

First published in 1949, Felix is released weekly during term time and is distributed around Imperial's London campuses. All students, staff, and alumni are welcome to contribute to the paper.

# Felix

KEEP THE CAT FREE | SINCE 1949



Imperial College's *University Challenge* team in their first bout against Manchester, with their mascot Titus (left). BBC

## “Once you’re already ahead, it’s a lot more relaxing...”

### Imperial's *University Challenge* team speaks to Felix about their first round triumph over Manchester

**Editor-in-Chief**  
MOHAMMAD MAJLISI

**W**hen asked if it was stressful quizzing underneath the studio lights for their first televised round in *University Challenge*, team captain Matthew Spry said, “I think I really got into the zone, and I think I managed to just tune out the fact that the cameras... and the lights are on. I just sort of played it like a regular quiz.” Imperial's recent success in the competition – where it had won three of its five titles in the years 2020, 2022, and 2024 – meant the team had “big shoes to fill”, according to Spry.

The team, consisting of captain Matthew Spry (PhD Electrical Chemistry, in the Department of Materials), Charlotte Stokes (MSc Applied Genomics), Mattia Elkouby (undergraduate Chemistry), Jaime Salamanca Camacho (MSc Quantum Fields and Fundamental) → **READ MORE ON PAGE 4**



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# DECLARATION

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

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

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

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

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

Signed by:  
**MOHAMMAD MAJLISI**  
Editor-in-Chief

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## EDITORIAL

# New beginnings and PR problems

**Editor-in-Chief**  
**MOHAMMAD MAJLISI**

**E**agle-eyed readers may have noticed a slight change to the *Felix* website over the past week. The old website, intended for use for “10-15 years” was a slight freak of nature, in that you had to be considered “cracked” or a “10x” computer expert to understand the nature of the beast, which made it unsustainable to run. *Felix* needed something sleeker, sexier, and also much more maintainable for a tired undergraduate who needs the work experience to pad their CV (I see you for what you are).

Thankfully, due to the efforts of our recently departed webmaster, Timothy Langer, we have managed exactly that. Timothy has migrated almost 10,000 articles across from the old website onto the new one and has left our society in a much better condition than from when he joined. I and the rest of the team extend our greatest, and most heartfelt thanks to him – not just for doing this, but also for the efforts he has exerted in the past year he was with us, in running felixonline.co.uk.

### Graduation

To those lucky bastards who have left this miserable, soul-sucking institutions well done! Completing a degree, regardless of grade, is tough and something everyone should be proud of. Well done guys, thrive, and flourish. Be free in the world, it's yours for the taking.

### Labour's PR disaster(s)

Not even Liz Truss managed to lose so much political goodwill in such a short period of time. Nor did she have such an impressive mandate to begin with. Labour has managed to alienate both the old base of broadly left-wing people, Muslims, the LGBTQ+ community, and the new base of businesses, private-school parents, and repentant Tory voters, with reforms that don't seek to please anyone in particular, nor have any sense of direction. Journalist Ian Dunt has summed this up quite succinctly: “Starmer has no loyal constituency. The hard left hates him, passionate Remainers are alienated by make-Brexit-work, the right considers him the enemy, and populists despise him.” Labour's first 100 days in office have been marked by race riots, alleged U-turns on their fiscal policies, corruption

and sleaze allegations based on the activities of Taylor Swift and Labour donor/ peer/ sugar-daddy Lord Waheed Alli, and a reset of staff as Morgan McSweeney's faction in Westminster ousts former supremo Sue Gray. Successive polls have shown the government slip in the country's estimation, with Saturday 13<sup>th</sup> October seeing Labour and the Conservatives neck and neck for voting intention (both 27%) in a More in Common poll. Starmer himself is the most unpopular Prime Minister in his first 100 days since records began, according to Pollbase and Ipsos, with an approval rating of 26%. It's fair to say Labour has shit the bed. However, with the autumn budget looming, it will be interesting to see if the new Labour government can turn their popularity around or continue to collapse. Starmer could find some solace in the fact he isn't Peruvian head of state, Dina Boluarte – polls by Ipsos and Datum International revealed she had a meagre approval rating of 8% this October.

## Union Council Paper Submissions

### Next Union Council Meeting:

Tuesday 12<sup>th</sup> November, Union Dining Hall, Beit Building

### Council Paper Submissions Open:

Tuesday 22<sup>nd</sup> October

### Deadline for feedback:

Tuesday 29<sup>th</sup> October

### Deadline for submissions:

Friday 1<sup>st</sup> November

## Autumn elections

Voting Opens at 12pm on Monday 21st October until 12pm on Thursday 24th October to elect student representatives. You can vote for both academic and well-being representatives for your year group as well as other positions that you may be aligned to such as CSP committees, PGT Representation Chair & Academic and Welfare Officers, Union Council positions, Constituent Union roles and Liberation and Community Network Committees.

These are the people who are going to represent you and represent the student voice so its really important you take charge of your Imperial experience and choose who you want to represent you.

To find out who you can vote for log onto evoting - eVoting | Imperial College Union (ic.ac.uk) with your college email address and the positions you are eligible to vote for will become available. You will also have access to see the candidates manifestos as well. Make sure your vote is informed and you have read all the information prior to voting.

## NEWS

CONTINUED FROM PAGE 1...

Forces), and reserve Carlos Doebeli (PhD Applied Mathematics), were joined by last year's team member Justin Lee, on our interview call.

Each of the team's members have their strengths and weaknesses. Matthew is "decent at art, geography, history, and politics." Mattia's strengths were "Chemistry... and usually geography", but Matthew and Jaime were also quite strong on this for this year's competition. Mattia also learnt "random bits of history" and poetry. Charlotte was strong on biology, as well as "some of the more pop culture stuff like film and TV," she explained. She was "quite good at literature, but definitely had some spots" in her knowledge. Jaime, who wasn't present, was described as knowledgeable about "everything." Charlotte described her teammate as knowing about "the stuff you've never heard of." Carlos chimes in "anything to do with Spain", and "maths and physics". Matthew also describes him as someone who's "born in the wrong century." As a team, literature was their weakness, so they divided up the trivia they needed to learn together.

Describing their first match against the University of Manchester, where Imperial won by an impressive 310-75 points, Matthew credits gaining an early lead with their team's victory. "Once, you're already ahead, it's a lot more relaxing, you can sort of enjoy it. You feel more confident, buzzing in when you know you're not actually taking a risk and costing your team by buzzing in with the wrong answer." He also spoke of their approach to the first round: "We went into it thinking, you know, just don't get battered in the first round. We went in wanting to win the whole thing, but the worst thing is to go at the first round and just get turned over by another team." Mattia expands on this further: "Also... we don't want to get destroyed in the first round and suddenly look like the weakest team like ever pitched by Imperial in the last, I don't know, 10 years."

Manchester was the team to beat. "The only team who could have caught a lead

in this competition were Manchester," Matthew explains. It, along with Magdalen College, Oxford, have both won four titles each, putting them joint second to Imperial. "I wonder if they did that deliberately. I think they might have paired Manchester and Imperial together for that reason."

Mattia's experience last year as reserve meant he was quite useful in managing the pressure of competition. He explained: "Obviously it was nice to be reserved last year, and I got to see how everything worked, and I got to be in the studios, which meant this year I was far less stressed than the others about it. Like, I remember before our first episode, everyone was kind of shaky and it didn't really affect me that much."

This year's mascot is Titus, a plushie Titanosaur Jaime sourced from the Natural History Museum. Mattia explains their plan for the soft toy: "We wanted to do the same thing as Justin's team had done with the mascot with like Little Otter the year before, which was, add a new piece of clothing to the mascot after each victory."

Due to the teams' almost concurrent successes, the Imperial Dynasty has been born, with previous winners sharing their knowledge and helping train the latest competitors in the competition. This is Justin's second year on the selection committee. Imperial alum and 2022 winner Fatima Sheriff is also part of the selection process. She has also continued quizzing on television, competing on Only Connect on the same day Imperial beat Manchester. "There are four different locations and times for people to get into the first round and for the second round," Justin says. He has also noted a rise in people joining, "I remember having an uptick in prospective Singaporeans," he told me, recalling this occurred after 2022, after supremo Max Zheng performed astoundingly well. "Some of them tried to ask for his autograph," he continues.

The University Challenge team operates differently to Quiz Society, with its own independent committee and selection process, and running its own independent trials. Anyone can attend,

regardless of affiliation with Quiz Society. Justin explained the format: "There are two rounds of trials, one of them split across four venues and four dates. There are a total of 100 questions for applicants to answer and divide it into two columns. There's the confidence column - if you get it right, you get two points. If you get it wrong, you lose a point. There's a not so confident column you if you get it right, you get one point. If you don't get it right, you get nothing."

"So, we generally select the applicants with the highest answer scores, but if we see someone with some specialty that we are interested in or someone that mesh well with some other people skills, we would consider them as well. And so the best dozen or so people will be on the second round of the trial. And then we press buzzers and see who gets the answer first and see how they how they function as a team and then after that we will spend a week or so selecting a team."

Mattia explained that experience is not necessary: "People can just come to their trials without having prepared anything. Just come and maybe even the knowledge they've already accumulated in their life will be enough to do incredibly well in the test. They don't have to psych themselves out and tell themselves it's not possible because someone like Jaime on the team, who had never actually done a quiz before, did the best out of anyone."

### Curious about running this year? Quiz Soc are running four trials this year:

- 25/10/24—White City, MSRH, G23-24, 6 PM
- 28/10/24—Royal School of Mines, LT 131, 6 PM
- 29/10/24—Blackett, LT 1, 6PM
- 31/10/24—Charing Cross, Reynolds, Brian Drewe LT, 6 PM

If you'd like to have a go, please attend one of the trials and take your chances. Bring a pen! For any questions, email: [quiz@imperial.ac.uk](mailto:quiz@imperial.ac.uk).

# Union launches next phase of democracy review

Editor-in-Chief

MOHAMMAD MAJLISI

Imperial College Union is holding focus groups for its democracy review in order to improve its representation of the student body. The review will take a look at democratic functions as well as student representative structures, to ensure that the Union accurately represents the views of students, as well as improving engagement.

Students are invited to sign up for focus groups taking place the week commencing 21st October. Students can sign up via the QR code below.



Announced in July 2024, the review seeks to take a "a holistic look at whether our current ways for you to contribute to the Union are effective, impactful and accessible to all Imperial students... it should change some of the ways we do things, enabling a more inclusive and representative students' union in the future," from a blog post written by Union President Camille Boutrolle.

2024's leadership election saw a voter turnout of 21.77% for the general election, and a 31.70% turnout for Clubs, Societies and Projects (CSP) elections. Whilst this is a greater turnout on average for the university sector, turnout has decreased in recent years.

# OT Interviews: Camille Boutrolle, Christian Cooper, Stephanie Yeung

Returning Officers Camille, Christian, and Stephanie, speak to *Felix* about their second terms and what it's like completing a second term

## Editor-in-Chief

### MOHAMMAD MAJLISI

Camille Boutrolle, Christian Cooper, and Stephanie Yeung were voted in for a second term in their respective roles as Union President, Deputy President (Clubs and Societies), and Deputy President (Finance and Services) in March 2024. Felix editor Mohammad Majlisi sits down with them to speak about what this second term in office might mean for students across Imperial's campuses.

This interview has been edited for length and clarity.

We start off with a simple question – what it's like to return for a second term, and how is the experience different. Camille starts first: “I think when you start out the first time you spend three months learning a lot about how not just the Union works, but how the College works, who has soft and hard power. Whereas [this time] I could hit the ground a bit running this time round because I didn't have to relearn how the organisation works.” What hasn't changed, is relearning the Officer Trustee dynamic: “even though it's just two people who are new in our officer trustee team of five, it's about relearning the whole team dynamic.”

Christian agrees: “I think the way I always describe it to people is you lose two months induction; you lose two months at the end of your term because you're like just fading out. So, I think I've saved four months from the overlap, so I've got like an additional four months to a one-year officer. But I think the team dynamics is really good, but it's obviously going to be different.”

I asked the Officer Trustees about dealing with a more politically vocal student body, with several campaign and activist groups working around campus. For the sabbatical officers, the best approach is “actually sitting down with them, giving them that time to talk to us is really, really important,” Christian explains. It's also reciprocal “giving us a chance to sort of talk them through it, not to dictate what's going on, not to say this is what has to happen, but to sort of explain the context around things. I think historically the Union's been really poor at that. I think we started doing that last year. It's like a really big goal is to actually try and communicate with students.”

Camille believes in the idea you “need both campaign groups” and the Union. “You need people demonstrating that volition and then you can mediate behind the scenes”. Last year, Camille found allies in her sustainability goals through Imperial Climate Action, a pressure group of students and staff calling for greener policies and divestment from fossil fuels at Imperial College.

All three returning officers campaigned on building up from their initial manifestos. Camille is focussing on increasing the London PhD stipend, as well as ensuring White City campus development works in the favour of students. She is also working on cross-department module sharing: “I'm inclined to think that would be like more actually interdisciplinary modules between different departments right now,” because of complications with Imperial's status as a non-University of London university. The University of London is a federal university, in which its 17 members, includ-

ing UCL and LSE, are universities within their own right, but are also members of this conglomerate. Imperial left the University of London in 2007, in order to award degrees independently.

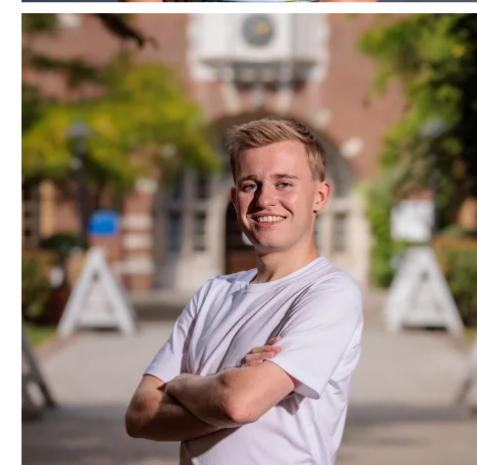
Similarly Christian is focusing on improving access and participation to clubs and societies through the student experience fund: “Over the next couple of weeks, I'm hoping to release the form for direct applications, which would be open to anyone regardless of your status. If you don't have the fund, it's open to you.”

Stephanie is continuing her focus on sustainability, but with more of a narrow focus: “There are aspects of the strategy and actions that would fall on me or like would relate to me or things I personally feel more passionate about, but I think overall as the (sustainability) strategy delivers in its first year what's most important is being able to transfer that ownership, which is already happening to our operational, full time staff team because we're not going to be here next year. So, like I think for me most important is that I can pass on all these different projects and things that we're working on.”

Christian and Stephanie are working on the Principles of Socially Responsible Engagement. First introduced in 2023, the current Officer Trustees are aiming to revamp the system and improve the framework. Up first is a name change. The framework is simply a framework, as Christian explains: “It's not a strategy. It's going to be more sort of guidance based, but it's also not a policy. What I wanted to be really clear from the very start that this is not, “You do this or else will sanction you.” It's you do this, and things will be better for you. I want it to be quite

egalitarian. I want buy in – for students to follow and see this framework.”

If you would like to read more from the Officer Trustees, check out the interview on [felixonline.co.uk](https://felixonline.co.uk).



Camille Boutrolle, Christian Cooper, Stephanie Yeung. Imperial College Union

## SCIENCE

# Understanding the shape of life

The 2024 Nobel Prize in chemistry was awarded to David Baker, Demis Hassabis, and John Jumper for their protein structure breakthroughs.

Science Writer  
JAMES DESMET

Proteins – macromolecules essential to life at a molecular level – are chains comprising 21 different amino acids. Without them, life could not exist. Their complexity is unfathomable, primarily because the amino acid chain, known as the ‘primary structure’, can engage in various molecular interactions within the protein. These include interactions within the chain itself (‘secondary structure’) and between unique side chains branching from different amino acids (‘tertiary structure’), causing each protein to fold into unique shapes.

With the average protein length in a human cell being 430 amino acids – and many exceeding this – understanding how proteins fold and interact to form their shapes critical to their function has challenged scientists for decades, a puzzle termed the ‘protein folding problem’.

Solving this problem has profound implications for medicine and drug discovery.

Many diseases result from misfolded proteins, and nearly all modern drugs target proteins in some form. Understanding protein structures is thus crucial for understanding and treating diseases.

Historically, protein structures were determined using techniques like X-ray crystallography, NMR spectroscopy, and mass spectrometry. This required producing, isolating, and testing proteins, with a sanguine hope that the data would be sufficient for structure decoding. While effective for many proteins, this method failed to solve more complex proteins for decades. It is also time-consuming and expensive due to the practical advanced techniques required.

However, with advances in machine learning and modern technology, scientists thought it might be possible to predict protein structures computationally.

tures for specific tasks and reverse-engineering the amino acid sequences needed to create them. This led to engineered proteins not seen in nature, such as those



**But one must ask: is this a testament to AI and machine learning’s prowess or to the hands that guided it?**

David Baker’s lab believed protein structures could be predicted from amino acid sequences. Their work led to the release of Rosetta in the 1990s, which was updated

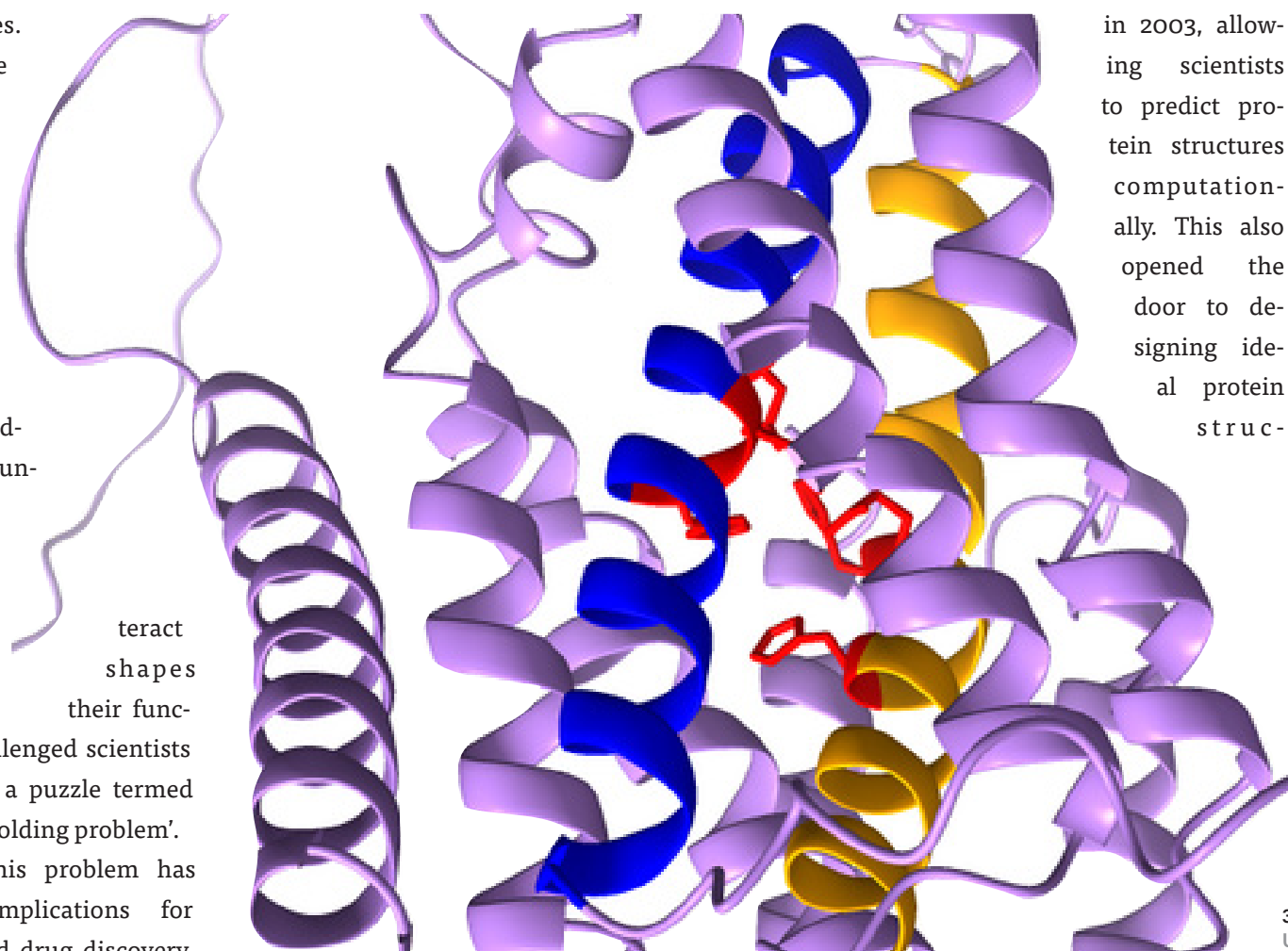
significantly in 2003, allowing scientists to predict protein structures computationally. This also opened the door to designing ideal protein structures

inhibiting the COVID-19 spike protein and enzymes that degrade plastics.

Demis Hassabis, John Jumper, and their teams at DeepMind aimed to improve upon this using modern machine learning. They created a model trained on a massive dataset of experimentally determined protein structures. Their work culminated in AlphaFold 2’s release in 2020, a significant advancement capable of predicting virtually all known proteins with near-flawless accuracy.

The efforts of David Baker, Demis Hassabis, and John Jumper have effectively solved the protein folding problem; what once took years in the lab can now be determined computationally in hours. The impact is already substantial, with Rosetta used to design proteins for the COVID-19 vaccine and AlphaFold 2 decoding proteins in bacteria involved in antibiotic resistance.

Only time will reveal the full scope of this Nobel Prize-winning achievement. But one must ask: is this a testament to AI and machine learning’s prowess or to the hands that guided it?



3D Alpha Fold structure for ZIP7  
Username: WafflesOnIce (CC BY-SA 3.0)

# The tiny molecule that answers a big question

The discovery of microRNA was finally acknowledged in this year's Nobel Prize in medicine.

Science Writer

AMELIE BURFORD

On Monday 7<sup>th</sup> October, the recipients of the 2024 Nobel Prize in Physiology or Medicine were announced: US scientists Victor Ambros and Gary Ruvkun, professors at Massachusetts Medical School and Harvard Medical School, respectively.

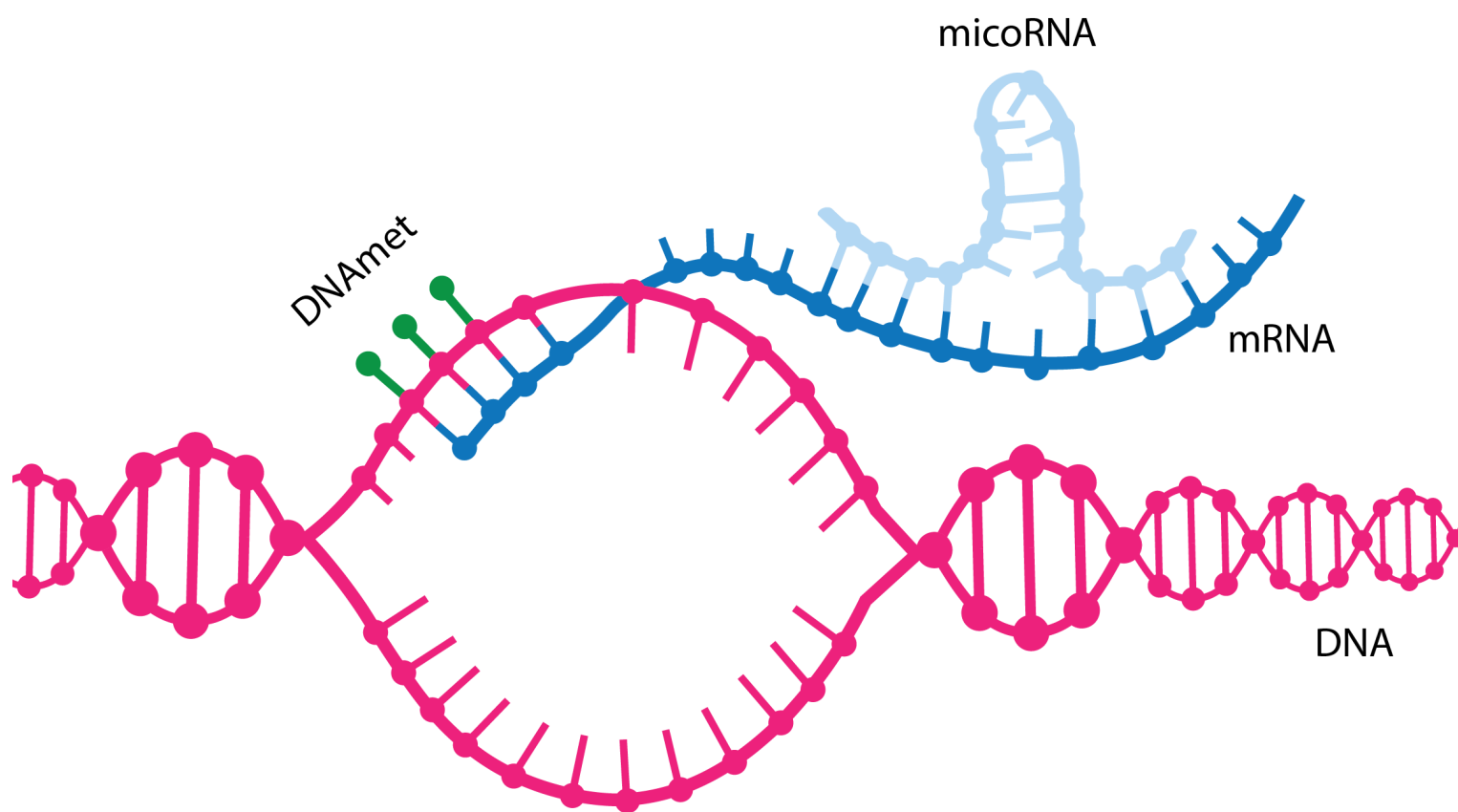
They were honoured with the title of Nobel Laureate – along with a shared prize fund of 11 million Swedish kronor, or £810,000 – in recognition of their work in the discovery of microRNA and its function in the regulation of genes at the post-transcriptional level.

Despite all cells in an organism containing the same DNA, individual cells still produce different proteins and perform various activities, depending on their role and position in the body.

The mechanism by which genes are switched off or on in different cells was relatively unknown until 1993, when Ambros made a seemingly insignificant discovery while researching the genetics of the unassuming roundworm *C. elegans*.

Despite being less than 1 mm in length, *C. elegans* contains many specialised cells, such as nerve and muscle cells, that are also found in humans. Ambros discovered that microRNAs play an important role in the specialisation of these cells by binding to mRNA after the transcription of DNA, halting translation at the ribosome, and therefore preventing the expression of unwanted genes.

Even though this discovery seemingly answers the question of cell specialisa-



Conceptual drawing of microRNA during the gene expression process. Kajsa Mollersen (CC BY-SA 4.0)

tion that puzzled scientists for decades, Ambros's research was originally met with "deafening silence", as the Nobel committee stated, since it was believed that microRNAs were unique to *C. elegans* and therefore of little significance in the medical field. That was until Ruvkun published his discovery of another microRNA that is highly conserved across the animal kingdom, including in human beings.

This breakthrough inspired a boom of research in the field, and it is now thought that the human genome codes for over a thousand individual microRNAs, all of which are involved in the regulation of gene expression at the post-transcriptional level. Now, over thirty years after Ambros's original discovery, the two sci-

entists have been recognised for this contribution by the Nobel assembly.

Ambros and Ruvkun's discovery isn't just useful in solving some of genetics' biggest puzzles; it also has practical applications in medical treatment. It is now known that defects in gene regulation by microRNAs can contribute to cancers and genetic diseases such as DICER1 syndrome.

"MicroRNAs are very much implicated in cancer. There is ongoing research to make treatments or utilise microRNAs—mimic microRNA or block microRNA—to treat cancer," stated Thomas Perlmann, secretary-general of the Nobel Assembly. However, it's not all been plain sailing: "There are some technical hurdles, so there have not been any drugs

yet."

Whatever the future holds for microRNAs in medical treatment, it is clear that Ambros and Ruvkun's discovery has important implications for how we understand molecular biology and genetics. As Janosch Heller, a professor at Dublin City University, stated, "Their pioneering work into gene regulation by microRNAs paved the way for groundbreaking research into novel therapies for devastating diseases such as epilepsy, but also opened our eyes to the wonderful machinery that tightly controls what is happening in our cells."

# Hopfield and Hinton awarded Nobel Prize for shaping the neural network landscape

John Hopfield and Geoffrey Hinton are recognised for their seminal work in artificial neural networks and machine learning.

## Science Writer

TAYLOR POMFRET

The Nobel Prize for Physics in 2024 has been awarded jointly to Professors Emeriti John Hopfield, of Princeton University, and Geoffrey Hinton, of the University of Toronto, “for foundational discoveries and inventions that enable machine learning with artificial neural networks”.

The Nobel laureates used physics to find patterns in information. Using tools from the discipline, they constructed methods that laid the foundation for machine learning.

John Hopfield, well known for developing the “Hopfield Network”, created a structure that can store and reconstruct information.

Geoffrey Hinton, also known as “the Godfather of AI”, invented a method that can independently discover properties in data, which has become an important feature in large artificial neural networks (ANNs).

ANNs and machine learning date back to the 1940s, when Warren McCulloch, Walter Pitts and Donald Hebb proposed mechanisms describing how neurons in the brain cooperate. Only within the past three decades, these methods have been developed into versatile and powerful tools for scientific applications. Inspired by neurons in the brain, ANNs are large collections of nodes, analogous to neurons, each connected by weighted cou-

plings, analogous to “synapses”, which are trained to perform certain tasks – rather than carrying out a set of predetermined ones. The structure of ANNs is closely related to spin models seen in statistical physics. This year’s laureates



**Their work has demonstrated a new way for us to use computers in order to tackle scientific problems.**

exploited this connection to make breakthrough advances in ANNs.

Hopfield’s seminal work in biological physics in the 1970s examined electron transfer between biomolecules and error correction in biochemical reactions. In 1982, he published a paper describing a dynamic, associative memory model based on a simple neural network, called

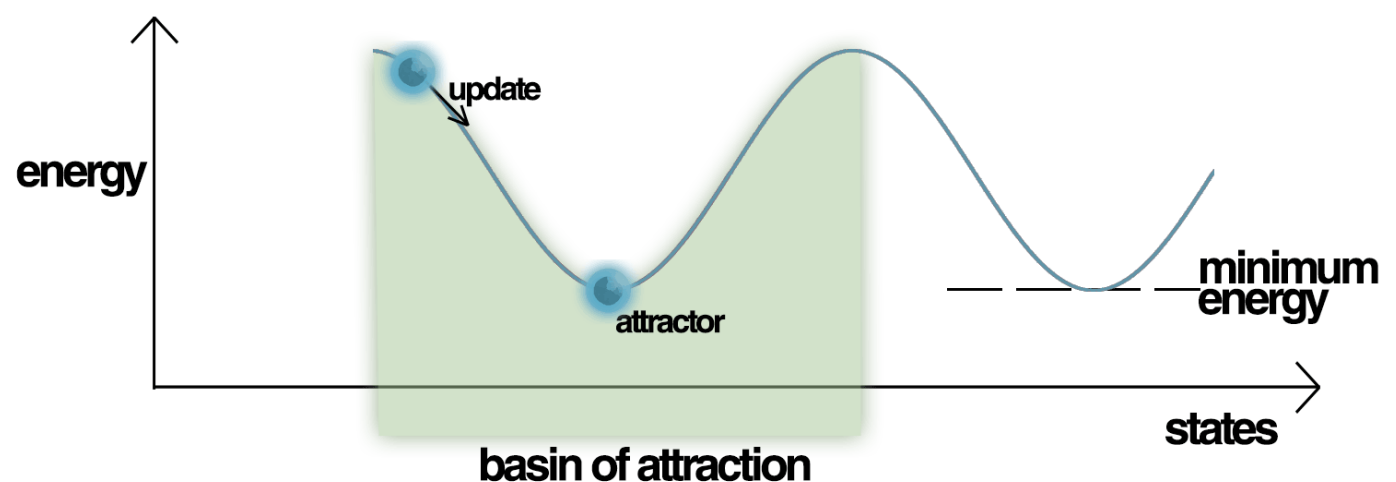
the Hopfield network. This is a network that can store patterns and is capable of recreating them. Hopfield likened his pattern-searching network to a ball rolling down a landscape of peaks and valleys. If a ball is dropped into the land-

scape, it will roll into a valley. For a network, it is given a pattern, analogous to a ball rolling down a hill into a valley – and will search for the nearest pattern stored in its memory, analogous to a ball ending up at the bottom of the valley in the energy landscape. When the network is trained, it creates a valley in a virtual energy landscape for every saved pattern.

From 1983 to 1985, Geoffrey Hinton developed a stochastic extension of Hopfield’s model, called the Boltzmann machine. This is a generative module, which focuses on statistical distributions of patterns rather than individual patterns.

These pioneering methods developed by the laureates have been instrumental in shaping the field of ANNs. Their work has demonstrated a completely new way for us to use computers in order to tackle scientific problems. ANNs now have become a standard data analysis tool used in astrophysics and astronomy. They were used for the search of the Higgs boson in CERN, and most significantly - deep learning ANNs methods are used in the AlphaFold tool for prediction of three-dimensional protein structures, given their amino acid sequences.

The laureates will pick up their awards at the Nobel award ceremony later this year on 10<sup>th</sup> December.





## ENVIRONMENT

# Did global warming cause the Florida hurricanes?

## The science behind linking correlation to causation

Environment Writer  
**ADRIAN DRABER**

**H**urricane Milton, which made landfall in Florida on 9<sup>th</sup> October, was the fifth most intense Atlantic hurricane on record. It was not alone: this year saw Hurricane Beryl in July, earlier in the year than any other Category 5 Atlantic hurricane. They were accompanied by Hurricane Helene, the deadliest hurricane in the USA since Katrina devastated New Orleans in 2005. These hurricanes form a larger trend of a steady increase in the frequency of intense storms across the world.

There are several reasons why the effects of cyclones are getting worse. For instance, the expansion of cities in vulnerable cyclone-prone regions puts more people and infrastructure in harm's way. However, climate change is cited the most when it comes to the severity of

recent extreme weather events. The greenhouse effect is believed to affect tropical cyclones in several ways. The IPCC's Sixth Assessment Report cites research pointing out that warmer ocean temperatures lead to higher precipitation in a tropical cyclone, and that rising sea levels make storm surges more likely. However, determining whether climate change has caused a given extreme weather event is difficult. The atmosphere is a complicated system, and scientists only have a sample size of one – namely the Earth's – to study.

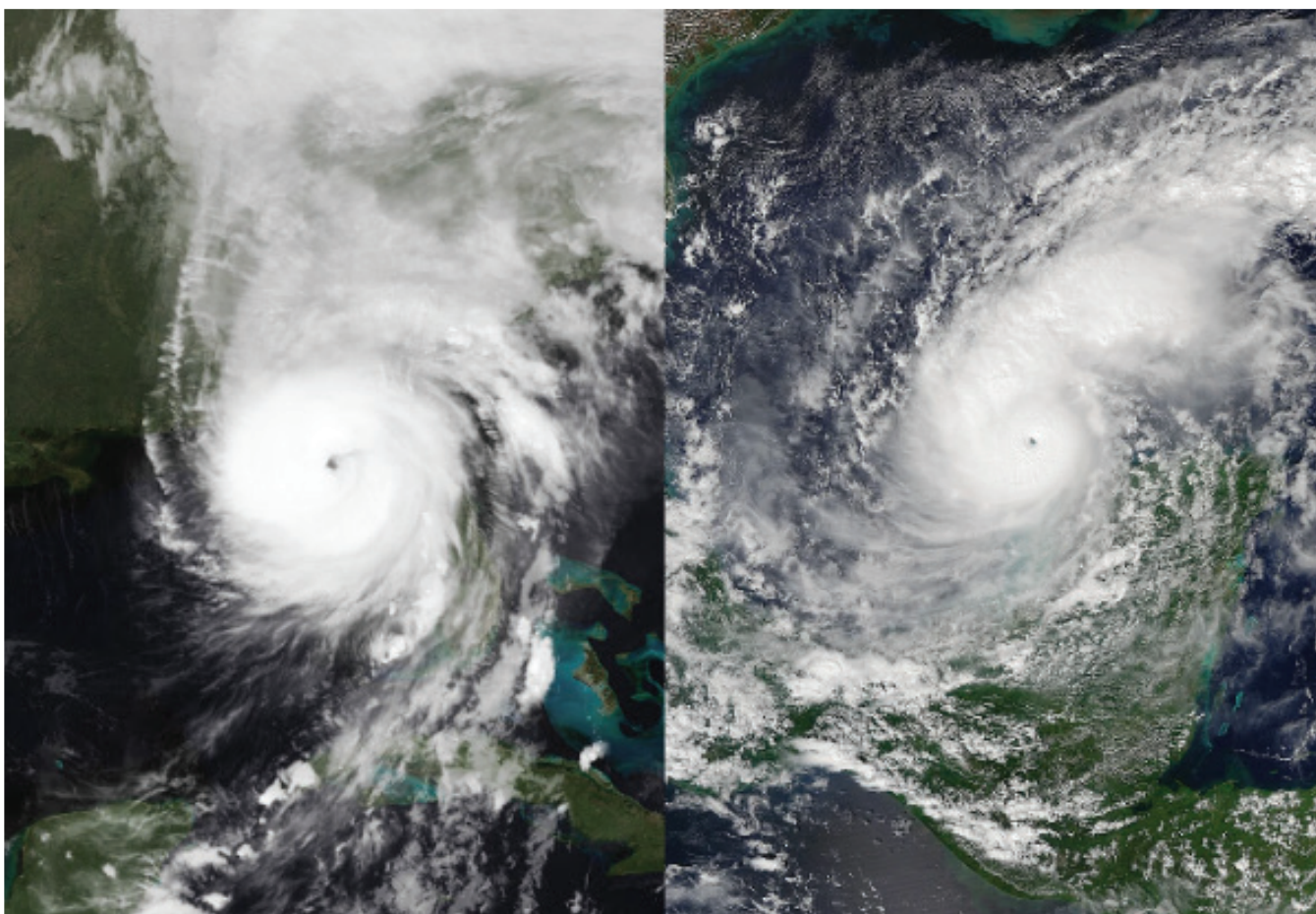
Despite this, a field known as attribution science has developed rapidly over the past 20 years. Researchers working in this field aim to answer the question of how a given extreme weather event was impacted by climate change. To do this they test two models of the Earth's climate against each other over thousands of simulations. One model uses the Earth's current climate, and the other artificially removes all anthropogenic green-

house gases from the atmosphere. These simulations, run thousands of times, allow scientists to study the change in likelihood of severity and frequency of extreme weather events such as cyclones. More recent refinements involve the use of multiple different climate models and simulating the Earth's climate – including rising emissions – over a much longer timespan. Climate change does not solely “cause” an event, as it is one among many other factors involved. Instead, scientists analyse the intensity of extreme weather events, and how they are affected by global warming.

One prominent organisation in this field is World Weather Attribution (WWA), which is partnered with researchers at Imperial. The WWA studied Hurricane Helene and found that its 3-day maximum rainfall total and strong winds were 70% and 150% more likely to occur due to climate change. The increase in wind speeds of around 11% which, while not sounding like much, meant that Helene was more than twice as destructive due to climate change. This is due to hurricane damage growing with an eighth-power curve relative to wind speed, as estimated by the National Oceanic and Atmospheric Administration. While Milton has not yet been extensively studied, the WWA used existing models to conclude that Milton's rainfall was made twice as likely, and storms of similar intensity have increased by 40%. It is clear that greenhouse gases have had a significant impact on the intensity of the two hurricanes. Frederike Otto, lead of the WWA and lecturer at Imperial's Grantham Institute, said, “Yet again, our study has shown that hurricanes will keep getting worse if humans keep burning fossil fuels and subsequently warming the planet.”

Current research does not imply that the frequency of tropical cyclones is on an upwards trend due to climate change but we can expect to see a greater proportion of storms classified as a category 4 or 5. There is also a large amount of uncertainty regarding events outside western countries, where research is focused.

Apart from climate action, the risk posed by extreme weather can be reduced by upgrading emergency infrastructure, promoting safe evacuations and helping poor and marginalised communities who are most at risk.



Left: Hurricane Helene, Right: Hurricane Milton NASA

# Tales of the Unsung Wilderness: Longlegs

Environment Writer

SHREYAS KUCHIBHOTLA

You're sitting on your couch, watching TV on a brisk autumn evening when you hear a faint shuffling on your carpet. You try to pinpoint the location of the sound as you warily turn your head, but there's nothing to be seen. A few minutes later, it starts again. As you stand up and look at the corner of the living room, you see what must surely be a prop from a Halloween party - a dark, eight-legged beast scampering across your floor at speeds that shouldn't be possible, the hair on its legs contrasting starkly with the plain white of your wall. Not in the UK, you think - this is what Australian nightmares are made of. If you haven't already screamed and run in the other direction and have instead picked up a newspaper (or, worse, a vacuum cleaner) to send this fearsome beast back to the depths from whence it arose, wait.



An adult male *Eratigena duellika* photographed (focus stack) at my flat in West London. Shreyas Kuchibhotla (Sept 2024)

This long-legged sprinter is most probably a male giant house spider, *Eratigena* sp. Some of the most frequently encountered spiders in the UK, *Eratigena* are usually the "scary ones" - the arachnids that strike terror into the hearts of innocent citizens with their size and speed. However, they are in fact incredibly shy creatures, cowering under the giant primates with whom they inadvertently cross paths. Despite their common name of "house spiders," they are widespread and common in a variety of habitats ranging from gardens to the deepest, darkest woodlands. Females are large, with a body length (excluding legs) of a little under 2 cm and a leg-span of about thrice as much. However, they rarely stray from their webs. It's the males, that suddenly mature in late August every year, that have to find them - and it's these males that often end up in the wrong place at the wrong time. The legs of a large



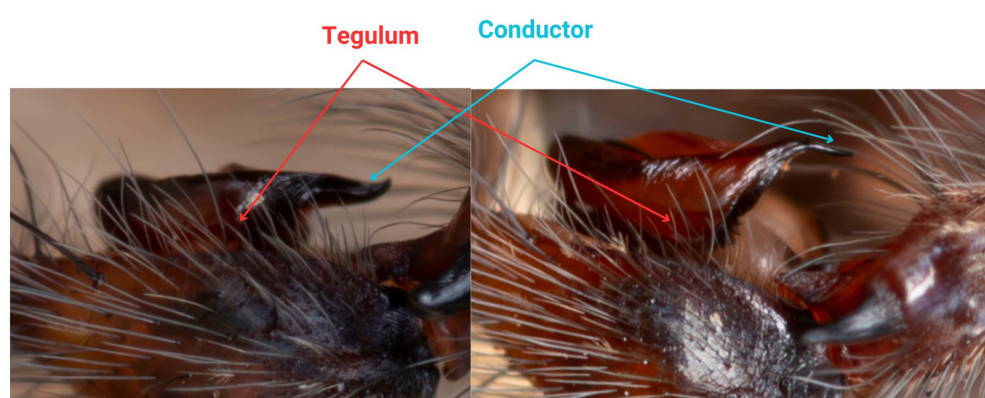
An adult male *Eratigena duellika* photographed at Perivale Wood, London. Shreyas Kuchibhotla (Sept 2024)

male GHS (as they are fondly called by British spider enthusiasts) can span nearly 8 cm across, and he can run at half a metre per second. Why, then, shouldn't he be feared?

Put simply, GHS don't want to bite. And even if they did, it really wouldn't cause you much of an issue. I've worked with spiders for over 2 years now, and if there's one thing I can confidently say, it's that it takes a lot of effort to get a spider to bite you. They don't want to waste their limited venom stores on something they could easily run away from. Meaning unless you give them a reason to believe their life is in danger - for instance, squeezing them against something - they will always choose flight. Despite frequent sensationalised claims about people being sent to the hospital by a spider, the truth is that there are simply too many things that have to go wrong, and almost always don't, for this to be the case.

GHS belong to a group of spiders called Funnel-weavers (family Agelenidae) - not to be confused with the Australian Atracidae which are indeed rather deadly. They build an elaborate web consisting of a large silk sheet tapering into a funnel-shaped entrance within which the spider hides. When an insect stumbles onto the sheet, it is swiftly captured, bitten a few times, and dragged back into the spider's lair to be eaten. This is a simple and elegant design that has worked in their favour for millennia. Fortunately, their adaptability means that they bring their patented bug-killing tactics along with them when they colonise a little corner of your flat. Being large spiders, they are capable of tackling all kinds of house pest from flies to cockroaches, without having to spray any pest-killing concoctions around your house. In addition, despite their fearsome appearance, they are no good in a fight, often being killed and eaten by considerably smaller species such as cellar spiders, *Pholcus phalangioides*.

Perhaps even more interesting than the biology of these spiders is their rich taxonomic history. The three species in the atrica group – *Eratigena atrica*, *duellica*, and *saeva* – used to belong to the genus *Tegenaria* before they were shifted to their current genus, a move which had little rationale besides being a somewhat sensible-sounding anagram of the original. Unfortunately, as is often the case with spiders, the three species look basically the same. How do you know they are three separate species, then? The most reliable character for telling spider species apart is their reproductive organs (the swollen pedipalps in males, and the epigyne in females) which are unique to each species. Sometimes the differences are clear-cut; other times, such as in the case of our friend *Eratigena*, the difference is as subtle as the angle at which a certain feature bends, or the thickness of a projection. In the case of *E. duellica*, *saeva*, and *atrica*, the difference lies in the shape of the tegulum of the palp, and how it merges into the conductor. In *E. saeva*, the tegulum bends nearly at a right angle into a thin conductor, while the bend is a lot smoother in *E. duellica*



The palps of an adult male *Eratigena duellica* (left) and *Eratigena saeva* (right), showing the subtle difference in shape. Shreyas Kuchibhotla

and the conductor thick and beak-like. Now, things get even wackier – turns out that *Eratigena duellica* is a mostly Eastern species while *Eratigena saeva* sticks to the west of the UK, but there is a considerable region of overlap in the middle where hybridisation occurs, and the palp morphology is somewhere on the broad spectrum from ‘clearly *duellica*’ to ‘clearly *saeva*’. This has prompted questions on whether the two species are truly distinct. *Eratigena atrica*, on the other hand, is a rare spider in the UK, and despite small populations in Newcastle and Scotland, it is generally imported by accident from mainland Europe.



An adult male Cardinal Spider (*Tegenaria parietina*) photographed from the collection of a spider keeper. Shreyas Kuchibhotla (Oct 2023)

GHS are not the only funnel-weavers in the UK. In most of the country, they are joined by the smaller and more colourful toothed weaver *Textrix denticulata* which is also often found in and around houses. I was quite pleased to discover a small colony of them on a plant outside my London flat, seeing as they are nowhere near as abundant in the Southeast. The hobo spider *Eratigena agrestis* is found at scattered locations across the country, generally under stones and logs in wasteland and grassland; there is a good population of them at Richmond and Bushy Park. *Coelotes* are heavily built, dark spiders that often reside in leaf litter and under logs in woodland, while the incredibly rare *Eratigena picta* has only been found in a couple of old chalk quarries. The true *Tegenaria* are represented in the UK by quite a few species, but only three are likely to be encountered. *Tegenaria domestica* – the



An adult male Common House Spider (*Tegenaria domestica*) photographed at my flat in West London. Shreyas Kuchibhotla (Nov 2023)

common house spider – is similar to GHS but has short, striped legs and a different abdominal pattern; *Tegenaria silvestris* is found in a variety of natural habitats; and the impressive cardinal spider *Tegenaria parietina* is one of the largest spiders in the UK, with a legspan of 12 cm or more. It is the only species that can really be mistaken for a GHS, but both sexes have a dustier appearance with faint bands on the legs and often pale circular marks on the abdomen. While there have been records of them in houses, the cardinal spider seems to prefer old buildings such as churches and museums.

Now that you know all this (whether you wanted to or not) it is a fair ask on my part for you to leave the eight-legged chap in your living room alone. He means you no harm – he’s just looking for a mate and will be gone before you know it. If his presence bothers you, just pop him in a jar or glass and leave him outside. He will be perfectly fine: his ilk have been living in the cold long before you came about with your centrally heated house. Just look him in the eye(s) and wish him luck on his travels.

## COMMENTS

# What economic degrowth would mean for the future of geopolitics



Bird's-eye view of the center of Honk Kong Envanto Elements

The idea of decreasing the West's economic output is opposed by a range of criticisms, but its implications on global peace and democracy are rarely considered

Comments Editor  
**GUILLAUME FELIX**

If the Labour Party's objective of an annual 2.5% growth in GDP is met, how long will it take for the British economy to double in size? While the most maths-savvy minds of Imperial might laugh this question away with a quick '28 years', there is value in analysing the underlying stakes; our society is built on the hope that its output can double in size with each generation. In other words, we accept a promise of endless growth at an exponential rate, in a world where limited resources replenish linearly.

All of those who are daunted by this prospect will be reassured to know that they are not alone: although less noticeable in the UK than within continental Europe, the global movement for degrowth has recently seen a surge in both credibility and impact. While its serious proponents in the general population constitute a marginal niche at best, they have always included influential voices, that of Tim Jackson

(economist and author of the widely acclaimed *Prosperity without Growth*), or public speaker Jean-Marc Jancovici.

Put simply, degrowth is a policy of intentional and controlled decrease in an economy's total production, achieved through a gradual reduction of its energy and material use, to ensure its long-term sustainability. In more concrete terms, it's renouncing the superfluous goods and services of the modern world so the essentials can always be provided to populations in the future.

### Rainbows and butterflies

I myself was extremely sceptical of the idea, regarding with some disdain what I considered to be a task too big to succeed in a system too big to fail. That was until stumbled upon an interview of Mr Jancovici defending his eye-opening thesis: degrowth is not a question of if, but when, and most importantly how.

Growth is intrinsically linked to the consumption of resources and energy, and will inevitably falter when those run out. Further miniaturisation, increases in efficiency, and circularisation of the

economy could only push the doomsday back. And even that remains contentious. The ever-larger cars introduced on the market exemplify the limits of this model: as theorised by the Jevons paradox, advances in efficiency are often



### Degrowing democracies would greatly reduce their weight in global decision-making

offset by profit incentives, and quickly caught up by our consumerist appetite.

The now fashionable argument in favour of so-called "dematerialised economies" is equally misguided. Such economies are only dematerialized at the level of their logistics, as all digital services depend on physical processes, either as a means (think Internet servers for Netflix) or an end (think commodities

for a hedge fund).

It remains tempting to point at the 30-odd countries that have managed to decouple their emissions and GDP over the last couple of decades, but scientists agree that this transition to green capitalism is much too slow to keep the Earth on track to net neutrality by 2050. To avoid a return to the unforgiving lifestyles of the past, democratic decisions must therefore be made on the fair allocation of the indispensable "carbon credit", ensuring the basic needs of all are covered.

It would be unfair to force degrowth upon all countries: most economies aren't as wasteful and damaging as Western ones. Crucially, the populations of the Global South count on growth to escape from poverty, just as Western populations did in the last century.

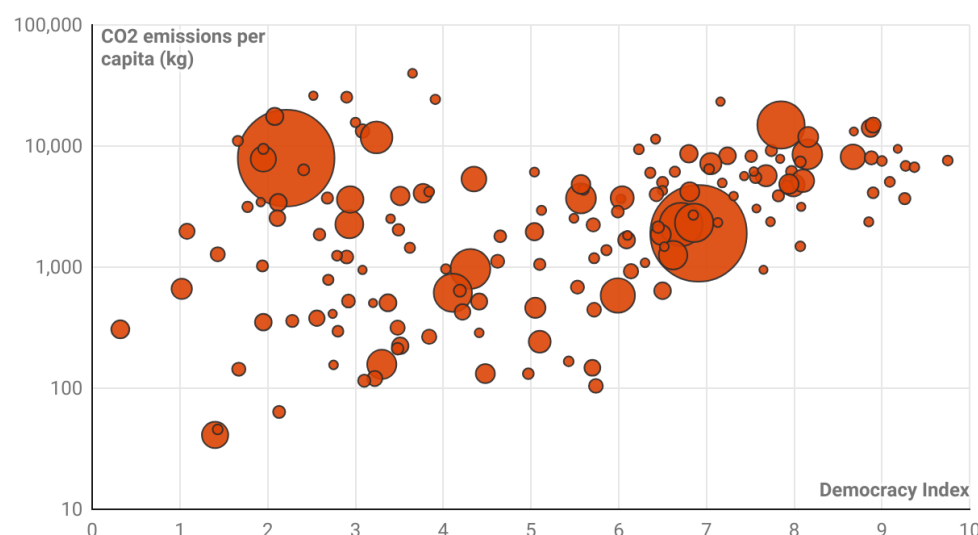
By contrast, some scientists suggest that growth has begun to have negative consequences on the welfare of high-income nations, which are now plagued by soaring cases of obesity and social isolation, while Healthy Life Years are either stagnating or falling. This is a first in human history: the theory holds that growth and ease of living go hand-in-hand. Choosing to reallocate our carbon credit to essential technology only, notably in the field of medicine, might not only reverse those trends but also result in the delocalization of fewer emissions to the developing world.

## Goodbye, votin'!

A major challenge of a radically different nature must then be considered. A successful policy of degrowth would result in an unprecedented change in the power balance of the world, to the detriment of democracies. Indeed, the world's largest polluters per capita (excluding some Gulf states), also rank at the top of human rights, press freedom, and democratic transparency indices. Degrowing these economies would greatly reduce their weight in global decision-making, while the autocrats and warmongers who tend to have little regard for matters of sustainability or responsible governance would benefit from increased economic power.

## Democracy? It's a gas!

The most democratic countries of the world also have high emissions relative to their population size, although the trend is not as clear for less democratic countries.



Source: The World Bank; Economist Intelligence Unit; Global Carbon Project • Created with Datawrapper

The correlation between high emissions and high peacefulness does not mean that poorer, less democratic countries will liberalise as their status converges with that of the West, as democratic backsliding has been reported in the last decade independently from economic success. China, which has further plunged into autocracy this decade, enjoyed a growth rate of over 5%, and Russia's democratic crackdown and unjustified invasion of Ukraine followed a decade of relatively stable economic advances. On the whole, the global level of democracy as reported by the Economist Intelligence Unit has dropped continuously from 2015 to 2021, while the World's GDP per capita has increased by around 16% over the same period.

Furthermore, the sobriety of a shrinking Western economy would make it both practically impossible and politically unthinkable for its governments to pursue military aid deliveries to Ukraine and would do little to deter China from walking the talk of its expansionist threats. These two particular situations could be short-lived, but they are certainly only preambles to the trouble that lies ahead. Being short on resources and battered by an unbridled climate exacerbates violent tendencies.

Whatever awaits us, a bad reputation still clings to the very idea of degrowth, and its full integration within the policy of any government likely won't be seen

soon. Attacking what researcher Erik Assadourian considers to be among the "sacred myths of modern culture" is often assumed to be another utopian dream, brandished only by the hippies and tree-huggers most decision-makers would rather pay no attention to. Growth remains a key electoral promise of candidates to power.

And yet, European governments ritually fail to deliver on it: just a month ago, the Draghi report on productivity in the European Union warned that – unless radical policy changes are enacted – the bloc's economy would have the same size by 2050. Inequalities, on the other hand, will likely do a better job at growing. Politicians beware, unplanned degrowth will be a bitter pill.

# How Parliaments can outsource their climate action

Comments Writer  
**EDGAR SCHAEFF**

A common criticism of democracy is that it cannot cope with society's general failure to address climate change appropriately. Some argue that the costs of policies addressing the environmental crisis are so high that the government in power would effectively commit political suicide by enacting laws such as a carbon tax, an emissions trading scheme, or a carbon import tariff. People from all backgrounds would feel so threatened by the short-term effects of these policies – above all an increase in the cost of living – that opposition will prove relentless enough to force governments to either back out from the measures or step down.

Therefore the critiques point to a command-and-control autocratic system, that can operate without interruptions on long timeframes, and wielding sufficient authority to force necessary policy upon the irrational, shortsighted, and fickle masses.

However, although their argument is in good part true, they forget that democracies already make use of such an autocratic element without cutting back on their liberal values. This institution is no other than the central bank. It raises interest rates to fight high inflation rates, thereby increasing the cost of borrowing, hurting businesses or common mortgagees, and also disincentivising investment into an economy as private funding is diverted towards savings. All in all, by slowing or reversing economic growth, it becomes an instigator of unemployment. And still little does one read about people's outrage towards central banks. I argue in favour of the introduction of a climate

institute that operates similarly.

Just as the central bank's objective is to watch over monetary stability and reduce long-term unemployment, the target of the climate institute would be to introduce "carrot-and-stick" frameworks of measures that set the economy on a sustainable path. Only that could mitigate the negative long-term consequences that hang like the



**Little does one read about people's outrage towards central banks**

sword of Damocles over our society.

This institution's board of seven governors is to be elected by the national parliament with a two-thirds majority for eight years unless it is toppled by a three-quarters majority before that time. To achieve its objective, it would be given full legislative power over specific aspects of the economy, to implement and oversee measures like a carbon tax or carbon import tariff. The constitutionality of its legislation is kept in check solely by the constitutional court, which can also be petitioned to inquire about its proceedings by a simple majority in parliament.

Having outsourced the dangerous topic of climate change and the blame that comes with it, democracies can continue to operate. Parliamentarians will silently accept the infringement on their sovereignty in order to keep their seat and their say in day-to-day policing.

## BOOKS

# The People Powering Abdus Salam

A short word from a handful of the Imperial College Library team, who we may not see everyday, but whose presence is critical to our campus.

### Books Editor ADITI MEHTA

Last year, a certain summer term insanity came over me. I couldn't sleep, I couldn't read, and I certainly couldn't work. I lay in bed, drowning in ennui. Jolted up by a fire alarm at three in morning – a quintessential university experience – I deliriously found myself wandering over to the Abdus Salam Library instead of the fire safety zone.

I had goosebumps on my arms, but the air was biting, and I enjoyed watching my breath.

The library, naturally, wasn't as empty as I hoped. That was until I made my way up to Section 800 on the fifth floor: the literature section.

The Abdus Salam Library is not like a traditional library. Although it packs a flurry of activity (and you will be lucky to find a seat at 4pm on any given day), the shelves are saturated with specialised STEM and medical texts – as are the librarians, for whom helping you is only a fraction of the role that they play in the wider community.

Spanning a meagre three shelves, the literature section is not particularly expansive. Still, I enjoyed perusing through the shelves, brushing my fingers over the

spine of each book as I walked by.

Initially, I was a bit miffed with the lack of literature that I was under the impression library had available. But upon further digging, I discovered two key things that enable me to continually enrich my breadth of reading. One, Libby, an online platform through Imperial that gives you access to thousands of books for free. And another, that I can request the library to acquire a book I want to read.

That night, I left the library about an hour after the fire alarm had gone off. My tiredness was catching up to me, but equally, my listlessness had been replaced with satiation. I walked out with

three books in hand: *A Room with a View* by E.M. Forster, *The Lincoln Highway* by Amol Towles, and *Never Let Me Go* by Kazuo Ishiguro.

I've since grown more curious about the people behind Abdus Salam, who work tirelessly to make the library such a conducive place, and offer services we certainly take for granted.

So, here are merely a handful of the people who work at the Imperial Library Services. Of course, accompanied by their book recommendation, because it would go against my morals to not ask a librarian for a suggestion of what to read.



### Ella Burrows

I'm Ella, and I work as an Acquisitions and Metadata Officer, part of the Content and Discovery team at the Abdus Salam Library. I joined the Library in September 2023, and have loved working here so far – my role is varied, I've learnt a lot, and working with rare material in our Special Collection brings lots of surprises.

I tend to read books from a variety of genres, mostly fiction. One great aspect of my role is that I get to see almost every print book we order for the Abdus Salam Library as it arrives, and as we've been developing our fiction collection I now have a very long reading list! Having said that, one book I read recently and loved was *Stay True* by Hua Hsu. It's a memoir that's funny, sad, moving, and captures the specificity of young adulthood beautifully. I don't believe in all-time favourites – my favourites are subject to change – but a fiction book I can definitely recommend, and one we have in the Library, is *Monstrilio* by Gerardo Sámamo Córdova. It's about loss, expectations, and the intensity of parental love, and it also has elements of horror and humour.

## Dan Whittaker

I'm Dan Whittaker, a Senior Library Assistant at the Abdus Salam Library. I work in the liaison librarian team supporting Business, Engineering, and Natural Sciences.

I've spent my entire career in academic libraries and have been at Imperial since 2017. I love working with bright, motivated students every day and as you might expect from a lifelong librarian, I also love books. So, I have found it difficult to recommend only one. I find myself drawn to a genre sometimes known as The Great Twentieth Century American Novel. Books by authors like John Steinbeck or Ernest Hemingway. One of my all-time favourites is *Stoner* by John Williams, a hidden gem. For something a little more 21st Century, I recommend *Half of a Yellow Sun* by Chimamanda Ngozi Adichie.



## Yusuf Ozkan

I'm Yusuf Ozkan. I joined Imperial in 2019 and currently work as a Research Outputs Analyst working in the Scholarly Communications Management Team, which helps Imperial staff and students to communicate and disseminate their research.

I'm doing my PhD on war studies. Therefore, my favourite genre is military and intelligence history. It has been long time since I read a book not related to my research. So, I can only advise a research related book. My favourite book is *Churchill and the Dardanelles*, authored by Christopher Bell. It's an academic history book, but excellently written, that covers all aspects of the Dardanelles Campaign in 1915.

## Monika Koziel

I've been working at the Abdus Salam Library at South Kensington for the past three years, following ten years at City University of London. As the User Service and Stock Management Coordinator, I line manage two wonderful teams—stock management assistants and library assistants. Together with User Services Team, we ensure that our library is a welcoming, resourceful space for students, staff, and visitors.

I love fiction as much as I do non-fiction, and authors like Margaret Atwood and Paulo Coelho never fail to draw me in.



## FOOD&amp;TRAVEL

# Deliveroo gifts students three years free delivery

Deliveroo visited Beit Quad last Friday to announce their newest offer to students at Imperial College.

**Food Editor**  
**CHARLOTTE PROBSTEL**

The London-based company Deliveroo is offering every student at a UK university a three year-long deal of free delivery, promotions, and discounts as part of their student package. Students require a valid university email ending in “@university.ac.uk” to sign up.

Deliveroo hired teams to tour around universities all around the UK, from Southampton to Dundee. The team which visited Imperial last Friday, told Felix they had visited 96 other universities in the past few weeks. The team brought free food to Beit Quad and a claw-machine to give new signees a chance to win a bucket hat, a tote bag, or a Stanley Cup.

After signing up, which requires no monthly payment or commitment, Deliveroo Student members can expect a 10% discount off Wingstop, 20% discount off Nando's, and 15% off National Express. For free delivery, the order has to be a minimum of £15 for restaurants, or £25 for groceries.

Sign ups opened on 3<sup>rd</sup> September 2024 and will only close September 2025. The deal will run until September 2027.

In London, Deliveroo has deals with popular restaurants such as Pizza Pilgrims and Dishoom to offer students with a Deliveroo student account any timed deals.

If interested, readers can scan the QR code below to sign up.



Advertisement stand  
Charlotte Probstel



Advertisement Deliveroo

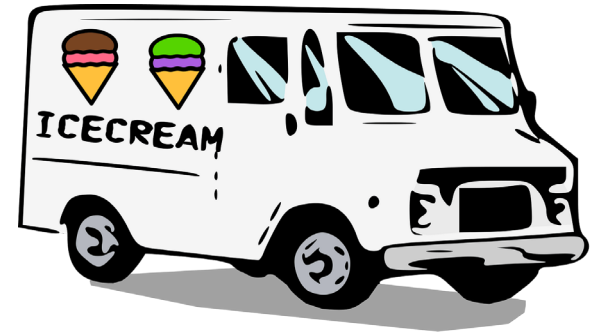




## BUSINESS

# Classroom to Curbside: Harvard's Food Truck Challenge

An Imperial Business student's review on business strategy and analytics



Ice Cream Truck. Creazilla

**Business Writer**  
**ALIA FRIEDMAN**

The Food Truck Challenge by Harvard Business School is a simulation which has students play the role of a food truck entrepreneur setting up and managing in a competitive ever-changing environment. Through my experience in the exercise, I uncovered two key insights that extend beyond the simulation itself and into the domain of practical challenges businesses face. I then looked at the relevant business literature to compare.

### The best business plans collide with reality - make one still

**Simulation Situation:** The utility of a business plan was tested during the simulation. Initially, my team began by strategising, analysing all the available data, and devising a plan that would position us in the optimal location with the ideal food selection. We decided to place our truck near the college campus, serving ice cream. Confident in our choice, backed by the data we submitted our selection—only to discover that construction on campus significantly reduced foot traffic, which led to lower sales. All our carefully laid-out business plans were rendered ineffective.

**Literature:** If, in the immortal words of Steve Blank, famed entrepreneur and progenitor of the Lean Startup methodology, “No business plan survives

first contact with a customer,” why does the practice persist? A more expansive view suggests that the concept of a business plan as a purely strategic document is uncorrelated with success. However, as a planning exercise that forces entrepreneurs to think through the process of launching a new business, research validates its utility.

Business plans create a mental model for entrepreneurs and can help mitigate cognitive biases. Although the business plan is almost certainly subject to change, by creating this mental model, it allows entrepreneurs greater mental flexibility to adapt to changes. Interestingly, other traditional business planning activities, such as “gathering secondary data or sharing the business plan for feedback or funding,” are not correlated with success. As an aside, the research validates my team’s decision not to pursue the research gathering option in the simulation and instead jump into prototyping by using the cart in the first week. This allowed us to iteratively develop our business strategy and exemplifies the Lean Startup methodology.

### Possess a healthy skepticism of analytics

**Simulation Situation:** When first tasked with the simulation, my teammates and I referred to taste preferences published in the provided market data. However, we quickly discovered the data didn’t seem to be entirely accurate. Contrary to the

report, young adults weren’t prioritizing healthier options, and seniors seemed just as enthusiastic about ice cream as the children. Quickly, we recalibrated our use of the market data, deciding its outdatedness and possibly idealized self-reported insights were far less relevant than the immediate data on revealed preferences.

**Literature:** It is taken for granted that analytics are valuable to any modern venture, yet according to Gartner, over 85 percent of big data analytics projects fail. Additionally, according to a McKinsey survey, only eight percent of respondent organizations were able to successfully scale their analytics beyond a specific use case. What, then, accounts for the constant pursuit of data if these projects so often fail?

In their seminal paper on big data analytics, McAfee and Brynjolfsson compared big data to traditional analytics. They find that firms that describe themselves as data-driven are, on average, “5% more productive and 6% more profitable than their competitors”. Additionally, another strength of big data analytics is its real time capabilities from diverse sources. Thus, it is clear that analytics offer firms a competitive advantage, but how and when to trust them remains a critically understudied focal point.

According to the framework laid out by Andriole and Barsky the leading causes of failure in analytics within firms are data issues, modeling issues, tools

issues, talent issues, management issues, and cultural issues. Specifically, among data, modeling, and tools problems, one of the most challenging issues is obtaining timely and accurate data. For example, in the simulation, my team faced the issue that while the data might have been accurate at a specific point in time, its validity for making predictions was questionable due to changing market conditions which rendered past trends less reliable for current decision making. While analytics are rightly feted as a competitive advantage that firms can utilize, attention needs to be paid to the factors that render them inaccurate. Both theories support the original insight, that in our case, no data might have been better than inaccurate data.

The two key insights are all fundamentally related to one another in that they stress the value of context. While a business plan may collide with reality, the literature shows there are important contexts where it can be utilized strategically and analytic data can be extremely helpful, but in the wrong context, it can be maladaptive. For a venture to succeed, entrepreneurs should be encouraged to break with strict business theory and embrace whatever the context may be.

*Special thanks to Professor Dmitry Sharapov for his engaging class in Innovation & Entrepreneurship and for his valuable support on the simulation, which served as the foundation for this article.*

CATNIP



# Minimalism sucks

## Catnip writer Jilbert returns with his highly-acclaimed column “Fuck this Shit”

**Professional Hater**  
**JILBERT GACKSON**

**H**ello readers, for those who don't know me I was your very modest Arts editor for two years at *Felix*, but since they weren't paying me I decided to step down. For those few people – and from my memory it was very few – who read my articles, you may have appreciated my blunt yet self-proclaimed witty remarks when it came to art. Thus I unfortunately intend to continue in a similar vein but this time I shall apply it to the everyday.

My first offensive missive shall be on corporate minimalism. Corporate minimalism is the current 21<sup>st</sup> century trend that reminds you that the straight-white-man (such as myself) is still very much in charge when it comes to business. Gone are the days when companies strove to create a lasting image with a hint of pizzazz and ambiguity. Instead we are subjected to glorified nothingness in attempt to forcefully modernise the most basic of living essentials, such as exclusive wine bars and artisan cafes, all to create that clean, clinical look.

The best example to look at is the coffee shop. A delight for many is walking into one's favourite coffee

shop. Let's take Caffe Nero: you walk in to a lovely wood panelled cafe with books adorning each wall, maybe a lovely little picture set, and subtle, warm lighting that makes you feel like your next cup of coffee is one that's going to make you stay a while (it is so bitter that you do not want to drink it too quickly), maybe start that book you've been reading in public for three weeks, or that essay that's due in two days time. Compare that with the minimalist behemoth that's taken over the London coffee scene: Blank Street Coffee. You walk in and you are unsure whether you've stepped into a coffee shop or a new-wave dermatology clinic, the lettering is in a corporate sans serif typeface that screams Adobe rather than arabica, and with all of that you half expect them to say, “Would you like that in a cup or intravenously?”

Of course it's not just coffee shops. If you were to take a walk down Camden High Street all you will see is row upon row of shops with black and white signs that have a single brand name in Arial type in lettering that say something along the lines of “Arise,” “Zenyth,” (sic) or “Plebs”. What these shops sell you have no idea. Their sparse, minimal nature gives you nothing to elucidate what they sell either. Does Plebs sell coffee? Handbags made of hemp? Maybe shoes? (Each shoe sold separately). You do not know. Yet now every corporation has gone down the route of reducing their formally icon-

ic logos into nonsensical abstract Rothkos that make Egyptian hieroglyphics look comprehensible.

But these types of shops and brand design have created a generation of “blank supporters” who trot down the street in the colour palette of “sad beige baby,” wearing long oatmeal coats and Burberry scarves – the so-called “yummy mummy clean aesthetic”. They display wheat-coloured paperback copies of Plath's *The Bell Jar* in their jeans backpockets – will they choose the corporate finance fig or the nepotistic marketing one? It is light academia without the academia. These same people walk through Camden and try to pass it off as bohemian whereas if they were really bohemian they'd be lying face down in an opium den which, for reference, would be decorated most opulently.

This whole scheme of “neutral espresso tones,” stupid shop fronts, and meaningless photographable opportunities is playing into corporations' hands, who feel that by making things look aesthetically pleasing means they can hike up prices; your coffee, which in any other part of the world would be £2, is now £4. You're now paying for the experience to have everything look like... nothing. As a popular internet meme once said, “Minimalism is just a scam by big small to sell more less.”

## Special thanks this week

Thank you to my drinking buddies Matthew, Mark, Luke, and John. A special mention to my clinical psychiatrist for helping me with my bible-induced psychosis. Thank you to my bible-induced psychosis for my clinical psychiatrists new car. Thank you William Morris for inventing Wetherspoon pubs. Thank you William Morris for being the first mad socialist lad out on the Hammersmith town. Thank you William Morris for Hammersmith and Fulham City Council in its current state, some fairly average poems, some banging patterns, and again most importantly the best Imperial drinking hub. Love always to the lads that built the Babel penthouse, without you guys I wouldn't be writing this paper in English. Regards to my lawyer for getting me off four counts of Union election fraud. Thank you to the mafia for getting me into four counts of union election fraud. Thank you to this week's crossword writer without whom I'd be 6 down. Thank you again to the mafia without whom I wouldn't be able to see my wife and kids again. Special thanks to the Demiurge for making the material world, without whom I wouldn't be here.

Thank you Beyonce, I dedicate my entire section to you. Feb Senton, you have my heart.

# Huxley reaches final of architecture competition

**Catnip Editor**  
**NEGAFELIX**

**A**fter seven rounds of voting, the Huxley Building has been selected as a finalist in the “Christopher Wren Demolition Award”. The competition, set up to celebrate the upcoming 350<sup>th</sup> anniversary of St Paul’s Cathedral, asked the general public to submit the building in London whose “absence should most improve the urban landscape”. Competition runner, Forman Noster, said he was inspired by thinking about all the “visual tragedies St Paul’s Cathedral has been forced to witness

over the last 350 years with the changing urban landscape. We oftentimes think about the beauties but overlook the worst.” The Huxley Building in the South Kensington campus has cemented itself in history as one of these tragedies.

The other two-buildings to make it this far are 2015 Carbuncle Cup winner 20 Fenchurch Street (“The Walkie-Talkie”), and Grimshaw’s Grand Union Canal Walk Housing (1989). One Computing student, Feb Senton, told NegaFelix, “It isn’t all bad, we recently got also got selected as one of the top dogging spots in South Ken, so really all publicity is good publicity.” Another student Hevin Kalme did not mind about Huxley’s poor public

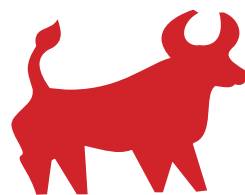
perception and was far more stressed about the prospective move: “Any ugly building is better than the shithole that is White City.”

We reached out to the Maths and Computing departments to gauge their future plans after the news. A student representative, Jriff Aazlan, said that, “The Huxley Family is choosing to focus on other sensory issues, such as smell, that the space struggles with right now, before tackling the exterior. Though most students are pressing for an eco-brutalist redesign, the real brutalities take place inside the Huxley walls.”



**ARIES**

This week the Grand Council of your polycule hold a coup to exile you after your vibes were off in the last platonic orgy.



**TAURUS**

This week you realise your partner’s mouth makes for the perfect bedpan.



**GEMINI**

This week you find out you are not like the other girls because you are, in fact, not a girl.



**CANCER**

This week you celebrate as your sourdough starter feeding schedule times perfectly with a yeast infection.



**LEO**

This week you have an argument with your friend after he finds out your halloween costume is Virgin (his is nationalised railway).



**VIRGO**

This week you get kicked off the BSL Horizons course for pretending to be trapped in an invisible box.



**LIBRA**

This week you release The Tortured Physics Department: The Anthology on vinyl to combat the NSS scores.



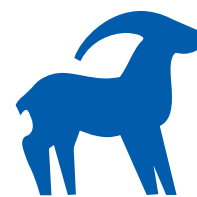
**SCORPIO**

This week you try and rationalise with your “dirty blonde” (brunette) friend that ethnic minorities are not “old money white”.



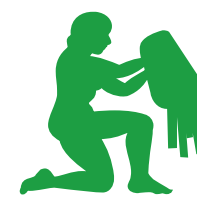
**SAGITTARIUS**

This week you keep getting weird looks from suspiciously feminine boys but then realise you’ve become a bit too preoccupied with suspiciously feminine boys.



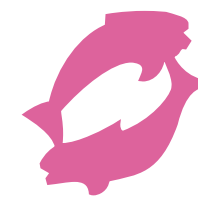
**CAPRICORN**

This week the three large male rats living in your flat celebrate the potential section 21 no-fault eviction abolition.



**AQUARIUS**

This week you see the northern lights for the first time and tell your friend from Bradford, “The northerners really have it lucky.”



**PISCES**

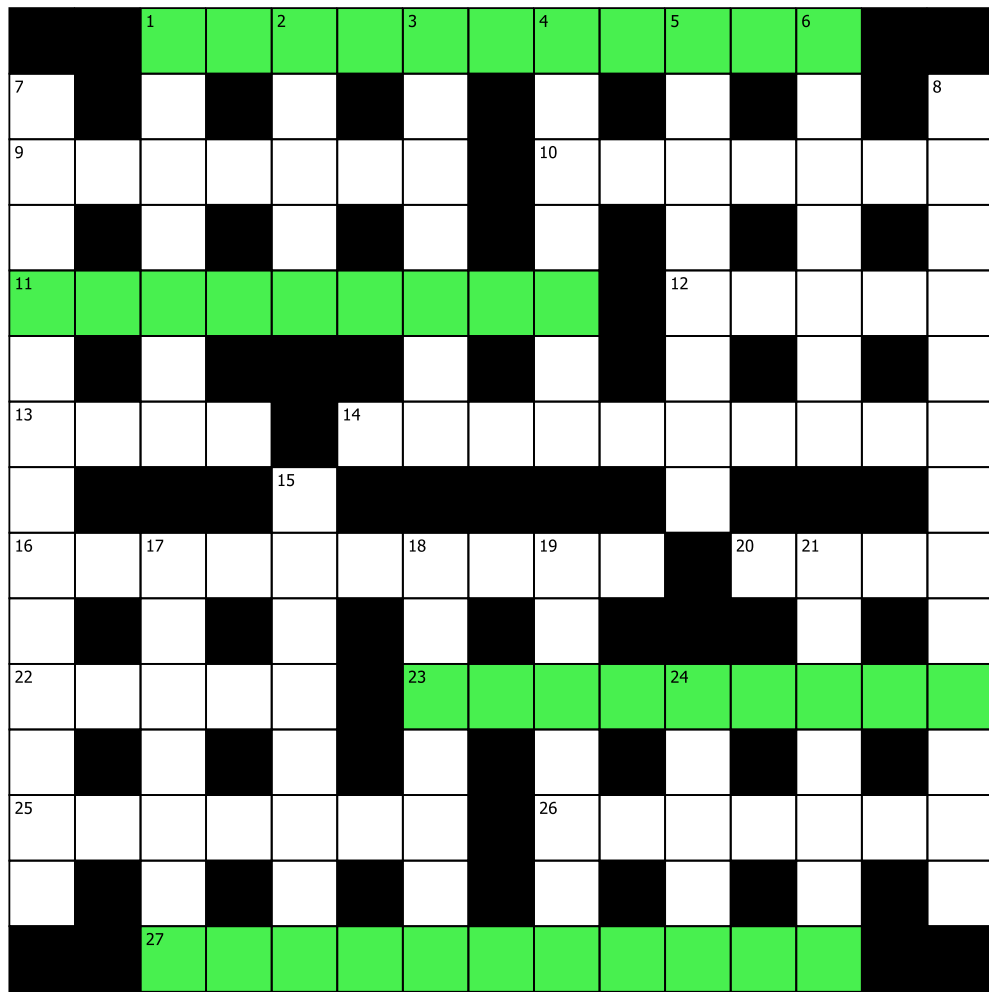
This week you and your lab partner, Rachel, decide it’s time to “fiddle the books”.

PUZZLES

Puzzles Editor  
IVIN JOSE

# CROSSWORD

'Man's best friend' (3 pts.)



## Across

1. A breed known for it's distinguished silky coat, Ruby in *Lady and the Tramp 2*. [11]
9. Roman who beat Minerva in a gift-giving competition to humanity by creating the first horse, tends to carry a trident. [7]
10. Indication to play music in a fast, lively and cheerful manner. [7]
11. Bred to flush out burrow-dwelling animals, in miniature, long-haired and short-haired varieties. [9]
12. Small crustacean found in all the world's oceans. [5]
13. Scottish for young woman. [4]
14. People who study stars to predict the future. [10]
16. Tries very hard to achieve something. [10]
20. An East Asian popular music singer. [4]
22. Where sailors are. [2 3]
23. Beethoven. [9]
25. Difficult to catch, evading your grasp. [7]
26. Comprehensive, item-by-item report. [7]
27. Scent hound with long drooping ears, Toby in *The Great Mouse Detective*. [11]

## Down

1. Fluffy, camel-like animals. [7]
2. Larvae of an insect. [5]
3. Broad city roads. [7]
4. A person who compulsively collects large amounts of objects. [7]
5. The likelihood of you getting Coldplay tickets. [8]
6. What dogs love doing. [7]
7. In its true, complete form, not mixed or diluted. [13]
8. Act of skating on wheels without ice. [13]
15. Collections of stars, planets and vast clouds of gas and dust. [8]
17. Interrupt or interfere.. [7]
18. Offensive and disgusting in a manner that is below usual standards of decency. [7]
19. The process that phoenix's go through once they have become ashes. [7]
21. The anniversary you celebrate after 60 years of marriage. [7]
24. Indian International left-handed cricketer who recently hit the highest run partnership for 5th wicket in the world with Rohit Sharma. [5]

## Across

1. Vaguely corrupted, you pale queen! [8]
5. Small part in high school could be hard to break? [6]
8. Start to dash and shout. [6]
9. Distressed and without clothes, one had strep? Pray tell. [7]
10. Obscure company turned it around and gained a small following. [6]
11. Leave previous thing. [4]
12. Lodging itself grandly, primarily with John. [5]
15. Duck and cover - famous French leaders with cycle! [5]
19. Fit bird bottomless before the morning. [4]

21. Cool stick, you hear I can understand this French article? [6]
23. Brown teen spirit has outburst. [7]
24. Woman poorly gets character almost cut. [6]
25. Start off UCAS after distant disturbing riot. [6]
26. Adapted films in French experience decline. [8]

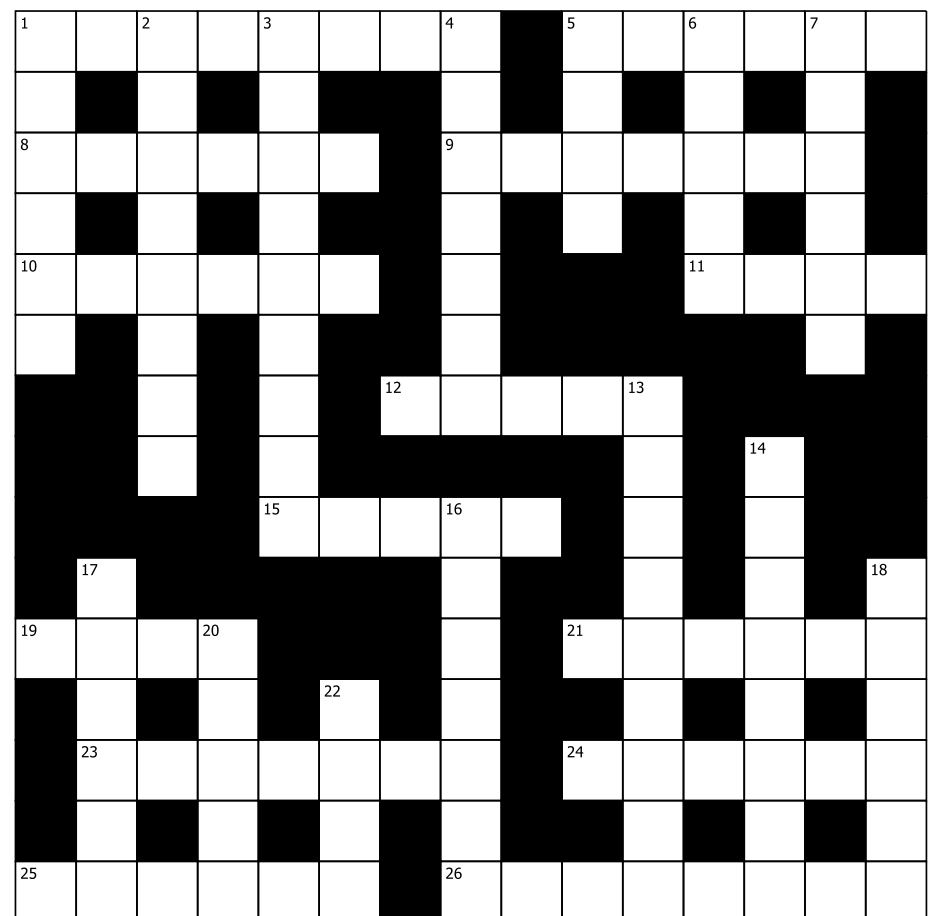
## Down

1. Sober one holding Fairy. [6]
2. A story about bringing back a Hackney catch. [8]
3. Organisation communist has died, random... [9]
4. Sign of any one spinning in your new great

- leaders. [3 4]
5. Pain magic needs no introduction. [4]
6. Withstand bad night-club. [5]
7. Statement she mixed into bad take. [6]
13. Absolutely no topping dive after focus. [9]
14. Green peer has hound back off. [8]
16. Professor is a good person, we hear. [7]
17. Empty character takes toll from depression. [6]
18. True, let me mix it up and show strength. [6]
20. It's crazy when people in distress become men. [5]
22. Before social drinking event. [4]

# CRYPTIC CROSSWORD

Submitted by David Latimer (5 pts.)



# SUDOKU

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

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

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

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

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

Medium (1 pt. each)

Hard (2 pts. each)

Extra hard (3 pts. each)

# GROUPING GRIDS

Submitted by William West & Vittoria Dessi

Carrot	Cram	Pan	Lion
Horse	Sponge	Cucumber	Cat
Eave	Little	Eat it	Welsh
Sleeping	Snail	Beauty	Snow

Medium (3 pts.)

### How-to:

For fans of *Only Connect*! The sixteen clues in each of these puzzles can be placed into four groups of four, each with a connecting feature. To solve the puzzle, write these groups and their connections below! An example can be seen in last week's solutions.

Bird	Fixed	Flush	Contemplate
Ponder	Griffin	Minotaur	Harpy
Muse	Even	Appartment	Dwell
Level	Sing	Cockatrice	Siren

Hard (4 pts.)

				Connections
1.				
2.				
3.				
4.				

				Connections
1.				
2.				
3.				
4.				



# COMIC

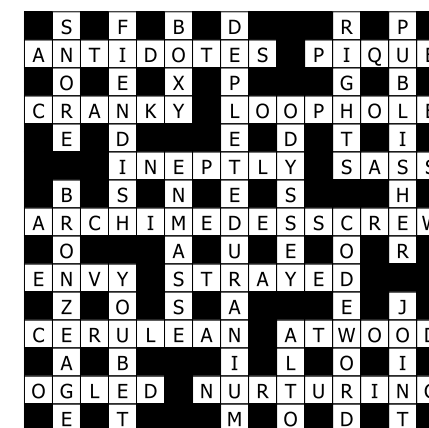
Submitted by Tengyu Zhao



## Previous Puzzles' solutions



Regular



Cryptic



Medium grouping grid



Hard grouping grid

## Puzzle Editor's Note

Dearest Puzzlers,

I hope the start of term continues to treat you well.

Rest assured, the Puzzles Section will always be here for you as a respite from work or the rain. Our four-legged barking companions are the theme for this week, brought on by your humble Puzzles Editor staring longingly at one too many of them during the morning commute. So brush up on your pet breeds if you'd like to rack up those lovely points!

Speaking of points, the Puzzles Leaderboard is beginning to heat up! Team GuineaPig has risen to the top with a brilliant score of 52, and The Menu is not too far behind. An especially warm welcome to the new additions to our Leaderboard, Team Experial and the brilliant Tactless Tony. But it's all still to play for, folks, especially with what we have in store for you next week . . .

Finally, I'd like to thank everyone who has contributed to the puzzles section: David Latimer for their Cryptic Crossword, William and Vittoria for their Connections and Tengyu for the Comic.

That leaves me with nothing more to say, other than have a fantastic week of crossing, connecting, completing, code-cracking, comic-consuming, and competing!

- Ivin

“The Wheel of Time turns, and ages come and pass, leaving memories that become legend. Legend fades to myth, and even myth is long forgotten when the age that gave it birth comes again.”

Anagram: Arrant Hold = Rand al'Thor  
Quote from: The Wheel of Time by Robert Jordan

## SPORT

# The fall of a city's empire: a battle won, next the war?

## Manchester City triumph in a tribunal separate to their 115-charge nightmare.

**Sport Writer**  
**LILA HARRISON**

**M**anchester City have emerged victorious, after a tribunal ruled the Premier League's accusations – that the football team was “misleading” about their commercial Associated Party Transactions (APTs) – unlawful.

Since Sheikh Mansour's 2008 takeover of the club, they have faced their fair share of controversies: human rights concerns, player misconduct, and significant financial violations of both UEFA (Union of European Football Associations) and the Premier League rules. Yet, as a result of many investments, world-class leadership from Pep Guardiola and Txiki Begiristain, and an elite global scouting network, they've emerged as one of the best-run clubs in the world. Amassing eight Premier League titles, six EFL Cups, two FA Cups, and finally winning the Champions League in 2023, it is hard to argue with this.

Despite being the only club to “four-peat” the Premier League, they are possibly the most contentious team to ever grace it. Following a two-year ban and a €30 million fine imposed by UEFA for Financial Fair Play (FFP) regulations in

2020, the Premier League followed suit on the 6th<sup>h</sup> of February, famously charging Manchester City with 115 breaches of FFP. The organisation alleged that the club failed to provide the accurate financial information and violated various rules related to financial reporting over multiple seasons – spanning between 2009 to 2018.

### What is FFP?

Financial Fair Play (FFP) defines a set of regulations introduced by UEFA to promote financial stability and integrity

mismanagement, protect club heritage and fans, improve accountability through enhanced transparency, and maintain competitiveness.

The latter reason doesn't appear to be holding up well. From the 2017-18 season through to the last, Manchester City have won the Premier League all but once, in 2019-2020, thanks to Jurgen Klopp's Liverpool. The Premier League clearly wishes to avoid a monopoly, with City as the predator potentially stifling competition and hindering the growth of other clubs.

### What are the 115 charges placed on City's head?

Leaked emails and a confidential Premier League investigation uncovered: 54 breaches of financial accuracy from 2009-2018, 14 breaches of player and

breaches of UEFA's own FFP rules from 2013-2018, and 35 failures to cooperate with the PL's investigations 2018-2023.

However, just in the last week, City have won a legal battle independent of these charges. It concerns commercial regulations, specifically APTs. APT rules require clubs to disclose transactions with associated parties – those with significant financial interests – to ensure fair market value and prevent inflated sponsorship deals that could disrupt the league's competitive balance.

The Premier League had previously blocked two of City's sponsorship deals, both linked with their ownership in the Etihad Aviation Group and the Abu Dhabi Bank. The tribunal ruled in favour of Manchester City, stating that the Premier League's enforcement of APT rules was procedurally unfair. It concluded that the league unlawfully excluded shareholder loans from the analysis, violating UK competition law and abusing its dominant position by preventing clubs from commenting on transaction data used to assess market value.

So, a minor battle won in this 115-wager war. This decision calls into question the overall legitimacy of the league's financial regulations and could undermine the credibility of the broader legal action against the club. Either way, it is guaranteed Manchester City will have as world class a board room as a dressing room.

Let's just hope the proceedings are not as predictable as: “5' [minutes]. Goal for City. Haaland.”



Outside Man City's ground, the Etihad Stadium. Vojta Zurek (CC BY-SA 4.0)

within European football. The Premier League subsequently implemented similar rules to prevent financial

manager payment accuracy from 2009-2018, seven breaches of the Premier League's PSR rules from 2015-2018, five