just beat RON (I mean barely...). Meanwhile Aishy had been planning her route to MathSoc Presidency since first year and was somehow roped into a couple of other Union roles along the way.

As an elected Union volunteer, there can be a great deal of pressure and responsibility placed upon you and your role might end up consuming the entirety of your life. In fact, more than half of Alex's personality is now being the RCSU president. You wake up thinking about all the claims that need approving, and you go to bed frustrated, envi-

sioning the million different ways that eActivities could be improved. But despite this, and no matter how much you hear any of us complaining about the way the Union works (or doesn't work), we really do love our jobs!

Being on a committee, or in any role throughout the Union, has massive rewards. Managing events, like the RCSU Autumn ball, ensuring that students' views are represented at council, such as at the recent Halls Rent Debate, and slowly instigating some operational changes within the Union is incredibly satisfying. Knowing that your actions have a direct, positive impact on 100s to 1000s of students is enough of a return to make our roles feel more than worthwhile. With every event we plan and every cause we represent contributes to building a stronger student community.

What's more, volunteer roles can be a hell of a lot of fun and encourages involvement in something bigger than just yourself.

What could be more glorious than stealing a spanner from the CGCU office right under their noses at 11pm! The level of inter-constituent Union rivalry and support, particularly with CGCU, has made being a part of the RCSU so much fun this year. It sounds so cliché, but honestly the number of friends you make through volunteering for the Union and the numerous, entertaining group chats that form from these friendships is what keeps us going at the hardest and most stressful of times.

Last week, we were invited to attend the

PhySoc Christmas dinner. It was lovely to celebrate the end of a jam-packed term with loads of RCSU volunteers, past and present. The large number of students who take up volunteer roles year after year, both within and outside of the RCSU, is a testament to how much we all genuinely enjoy serving our fellow students. I can say for certain that neither of will ever regret holding these roles, they have shaped our university experiences for the better. I mean, what would uni even be without all of this Union drama? We honestly can't imagine it.

Thank you all for reading this atypical column. This is probably the sappiest we're going to get in this column, so don't get used to it.

On behalf of the whole RCSU committee, we would like to wish you a happy holidays/revision period. We look forward to returning to the anti-union content this January!

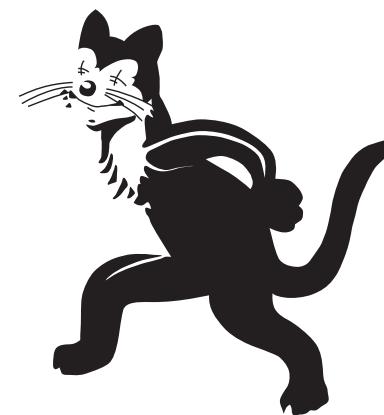
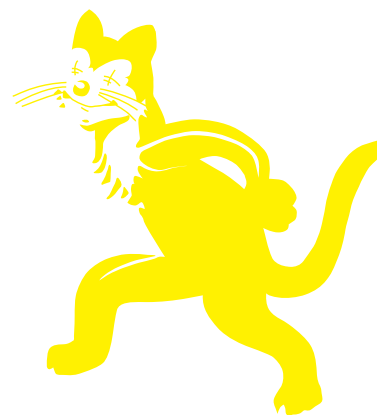
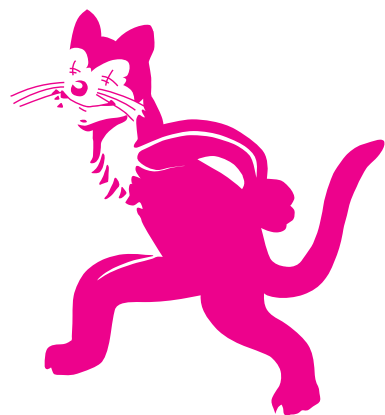
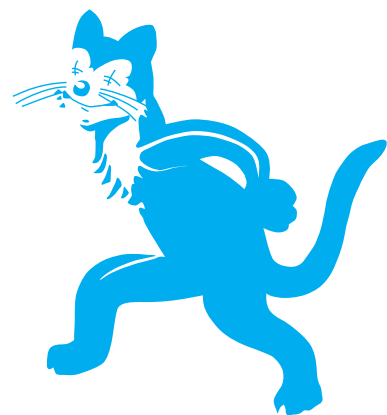
Sincerely,

Aishy and Alex



RSC Who? // RCSU

Felix is recruiting!



We want you – yes, you! We're looking for writers, photographers, editors, illustrators, reporters, computer experts and grammar nerds to join our team. No experience needed – we'll teach you everything you need to know. If you're interested, send us an email on felix@ic.ac.uk

Imperial Graduate CEO of Spyras Named UK's Most Promising Entrepreneur

George Winfield studied MRes Medical Device Design and Entrepreneurship at Imperial and won both the White City Innovators' Programme in 2018 and the Technology category of the Mayor of London Entrepreneur awards in 2019. His entry was 'Spyras', a paper-based breathing sensor used to reliably and efficiently identify sepsis. He has since gone on to be announced as the UK's most promising young entrepreneur by the Royal Academy of Engineering Enterprise Hub. Jack Powell caught up with him to gain an insight into his journey with Spyras and his experience with the Mayor's Entrepreneur competition.

J: How did the initial idea for Spyras come to you?

G: The initial aim was to get a good grade in my masters to go on to a job in finance or consulting! The technology had been conceived in the Guder Research group and it just needed someone to take it to the next step and commercialise it. My research was to tailor a novel, paper sensor-based technology to monitor breathing, and if possible, to find a practical application for this that could

have a genuine impact. It seemed like a tough task, especially since breathing is such a difficult vital sign to monitor. It has more impact on our general health and wellbeing than you can imagine. In a hospital setting, best practice is for breathing rate to be manually monitored and counted. Unfortunately, this is an entirely unreliable exercise, given that an elevated breathing rate is one of the earliest indicators of sepsis.

Sepsis is a condition which, once it takes hold, kills at a rapid rate. It claims more victims than breast, bowel, and prostate cancer combined in the UK. Spyras was founded to meet the need for better respiratory analysis, and earlier identification of this fatal condition. In the course of researching my thesis, I learned that identifying the signs of sepsis in patients has the potential to save over 5,000 lives annually in the UK and over £200m in direct treatment costs alone by preventing intensive care unit admissions

from lower care hospital wards. The accelerator at White City in partnership with NatWest was starting

"A simple application with a change to gain a national title and a massive cash injection of £20k with notable networks"

next door to where I lived and was aimed at allowing people to test potential new business ideas. We applied, ended up winning it, and the next day were fortunate enough to win a research grant worth £68000 in addition to the £5000 from NatWest. Maybe it does have the potential. Maybe it can do what we think it can.

J: What are your thoughts on being named the UK's most promising young engineering entrepreneur?

G: It's a very flattering title to have been presented with, but it's all dedicated to the team we have that have sacrificed so much in order to get Spyras going. It is a strange feeling reflecting back on the student project, from the aim of getting a good grade to being on the verge of creating something very special that has gained international attention. We can't wait to get it going.

J: What made you decide to enter the Mayor's Entrepreneur Competition?

G: What have I got to lose? A simple application with a chance to gain a national title, and a massive cash injection of £20k with notable networks now on offer.

J: How was your experience in the competition?

G: Very competitive. There are so many impressive businesses in the student entrepreneur scene. We had to get an

"Being able to grow your network during the process and to have your name mentioned at City Hall is surreal"

impressive business pitch together and across in 2 minutes, with no slides, in the middle of City Hall (fans of The Apprentice will know the place) to a panel that included the likes of Richard Reed (Innocent Smoothies) and Cassandra Stavrou (Propercorn). It is an incredibly lonely place to stand in the middle of that hall – but presenting to the audience and having the cameras live-stream it just added to the experience. Being able to grow your network during the process and to have your name mentioned at City Hall is surreal.

J: How did you make use of the City Hall mentoring after win-

ning in 2019?

G: I meet quite regularly with programme managers at the Mayor's Office, who provide an independent and impartial view to bounce my ideas off. To have that sounding board and another network, alongside the Mayor's Office to use, is invaluable.

Applications for the Mayor's Entrepreneur Competition 2020 close on 22nd March. They're looking for students and recent graduates with smart ideas in one of four categories: Environment, Health, Smart Cities and Creative Industries. You could win £20k and mentoring from the Mayor's Office to launch your idea. City Hall is also putting on a series of free workshops for students to find resources for generating ideas, meet potential business partners, and learn valuable pitching techniques. The first one is on 17th December – and you don't already need to have an idea to come along! If you're interested in entering or finding out more details, send an email to jp2517@ic.ac.uk or search 'Mayor's Entrepreneur Competition' on Google.



George pitches Spyras at the 2019 Final // Greater London Authority

WELFARE

felix@imperial.ac.uk

Liberation and community at Imperial is an issue for today

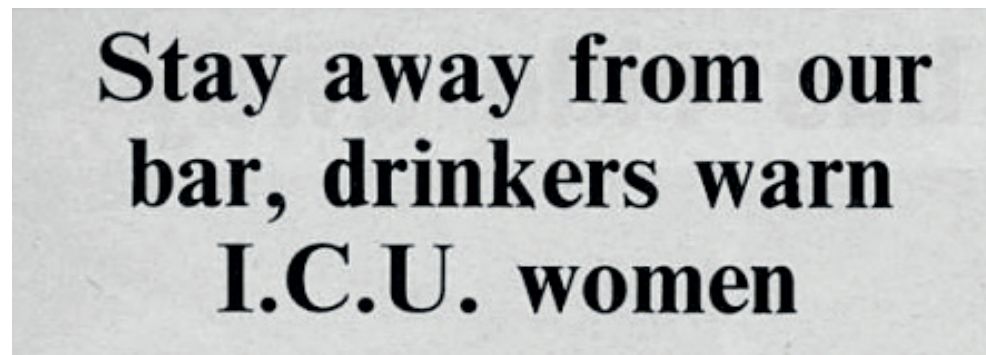
This week, Shervin discusses how the liberation of minority groups has affected Imperial, and how the student body of Imperial are trying to help.

WELFARE

Shervin Sabhegi
Deputy President (Welfare)

The rights and freedoms for minority groups around the world are never handed on a platter – they are hard fought through liberation movements. From international women's suffrage in the late 19th century, the American Civil Rights movement starting in the 1950s, the ongoing global struggle for LGBT+ rights and reasonable adjustments for people with disabilities. The thing these all have in common is they are about the seeking of equal status and freedom from all forms of oppression. Community is simply defined as a group of people living in one particular area or people who are considered as a unit because of their common interests, social group, or nationality. Anything and everything can bind together communities – it could be the subject you study, the sport you are interested in, the country you are from etc – and feeling a sense of community and belonging is crucial to having good wellbeing. Liberation and community are intrinsically linked; discrimination and inequality makes it harder for people in some minority groups feel part of a community, but also, being part of a minority group often gives people another community to feel part of.

At Imperial, liberation



Only men were allowed to drink at the Union Bar 50 years ago // Felix

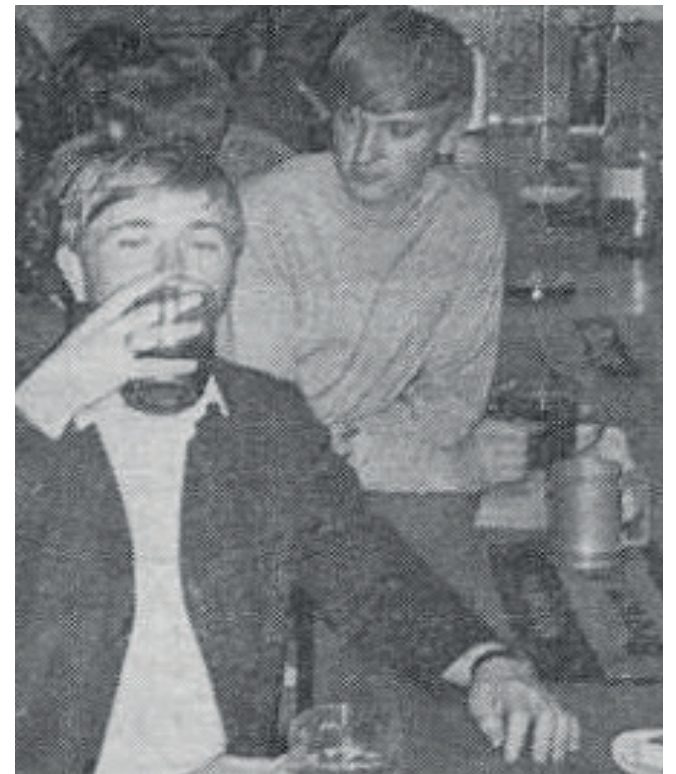
has been, and remains to be, as important as it is in a global sense. Just 50 years ago, women weren't allowed into the Union Bar and the discussions to change this started a massive fuss and resistance from the male users. ("Stay away from our bars, drinkers warn ICU women" reads the Felix headline from 1969). Issues persist to today; we have an indisputable diversity problem – the proportion of female, black and underprivileged students here is unreflective of the talent pool we recruit from. And cultures, particularly in academic circles, can often be toxic – particularly for minority groups. There are a number of things the College does to try and improve this. The Athena Swan and Race Equality Charter are two schemes ran by a UK universities-wide organisation to improve the access and outcomes of women and ethnic minorities in higher education. Imperial currently has a Silver award from the Athena Swan and is writing an application to the Race Equality Charter and these will give a good incentive to reflect on the issues these groups face here, and begin to fix them. Furthermore,

the College now has an Access and Participation Plan containing tough targets around bringing in more students from underprivileged backgrounds – specifically, doubling the number over 5 years.

On the student side, we have a team of Liberation and Community Officers whose role is to represent the needs of the various groups they represent and attempt to break down barriers they face at Imperial. Our Liberation Officers represent students identifying in the long-standing groups liberation groups – LGBT+, Disabled, Female and BME (Black & Minority Ethnic) students. And Community Officers represent students with particular community-related interests – Interfaith, International, Ethics and Environment and Mental Health. They all campaign to make change happen, raise the voice of the groups they represent and facilitate the building of communities. As senior Union representatives, they have influence both in terms of what the Union does, but also the College as many have seats on important committees.

Each Officer has a network attached to them that any student can join if

you align or ally with the group. These networks give you the opportunity to engage and get involved in what the Officers get up to – be it campaigns or events – and link up with other students who align/ally similarly. If you care about Liberation issues, sign up to the networks and get involved!



Leave the past in the past // Felix



Sign up to Liberation and Community networks! // Shervin Sabhegi

WELFARE

felix@imperial.ac.uk

Meet your Liberation officers



LIBERATION

**Freya Hepworth
Lloyd**

*LGBT+ Officer
icu-lgbt@imperial.ac.uk*

I'm Freya, your LGBT+ Officer. I represent LGBT+ students in council and I collaborate with the LGBT+ student and staff networks on campaigns and events. I started off this year with an HIV awareness and fundraising campaign, which you can read about on the next page. This year my big campaign is to introduce trans healthcare training to our medical school curriculum. I believe it is vital that all doctors should be able to deliver the best care to the trans community. At the moment we are failing our trans patients due to lack of understanding and knowledge on care pathways, hormone therapy and communication skills. I hope to introduce this training later this academic year together with the Inclusivity in the Learning and Teaching Strategy team. Lastly, I'm currently working on events and campaigns for LGBT+ History Month in February. Feel free to contact me by email about any LGBT+ related issues at Imperial and I'll do what I can to resolve them.



LIBERATION

Debbie Adegoke

*BME Officer
icu-bme@imperial.ac.uk*

I'm Debbie, a 2nd year Bioengineering student and your B&ME Officer! I represent those who identify as an ethnic minority- if you don't see enough people who look like you on campus (both students and faculty) I represent you! There's an attitude that talking about race is irrelevant- I'm focusing on transparency between the College and the students to change this mindset. I'm hoping to implement some things this year: learning about Imperial's history and meanings behind building names; events celebrating other cultures (through the art of entertainment & gastronomy); a safe space for students to discuss with peers and the College; alleviate the strain on Mental Health Service with alternative services catered to BAME students.



LIBERATION

Hilliam Tung

*Disabilities Officer
icu-disabilities@imperial.ac.uk*

Hi, I'm Hilliam, the current ICU Disabilities Officer! I represent students with disabilities across campus, and their views on the Disability Advisory Service and College support, alongside holding and assisting with inclusive events to bring awareness of success past disability. You may have seen me tending to the Faces of Engineering event with the CGCU of which we've brought in diverse speakers from companies such as Bloomberg, Cisco, Qualcomm and American Express, which I hope everyone enjoyed! I've also been assisting with the marketing of the Disability History Month events going on right now up until the 22nd. Having been catching on top of previous Union Council and faculty decisions related to accessibility for students with disabilities, I'm driven towards reviewing these policies and liaising with the Disability Advisory Service and Able@Imperial to see how students can better access these networks and services this year.



LIBERATION

Vinzenz Freigassner

*Disabilities Officer
icu-gender-equality@imperial.ac.uk*

My name is Vinzenz Freigassner and I study mechanical engineering in my second year and am originally from Austria. As Gender Equality Officer I want to reinforce the values that students and academics should carry regarding gender equality. Women have gone a far way to reach the current state, however, now is not the time to rely on the past progress but to continue to worry about how men and women can both live in an equal world with equal opportunities for everyone. During the spring term International Women's day will be celebrated so watch out for any information on that! Being part of the liberation and community officers means that I have a very supportive network even outside Gender equality. I am open to talk to anyone wanting to raise issues about gender inequality at Imperial or elsewhere. I am also happy for you to share your opinion on gender equality.

WELFARE

felix@imperial.ac.uk

Meet your Community officers



COMMUNITY

Amr Alwishah

International Officer
international.students@
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I was born in Amman, Jordan where I lived for my whole life before moving to Egypt for a couple of years in 2009. I then returned to Jordan to complete my IB Diploma and then came to Cardiff University on a scholarship for my Undergrad. In my final year at Cardiff, I was elected as Vice President Welfare and Campaigns so spent another year in Cardiff to represent and advocate for over 32,000 students. I'm now at Imperial to complete my Master's in Sustainable energy Futures and represent all international students at Imperial College – over half the student body. This year I want to: expand the introduction of the post-study work visa to include those of us graduating in the year 2020 and beyond; fight for the rights of EU students post Brexit; create a more connected international community and promote more cross-cultural events; increase support for international students and hold the College to account e.g. more transparency in tuition fees.



COMMUNITY

Ambika Bharadwaj

Mental Health Officer
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The idea behind my campaign was a simple one. With hard work & passion, a group of people can bring positive change. I have been working along a team of very enthusiastic & supportive people and have mainly focused on improving mental health awareness for this term. My immediate plans for 2020 are: to increase the involvement of Clubs & Societies in mental health related activities; indoor & Outdoor activities targeting mental health awareness; get necessary information (like well-being advisor's details, counselling details, etc.) on the Imperial College App; start a social media page to set up communication & increase transparency. Democracy is insane, and sometimes ideas end up being just a .doc, but I promise that slowly & steadily, I will deliver on everything I promised, and to quote the very famous musical, "There's a million things I haven't done, but just you wait".



COMMUNITY

Amna Ahmed

Interfaith Officer
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As Interfaith Officer, I'm passionate about creating an environment at Imperial in which people of faith feel welcome. With over 125 countries represented at the College, it is difficult to conceive the number of faiths practised by students and even more difficult to imagine Imperial without these differences. Our various STEM disciplines constantly require us to learn from each other to facilitate effective discourse and, yet, this principle is rarely applied to other aspects of our lives. I'm sure that if we spent just as long trying to see things from other people's points of view in our spiritual lives we'd all be much better off! I hope to spend the coming year serving as both a representative of your individual faith needs and as a bridge linking faith groups to each other. Please don't hesitate to reach out via email or in person if you see me on campus and sign up to the Interfaith Network on the Union!



COMMUNITY

Francesca Siracusa

Environmental Officer
icu-environmental@imperial.
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Hi everyone! My name is Francesca Siracusa and I am your Ethics & Environment Officer, as well as a year 5 medical student. I represent the student body on environmental and sustainability matters here at Imperial. I work closely with CSPs such as the Environmental Society and Divest Imperial as well as staff-led groups like Greening Imperial and Imperial Against Climate Change. My main aims this year are to: improve communication between the students/staff and the College on environment and sustainability matters; increase student engagement in environmental issues through events and campaigns - e.g. Climate Assembly, Greening Imperial Week; work with Campus Services and the Union to improve sustainability of food outlets and reduce waste; represent the student body in the College's new Socially Responsible Investment Policy working group... and more! Follow me on my social networks to keep up to date, have your voice heard, and get involved!

WELFARE

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World AIDS Day

On the 1st December world AIDS day took place, to support people living with HIV, raise support for the fight against HIV, and remember those dead from AIDS-related illnesses.

WELFARE

Freya Hepworth Lloyd

LGBT+ Officer

It is estimated that over 100,000 people in the UK are living with HIV. An estimated 7,500 of those are undiagnosed. The life expectancy for people diagnosed early (15-59) is the same as the general population. However nearly half of HIV diagnoses are late.

HIV is transmitted through particular body fluids. This includes blood, semen, vaginal and rectal secretions, and breast milk. The greatest form of transmission of the virus is through unprotected sex with a transmission risk of 2-20%. But babies can contract HIV from the mother during pregnancy, childbirth and breastfeeding at a rate of 15-45%. Sharing of needles and needlestick injuries can transfer the virus as well as blood transfusions and organ transplants from infected donors.

Blood donations are tested rigorously for any blood-borne viruses in the UK. Despite this, men who have sex with men, sex workers and people who have group sex are not allowed to donate blood within 3 months of having sex. This policy does not take into account sexual behaviour, for example, condom use, PrEP/PEP use, monogamy or recent STI tests.

HIV damages immune cells making it difficult to fight infections. When a person with HIV has extensive damage to the immune system and acquires a life-threatening



A student run stall raising money for World AIDS day // Freya Hepworth Lloyd

infection this is called AIDS.

HIV and Imperial

Earlier this year the second patient in the world to achieve HIV remission was at Hammersmith Hospital. After developing Hodgkin's Lymphoma this patient underwent chemotherapy and stem cell therapy. Unfortunately, this type of treatment is too toxic for standard HIV therapy. However, this is very promising for developing treatments in the future. Dr Ian Gabriel said, "The treatment we used at Imperial was different than that of the 'Berlin Patient' since it used no radiotherapy and highlights that its effectiveness lies in preventing cells from being infected. This exemplifies the need to pursue and develop new strategies based on abolishing CCR5 expression."

The Imperial College Trust has been heavily involved in HIV research and treatment from identifying the abnormalities in an HIV infected immune system to developing an HIV vaccine. The development of an HIV vaccine has been ongoing for over 30 years. At Hammersmith Hospital the most

recent HIV vaccine trial, Ad4HIV, has shown some promising preliminary results. The results of this trial should be published early next year.

The Imperial College Trust has also led the way for progressive and inclusive STI testing with the introduction of specialist services for the trans community at 56 Dean Street. They are a trans-led team who offer medical, social and housing support.

What we did

We have given out over 300 red ribbons over the last week. We have raised £184.19 so far for Terrence Higgins Trust. We had a stall in Beit Quad on Wednesday 28th November giving out ribbons and information pamphlets about HIV and PrEP. The ICSM Welfare team organised a free and confidential STI testing event at the Reynolds that evening. It was so popular they're considering another event soon in the future!

Important things to know about HIV

Several measures can reduce the risk of HIV transmission during sex. Type of sex has different levels of risk of contract-

ing HIV from receptive anal sex being the highest risk to receptive oral sex being the lowest risk. Factors that can increase the risk of transmission involve inflammation of mucosal membranes such as STIs and the presence of blood from menstruation or rough sex causing abrasion. Factors that decrease the risk of transmission include the use of PEP and PrEP, circumcision and lubrication.

What is PrEP?

PrEP stands for pre-exposure prophylaxis. Taking it regularly every day can prevent someone from getting HIV (in an HIV negative person). It is the first HIV prevention strategy that can be used by both men and women without depending on their partner. Taking PrEP every day has shown to reduce someone's risk of contracting HIV by over 90%. There are also ongoing studies looking into the interactions between PrEP and hormones. At the moment it is unlikely that PrEP interacts with hormones. However, most studies into PrEP have investigated its effects in men who have sex with men and heterosexual

couples. So there is a push for studies into the effectiveness of PrEP in the trans population and during pregnancy that will hopefully improve our insight. It is important to know that PrEP does not protect against other STIs so try to use other barrier methods if you want full protection.

What is PEP?

PEP stands for post-exposure prophylaxis. Similar to the morning after pill PEP can be taken within 72 hours after exposure to HIV to stop the infection. It's meant to be used as a last line resort in case of an accident (eg condom breaking) rather than using it routinely after sex or after sharing needles. Once you start PEP you have to take it once or twice every day for 28 days. The sooner it is started and the closer you stick to the regimen the more effective it is at preventing HIV. You're eligible for PEP if you might have been exposed to HIV during sex, have shared needles or have been sexually assaulted in the last 72 hours.

PEP can be prescribed to you at a sexual health clinic or in A&E. However, PrEP, in England, is a bit more difficult to attain. It is possible to buy PrEP online but it comes to between £17.50 to £80 per month. The other option is enrolling on the IMPACT Trial, which gives PrEP to the participants for free. It is only open to high-risk populations:

- Men who have sex with men or trans women, who have had sex without condoms in the last 3 months, and feel they're likely to do so in the next 3 months

- HIV negative partner of an HIV positive person when the positive partner does not have an undetectable viral load, and it is likely they'll have sex without condoms

- Other people who are clinically assessed to also be a high risk of HIV infection

Get tested!

Most importantly, make sure to get tested regularly! When should you get tested?

Every 3-6 months if you're having sex regularly

Every time you have a new sexual partner

If you notice any changes to your genitals eg itchiness, unusual discharge, skin changes, pain during sex/when peeing etc.

If you have sex with someone with an STI

If you have symptoms make sure you visit your local sexual health clinic or your GP, but if you don't you can order a home testing kit. Home testing kits are free to order in some postcodes. If your borough doesn't fund home testing kits you can buy an HIV home testing kit for about £23 or a chlamydia and gonorrhoea screening for £26. You can order kits from SH:24 and Fettle, who work alongside the NHS.

How can I help?

Become a volunteer at Terrence Higgins Trust
<https://www.tht.org.uk/take-action/volunteer>

Raise money for Terrence Higgins Trust
<https://www.justgiving.com/fundraising/imperialworldaidsday>

SPORTS

sport.felix@imperial.ac.uk

Sports editor's experience of the relationship between sport and mental health

Imraj shares his experience of sport and the stabilising quality it has on a chaotic life. He reflects on being a carer, mental health, and how sport can be used for self-care (and destruction).

SPORTS

Imraj Singh
Sports Editor

For Felix's 70th Anniversary we've asked sports clubs for content on mental health in sport. I am happy to see that Imperial athletes, alongside their sport AND studies, run a range of campaigns spreading mental health awareness. Additionally, some teams have taken steps to promote welfare by having designated welfare positions within their clubs. This focus on mental health in sport can be somewhat attributed to a societal shift in attitude. The typical British attitude of a 'stiff upper lip' is being replaced by an openness as a sign of strength.

It takes a lot more strength to process and be

"It takes a lot more strength to process and be open about mental health than ignore it"

open about mental health than ignore it. With that in mind I will share my own experience of mental health in sport.

I'm from Scotland and as a wee wean I played football. I was the kid that's thrown in as goalie on the third team. Yep, I was bad. After football

I began scouts and tried mountain biking, hiking etc. I was also part of a hockey club. I was better at these activities, but I never became serious with any of them. Unfortunately, it was around this time that my family life became chaotic and stressful. One of my siblings had been getting into trouble at school and this steadily worsened. It culminated in them being imprisoned. Additionally, another sibling's mental health deteriorated leading to them being hospitalised. These stresses contributed to me neglecting sport and choosing less wholesome activities. I did start heading to the gym recreationally and through that I met a mate who convinced me to start American football. Up to that point I had only tried some mixed martial arts and rugby, but from that I really enjoyed contact.

In Britain, rugby is often held at a higher esteem than American football. I feel this is unjust. They are both very different and I'd describe rugby as a contact sport and American football as an impact sport. This distinction is important as it gives insight as to why I came to like it so much. Arguably, the tackles in American football are more aggressive; gang-tackling and tackling in mid-air are common. Each "play" is typically seconds, whilst rugby "phases" tend to be longer. My stamina wasn't the best, but I was quick on my feet and happily volunteered as a human battering ram; for those reasons I fell in love with

American football. That year we made it to the national championships in Doncaster and I was awarded the defensive most valuable player that year.

"American football provided me with stability, a second family, and a place to escape chaos"

I kept playing American football through my A-level equivalents (called Advanced Highers). At that time, weekends were spent visiting psychiatric wards or prison. Having to reconcile my role as a young carer and general teenage angst was difficult. It led me to not being able to open-up about my role as a carer for several years, if I'm honest I still struggle opening up now. American football provided me with stability, a second family, and a place to escape chaos. I credit sport as a contributing factor to achieving my grades and securing my place at Imperial.

Prior to starting at Imperial, I undertook a year-in-industry in Kent. This was a big move for a seventeen-year-old, but it was an opportunity to allow my family to heal (without having to worry about me) and to save for Imperial. In hindsight, my stoic 'selfless' act was not wise, and I recognise lots



Sports editor strutting in front of the flight simulator // Thomas Angus

of alarming indications of dire mental health. It was an extremely isolating experience. I recall

"After a few months of re-learning to walk and run I decided I was fit to play another season, but my body wasn't having it"

weekends where I didn't leave my room or speak to anyone. Luckily there was a one sweet release:

American football. I found a local team a short train ride away. With that team we made it to the national championships. That year I developed a toxic relationship with the sport and began getting frequent injuries. The toll was two concussions, a badly contused thigh and sprained ankle. These injuries didn't stop me playing. Not wanting to let down my team, I put my body on the line.

At Imperial I kept playing American football. My injuries weren't that serious, nothing life changing, up until the end of first year. It was the old boys' game (of all games!) where I managed to tear off half my groin. After a few months of re-learning to walk and run I decided I was fit to play another

season, but my body wasn't having it. I ended up retiring during my second year. I still sorely miss American football; it is the only sport I have ever been remotely good at. This highlights the darker side of sport; sport giveth and sport taketh - make sure it doesn't take too much.

Sport has had a profound impact on my mental health. It provided stability, fun, and discipline, but only when boundaries were asserted and I only gave what's within my capacity. There are many resources available at Imperial if you are struggling with your mental health. Sport can be one of these resources and I would urge you to give it a go if you're interested.

SPORTS

sport.felix@imperial.ac.uk

ICBC reflect on mental health and spreading awareness in the rowing community

With alarmingly high suicide rates and suicide being single biggest killer of men under the age of 45 in the country, ICBC take action in sports, where mental health is too often overlooked.

SPORTS

Bazil Saiq

ICBC Treasurer

Mental health in sport is very often overlooked. Athletes are often perceived to be thick-skinned, resilient, and independent; looks can be deceiving. The thoughts, feelings, and emotions that navigate in that space between their ears are no different from that of any other person.

We are equally vulnerable.

Fitting in multiple training sessions a week, some of which may be early mornings, combined with a degree puts student athletes in a susceptible position and makes it critical that education of

mental health and self-care is prioritised. We are proud that Imperial College Boat Club has greatly increased the awareness of and helped break down the stigma surrounding mental health. Our former Club Captain, Jack Walsh is a founding member of a student-led campaign, Rowing Together for Healthy Minds (RTHM).

RTHM was started in memory of rower René Zamudio, 22, who took his own life in January 2017. He learned to row at Bristol University before continuing to row at Imperial College Boat Club. René started to suffer from depression during his second year at university which had a devastating impact on his relationships, friendships, sport, and studies. He never showed any signs

of mental health issues before going to university. He was a private individual and did not share his

“René’s death was a shock to everyone as his confidence and charisma belied the mental health issues he was suffering from”

pain and suffering with his friends; most were unaware of René’s suffering and were devastated by his tragic death.

René’s death was a shock to everyone as his



ICBC women’s eight racing in RTHM tops // Lucinda Douse

confidence and charisma belied the mental health issues that he was suffering from. As for many similar cases, he was the last person you would think to be suffering from mental

health issues. RTHM aims to get the rowing community talking about mental health to address preventable tragedies that occur all too often at universities across the country. RTHM also wants to break down stigmas surrounding mental health illnesses to make it easier for those suffering in silence to reach out for help. With the

support of mental health charity Mind, RTHM aspires to raise the profile of mental health in rowing and to inform athletes and coaches about the symptoms of depression and other mental health illnesses, in order to make it easier for someone like René to reach out for help in future.



Rio 2016 Olympian Jack Beaumont wearing RTHM top at GB final trials // Lucinda Douse

The RTHM campaign has been active around the country. The campaign has to date:

- Partnered with over 135 boat clubs across the UK
- Sold over 3500 universal charity tops that clubs and universities have raced in throughout the last year
- Supplied resources to all affiliated clubs that outline the club’s commitment to prioritising the mental health of its athletes.
- Raised over £4000 for partner charity, Mind. They offer information about mental health and provide support to anyone affected by these issues.
- Informed and educated on mental health via their social media accounts @rthm_uk on Instagram, Facebook, and Twitter.

SPORTS

sport.felix@imperial.ac.uk

In the wake of tragedy, ICBC members and alumni sail across an ocean to raise mental health awareness

SPORTS

Bazil Saiq

ICBC Treasurer

A separate campaign, Race4René, in memory of René, was set up in 2018 with some of René's closest friends and family, aiming to sail across the Atlantic with the poignant message: asking for help should not be as hard as crossing an ocean.

The crew of novice sailors, including ICBC members and alumni, have challenged themselves to take part in a Trans-Atlantic yacht race in memory of their friend and to raise money for charity. Partnered with the charities Child Bereavement UK and PAPHYRUS, Race4Rene supports cam-

paings for more research into methods for suicide prevention and support for young people suffering. Young people like René.

“Asking for help should not be as hard as crossing an ocean”

In this expedition, crew members face their first ocean-crossing passage as well as compete with touch racers in an ocean race. Currently, the crew is sending daily updates with some personal reflections from each crew member, which can be followed on @race4rene. During the race, the crew will take part in

every aspect of crewing the yacht, including setting, taking down and packing sails (including spinnakers), reefing, all manoeuvres, sail-trimming, keeping a lookout, steering, cooking, and daily cleaning.

The Race4René crew are currently tackling gusts of wind at up to 30 knots during their continuous 16-day race. However, it's more than just plain race sailing; the crew will arrive in Saint Lucia, having achieved something amazing. Through thick and thin, with each other's support, they crossed an ocean on a small sailboat.

Out of a tragedy, it is humbling to see the amount of good that has come, thanks to the goodwill of those who knew him and the determination of the communi-



Race4René crew members Harry Knights and James Harrison // Lucinda Douse

ty to save lives and raise awareness.

Mental health is not a topic for a day or a week; it should remain

a priority throughout the year and these campaigns are helping to do just that. Share your stories with your friends, talk about

things getting to you and support each other.

“Be kind, for everyone you know is fighting a battle.”

ICHC: An Ode to Monday Night Training

Imperial College Hockey Club's Welfare Officer Chloe writes about her motivation for a grueling Monday night training session!

SPORTS

Chloe Jeremy

ICHC Welfare Officer

It is 4:40 pm and I haven't got as much work done as I'd hoped today. Why? A Marble Olympics YouTube hole, mental and emotional fatigue... TikTok? It doesn't really matter. I log out of my hard-earned library computer and begin to pack up. Another student has noticed me stir and now hovers near my desk like a vulture over prey, ready to

settle in for the night shift. As I leave the library and begin to make my way to the union, I am relieved yet fearful thinking of the work I have left behind, envisaging the last-minute all-nighters that lie ahead.

Monday night training is kind of awful. You sit in rush hour traffic for over an hour, only to be dropped in Harlington, where it is always a few degrees colder and a few more degrees bleaker. The bus back sees you home by 10 pm if you're lucky, though for the later session it is closer

to midnight. Sports clubs are also expensive to be a part of, and the prospect of paying this expense on top of £9k per year, only to limit the time you have to make the most of the £9k investment seems hard to justify. Yes, you'll land your dream job in consulting and make up for it eventually, but was it because you put 'member of the hockey club' under the Other Interests section of your CV? Probably not.

So why bother?

Playing sport at Imperial makes little sense, which is why you

should do it. Spending 20+ hours a week attending training, socials, and matches with a group of

“Joining a society guarantees people check up on you in an often pressurised environment”

people, some of whom you may not even like, and doing stuff that definitely does not improve your academic prospects are important. Simply, it makes you feel good. Some of the people you play with may become great friends, or remain acquaintances, but the comfort is found in the fact that it doesn't really matter. Either way, joining a society guarantees people to check up on you in an often highly pressurised and sometimes isolating environment.

That is not to say that

societies themselves cannot be a source of this. In teams the group mentality can be insidious, and a conscious effort must be made to have peer pressure take people to Harlington for five hours on a grim Sunday without leaving them uncomfortable or unhappy at 7 pm on a Wednesday.

It is important that we as individuals carefully consider the way we think and behave, and in return people on the outside should be optimistic and proactive and consider joining.

SPORTS

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Imperial College Men's Rugby take on Movember and Mental Health

Since 2003, Movember has funded more than 1,250 men's health projects around the world, challenging the status quo, shaking up men's health research, and transforming the way health services reach and support men. Read about ICURFC's involvement here.

SPORTS

William Draper-Barr

ICURFC Member

This November, you may have been wondering why a male housemate had grown a moustache that looked more like a cappuccino stain than facial hair or why those loud blokes in ties in the union bar on a Wednesday were somehow looking more handsome than usual.

It was because across Imperial and the UK, men had been growing facial hair to raise awareness and money for Movember. Movember is a leading charity targeting three key issues at the heart of the men's health crisis, funding projects tackling prostate cancer, testicular cancer, mental health, and suicide prevention. The lack of awareness and funding for these issues have now seen one man dying of suicide every minute of every day, with males accounting for 75% of all suicides. This is

why ICURFC has gotten behind this cause and raised just shy of £1,500, with a big shout out to Rohit Rajasegaran on both an impressive moustache and personally raising £350 for this charity.

One in four people in the UK will be affected by mental illness in any year, where athletes also find themselves struggling with their mental health.

"The lack of awareness and funding for these issues have now seen one man dying of suicide every minute"

In 2016, elite rugby players, such as James Haskell, shared their own personal experiences with depression and anxiety for a campaign with the Rugby Players Association (RPA).

This #LiftTheWeight drive saw a 130% increase in the number of players contacting the RPA counselling services and I believe this really shows the impact of addressing mental health in sport. Improved mood and a more balanced lifestyle are obvious benefits for how physical activity can boost mental wellbeing, but sport can also fill a gap in young people's health care. Academic departments and the

Imperial College Union offer fantastic services

"#LiftThe-Weight drive saw a 130% increase in the number of players contacting the RPA counselling service"

for students, but sport creates a very informal and engaging environment where teammates can find support amongst one another on and off the field.

I think the best way to show this is with a personal example, as some may find it hard to believe that finding yourself 4 weekly food shop's worth of student loan poorer with a VK hangover that could kill a small elephant after ACC could be of any benefit to your mental health.

This week for me, Wednesday was sandwiched between a computing exam on Monday and a 30-page design report deadline on Friday, so losing a whole Wednesday afternoon to rugby did not seem ideal. Maybe it was the fact we were playing in Regent's Park and not Harlington, but 22 3rd XV ICURFC players put deadlines aside to



Movember // Movember

face the somewhat less overworked SOAS 1s.

This week's highlight reel could include the tap

"Academic departments and the Union offer fantastic services for students but sport creates a very informal and engaging environment"

and go prowess of Elliott Stoclet or Anton 'defence is the best offence' Haiser eating the ankles of forwards double his size, but our final match tea of the year at Wetherspoon's

will be the best part of the day. Everyone around the table celebrating the season so far, trying to forget the watered down £4.89 pints, was a great reminder to me of the community in ICURFC and sport societies across Imperial. If you have found you have not committed to a sport society this term, get to a training session next year - new players are always welcome.

To read more about the Movember movement, head to uk.movember.com, where you can read about the movement, men's health, and testimonials of individuals, and make a donation.

To get in touch with Imperial College Men's Rugby, contact them at rugby@imperial.ac.uk.

Donate at ICURFC's Movember, moteam.co/icurfc.



Billy's Mo // William Draper-Barr

SPORTS

sport.felix@imperial.ac.uk

Imperial Octopush battle it out in Oxford

SPORTS

Benjamin Slater

Scuba - Octopush Officer

On Saturday 30th November, the Octopush team (also known as Underwater Hockey or UWH) played their first competition of the year at the University of Oxford.

For the few people reading this who don't already know, Octopush is a game created in 1954 by scuba divers to help them let off some steam (without damaging any of their incredibly expensive equipment). They devised a game where teams would attempt to push a weighted puck into a goal, all while holding their breath underwater. The game is 'limited' contact and involves ten players, with six in the pool at

any one time and four as substitutes. Players also don a glamorous kit which includes a snorkel, mask, fins, a delightful hat, plus some specially made sticks that allow the player to manoeuvre the puck.

Although UWH is a very well-known sport in the UK, people often don't realise that it is internationally played, with competitions hosted globally and attracting a diverse range of people (although the game still hasn't made it to BUCS yet). In fact, the game's international history stretches as far back as the first world championship in Canada in 1980. The main reason the sport hasn't reached Olympic status is the huge engineering challenges involved in making the sport crowd-friendly. Ideas have included a fully glass pool or a submerged

spectator stand, however so far neither one has gained huge traction (especially after the terrible UWH Glass Disaster of 2001 where three players lost their lives). Although the imperial team isn't quite at an international level presently, it's definitely something that's on the agenda for coming years!

So who is your average underwater hockey player? Well, generally speaking, UWH players derive great pleasure from the niche, edgy, and aggressive nature of the sport. The game is surprisingly fast paced and often involves some ramming and the odd sneak attack by a fin or stick. The wonderful thing about underwater hockey is that collisions underwater usually lead to much lower injury rates than 'above-the-water'



Octopush at their first competition // Benjamin Slater

sports. Of course, risk of drowning is definitely increased compared to say field or ice hockey... but generally your teammates/the other team don't actually want to kill you and will come to your aid if need be.

The most recent tournament was last Saturday's competition in Oxford. It was against several other UK univer-

sities including Oxford, Warwick, Plymouth, and York. The Imperial team successfully won their first two games... and then promptly lost the next four. However, the six-person team was also lacking any substitute players, meaning a stream of relentless games with almost no breaks in between. Ultimately, Imperial battled hard

(and accidentally made a player on one team cry), so all in all it was a hugely successful first competition. The team is now looking forward to their next competition and the student nationals in 2020.

Imperial's UWH team trains at Ethos pool every Thursday evening. Get in touch with benjamin.slater16@imperial.ac.uk to get involved.

ICHC Ladies 2s Reach the top of their league

SPORTS

Chloe Jeremy

ICHC Welfare Officer

It has been a term of change for the ICHC L2s. The previous few seasons saw a lot of defeat, with moments of greatness and unbeatable team spirit, but just not many actual goals. Something had to change, and so October brought the hotly debated creation of the L3s, led by the blindingly optimistic captain Lois Gallety and devoted coach Milo Kite. We were also pleased to welcome several skilled freshers who are not above occasionally stepping on the ball or giving away a pass out of confusion/panic

– too scruffy for the L1s, but perfect for the L2s.

After several exciting weeks of matches, we got to know each other and were making great strides on and off the pitch. A mid-November LUSL match against Kent 1s, a team several leagues above us, had been a little rough, but hopes were still high as we came to face the only other undefeated team in our BUCS league, RUMS 2s.

This was to be "the most important game of the season" – Alex Bosman, co-captain. As ICHC's L2s pulled into the penultimate stop on the Piccadilly Line, Katya was nervous. But with Ash 'did you know I played county when I was 13' Cunningham in goal,

and Ellie 'Sorry I just feel so distracted today aha' Dobson as sweeper, we knew we were in safe hands, and Katya was a bit less nervous (but still quite nervous).

An unusually smooth start and some divisive attacking play by freshers Ella, Charlotte, and Millie saw us with a few slick goals by half time.

Some rocky play in the second half, with players either falling over from stationary or misunderstanding the umpire's words "please put the ball on the line" had us lose some momentum, but at this point we were just pleased to know most of the rules. An unlucky breakthrough in the final minute saw RUMS score their first goal, but not

before we had slipped in a few more, ending the match with a comfortable 6-1. All in all, a captivating performance by everyone collaboratively and individually ("except

Ash" – Henry Sewall, Coach), with inspiring teamwork and drive that is set to only get better as the season continues.

After a tough 18/19 season saw us struggling

with consistency and low in spirits, it is exciting to see such brilliant chemistry and smooth technical play that begs the question - is promotion finally within reach?



ICHC L2 Victorious Squad // Chloe Jeremy

FEELIX

FRIDAY DEC. 9th.

