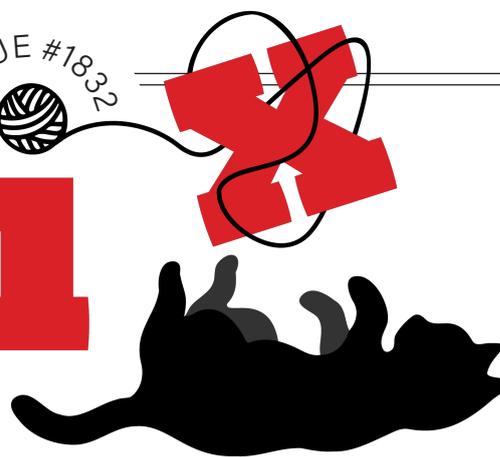




Felix

KEEP THE CAT FREE | SINCE 1949

ISSUE #1832



NEWS

Foreign nationals who praise Hamas face deportation

Immigration minister Robert Jenrick has asked Home Office officials to look at how visas could be revoked.

→ [READ MORE ON 4](#)

The OT Interviews: Yi Yang

Yi Yang explains her plans to improve the international student experience.

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SCIENCE



Imperial student's DNA model reaches 4,000 supporters on LEGO Ideas

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COMMENT

Science smart, people dumb

What the public execution of a *Nature* paper can teach us about communicating science.

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PHOTOGRAPHY

Photograph of the week

This week's theme: 'The Decisive Moment'
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Imperial alum trapped in Gaza

Messages shared with *Felix* reveal plight facing former Imperial student.

News Writer
MOHAMMAD MAJLISI

Editor-in-Chief
JAMIE JOHN

paints a picture of the dire circumstances he and other civilians face, trapped in the Gaza Strip.

He began updating the group chat on 13th October as a means of 'express[ing] what we go through every day in Gaza'.

Qtati, who graduated in 2020 with an MSc in Health Data Analytics & Machine Learning, had been living in the Al Zeytoun neighbourhood in Gaza City with his family.

On 17th October, an explosion at the local Al-Ahli hospital killed hundreds of civilians – only a day after Qtati and his family evacuated to the south to stay with relatives.

However, he said he knew 'many families who did not evacuate... because they just can't afford it.'

"No place is safe"

Securing food, water and electricity is a 'very hectic daily task'. 'We run out of water every 48 hours then we try to secure it again.'

But, wrote Qtati, 'It's probably bombs that would kill us, not lack of food'.

'Nights are horrible,' with 'no signs of life' save for the cries of scared pets and 'the massive sounds of bombs' that punctuate the air.

He explained that he would wake up '15-20 times during the night' at the sound of bombs, but avoided sleeping during the day ('so the nighttime can pass easier').

'There is no pattern in bombing, [but] with time I became [an] expert [at] identifying the

→ [READ MORE ON 4](#)



Damage in Gaza City following an Israeli airstrike on 9th October. Palestinian News & Information Agency (Wafa) in contract with APImages, CC BY-SA 3.0. Inset: Nael Qtati, the Imperial alumnus trapped in Gaza.

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 I, the *Felix* Editor, on behalf of the team promise that:

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

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

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

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

Signed by:
JAMIE JOHN
Editor-in-Chief



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Editor-in-Chief,
News Editor



ZANNA BUCKLAND
Deputy Editor-in-Chief,
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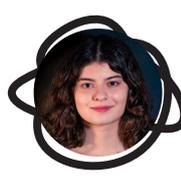
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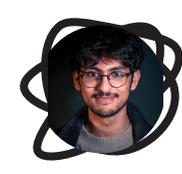
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Located in Beit Quad,
Prince Consort Road
London, SW7 2BB

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

Registered Newspaper
ISSN 1040-0711

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EDITORIAL

A breath of fresh air

In this issue, *Felix* talks to the Union's new Deputy President (Education), Yi Yang.

Speaking to Yang, it is clear that the common theme running through almost all of her goals for the year is an earnest desire to improve the international-student experience.

More so than any of the other Officer Trustees (OTs) the paper has interviewed thus far, Yang's plans arise almost entirely from her own experiences as an overseas student. It just so happens that those experiences resonate with much of the student population – overseas students comprise nearly half of the student body, and Chinese students such as Yang account for a quarter of this.

For the past few years, international students have had their specific concerns sidelined in favour of broader objectives that benefit all students. For this year at least, that will not be the case.

Yang has assembled a triad of policies that target what she sees as the biggest issues facing international students.

Poor English skills, she feels, hinder both the academic performance and the social lives of internationals – especially those from China.

She is therefore working with the centre for Academic English to promote its courses and remove the stigma around seeking its support. She hopes that a new 'Social English' course the Centre is running will help address the shyness and accompanying loneliness faced by some internationals.

Such work will serve home students as well. As discussed in a Comment piece last issue, every English-speaking student knows the frustration that comes with having to rewrite a group report, or battle to explain a concept to those whose language skills are lacking.

At first glance, the remaining two policies in Yang's triad do not address the international student experience. She intends i) to improve the postgraduate student experience, strengthening postgrad engagement with the Union, and ii) to provide 'professional training' for student representatives.

But Yang explains that 70% of postgraduate taught students are international students – many of them here for only one year. Such students, she says, engage little with the Union and with those outside of their own communities.

Her plan to provide professional training for student representatives is as much a means to achieving greater engagement with postgraduates as it is a goal in its own right. Properly trained student representatives will be empowered to relay the concerns of their cohorts to the Union. This will give the Union a better picture of how it can support postgrads.

Yang has one further goal, that sits somewhat apart from the triad above. Again, it stems from her own personal convictions: she wants to 'standardise UROP applications'.

In contrast to her other broad policies, appealing to a large constituent of the student body, her UROP

goals are decidedly narrow in scope

UROPs – Imperial's research internships for undergraduates – are clearly of personal significance to Yang. But fewer than one in four Imperial undergrads go on to research careers.

Perhaps there is a case to be made for standardising UROP applications, but by pursuing this goal, Yang is sacrificing time that would be better spent on more pressing problems.

Take for example Imperial's lowest scoring area on the National Student Survey, and Postgraduate Taught Experience Survey: assessment and feedback. Both students and academics across the board complain that the burden of assessment is too high, and that feedback to students is inconsistent and varies in quality.

Or the marking and assessment boycotts, which continue to affect second and third year students, even after the industrial action has come to an end. Some are still yet to receive their grades from last year.

Ultimately, Yang's focus on international students is a breath of fresh air – badly needed and long overdue. It will mean a year in which the wider student body does not receive as much attention from the DPE as it is used to. But overseas and postgraduate students will finally see their concerns represented in the sometimes-insular world of Union politics.

Imperial College
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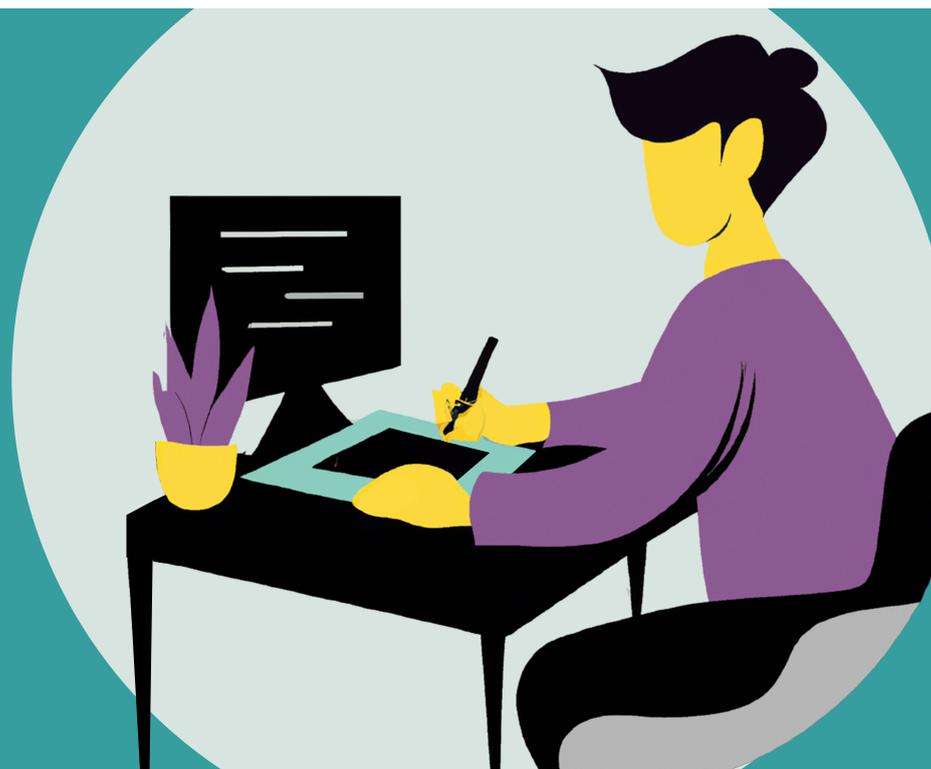
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NEWS

Foreign nationals who praise Hamas face deportation

Students and academics inciting antisemitism to have visas revoked.

News Writer
ARYAN DAGA

Robert Jenrick, the UK's immigration minister, has revealed plans to remove foreign nationals who incite antisemitism, even if their actions fall "below the criminal standard".

He included praise or support for Hamas, the proscribed terror group, in his description of behaviour that could lead to deportation.

The Government's definition of antisemitism, specified in a 2016 report, follows that of the International Holocaust Remembrance Alliance: 'a certain perception of Jews, which may be expressed as hatred towards Jews.'

It caveats that criticism of the Israeli government should not be seen as antisemitism, and that 'Zionism' remains a valid topic for academic and political debate (though use of the term 'Zionist' in an accusatory context should be considered 'inflammatory and potentially antisemitic').

Speaking in the House of Commons, Jenrick revealed that the process of withdrawing visas and expelling foreigners who spread "hate and division" had already begun in select cases. Current laws

permit this on national security grounds.

The plans, which would cover international students and staff at British universities, follow reports of growing antisemitism linked to Hamas's 7th October terror attacks and Israel's response to them. In London, the Met Police have reported a 1350% increase in antisemitic incidents, including assault, damage to Jewish property, and online abuse. A significant uptick in the number of Islamophobic incidents has also been reported as a result of events in the Middle East.

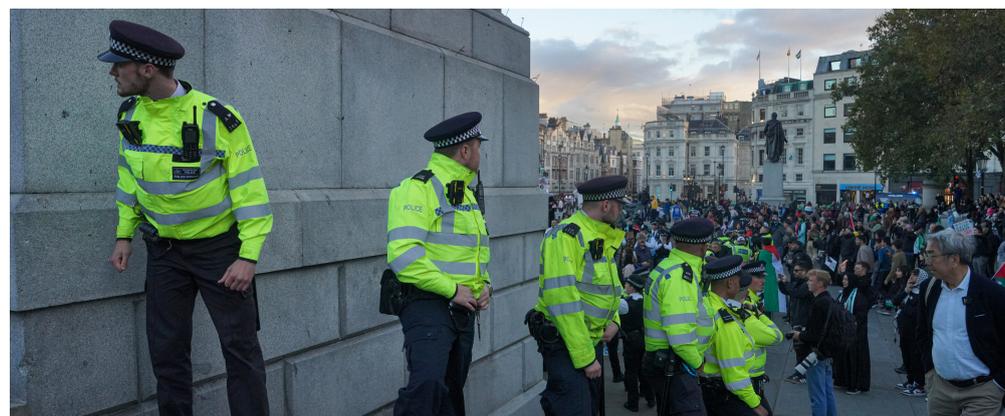
University College London is investigating an academic who said Palestinian "retaliation" was "entirely justifiable".

A professor at the University of Birkbeck described Hamas' actions as a "consequence" of "partying on stolen land" – in an apparent reference to the Re'im music festival massacre, in which 270 Israeli civilians were murdered and an unknown number taken hostage.

A hotline set up by the Union of Jewish Students (UJS) is receiving more than 100 calls a week, with students calling to share accounts of antisemitic behaviour.

The Education Secretary, Gillian Keegan, and the UJS have both separately written to university vice-chancellors to urge them to act against threats to the welfare of Jewish students, allowing them to 'pursue their studies without fear of harassment or intimidation'.

Imperial President Hugh Brady's response to a letter from the Jewish and Israeli societies stated, 'On behalf of our entire leadership team I want to underline to you and all your members that antisemitism has no place at Imperial. Full stop.'



Police at a protest in Trafalgar Square on 14th October. A1Cafel / CC BY-SA 2.0

→ **FROM P. 1: ALUM TRAPPED IN GAZA** sounds, the depth, intensity that each sound produce[s].'

'Yet every night has its own unique surprises, bombs you never experienced before.'

In the aftermath of Hamas's 7th October terrorist attacks, Israel has pounded the Gaza Strip with bombs. The Israeli Defence Force (IDF) has urged Gazans to evacuate to the south. But both north and south continue to come under fire, leading senior UN officials to call "the current siege imposed on Gaza... collective punishment."

"No place is safe," wrote Qtati. "No place."

"We are already killed [sic], it [just] hasn't been announced yet."

Qtati last message to the group chat was sent on 26th October. The next day, the Israeli government severed internet and communication links in Gaza. Qtati's current whereabouts are unknown.



We are already dead, it just hasn't been announced yet.

Two weeks ago, 11 Imperial societies, led by Friends of Palestine, submitted an open letter imploring Imperial to leverage its 'influence and network... to help facilitate [Qtati's] safe evacuation'.

Expressing concern at 'the deteriorating humanitarian situation', Brady said that Imperial 'does not have operations on the ground in Gaza and is not in a position to support graduates under such circumstances.' He suggested Qtati may be able to receive support from 'one of the international non-governmental organisations' operating within Gaza, or from the Council for At-Risk Academics, if he holds an academic post.

Friends of Palestine Society says it will now write to Imperial College Union in the hopes of securing support for Qtati and his family.

The OT Interviews

Yi Yang

Deputy President (Education)

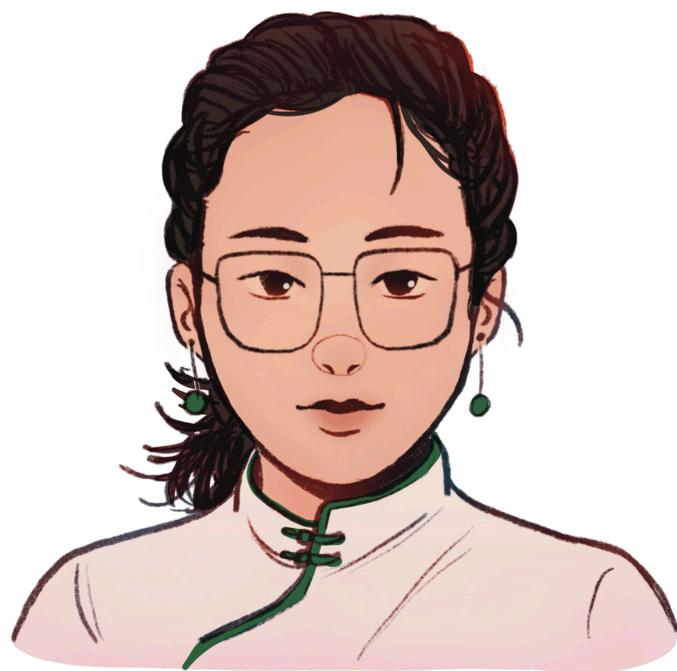


Illustration by Natalie Yu

In this series, Felix talks to the Union's Officer Trustees. This week: Yi Yang, DPE.

Editor-in-Chief
JAMIE JOHN

Yi Yang – like one in every four Imperial students – grew up in China. Her name is rather fitting, given her goals as Deputy President (Education). Yi (pronounced 'ee'), means wings, and Yang (pronounced 'young'), means Sun. She tells me her name comes from her parents' expectations of her: 'that I can freely develop myself under whatever environment I'm in.'

Yang was born in Shenzhen, Guangdong Province. She spent her early years there in China's public school system before moving to Hong Kong for her secondary education, attending an international school.

Shenzhen is itself a sprawling metropolis – communist China's first experiment with

market capitalism. But Hong Kong is one of the world's foremost financial hubs and has a culture distinct to that of mainland China – until 1997, it was a British colony.

Yang says the move to Hong Kong "broadened [her] horizons".

"Moving to Hong Kong, I had to get used to talking to different people, seeing even small differences in living conditions and culture across the border."

Nevertheless, relocating to London to study at Imperial was a dramatic change. Yang is studying for an MSci in Geophysics ("a really interesting degree, because so few people at Imperial know it exists", she says sarcastically).

She tells me that her department was very welcoming, and describes her cohort as "family". "The senior tutors were really kind to me when I had any difficulties –

they were good people to talk to and would signpost you to different services."

In her year group, 30 to 40 of the 90 geophysicists were Chinese international students. "It didn't really feel like we had a barrier," she says, explaining how she made friends with a home student who helped introduce her to other locals.

Yang acknowledges that this is not the experience of all international students, saying she is fortunate that there was "that kind of character happy to be a bridge".

Indeed, she ran for Deputy President (Education) on a campaign that focused almost entirely on bettering the international student experience.

Yang's goals

Yang lists four goals for the year:

1. Introduce language support courses for non-native English speakers.
2. Strengthen postgraduate student engagement with Imperial College Union (ICU), and discuss changes to the 'mutual expectation' documents to guarantee the quality of research support for postgraduate research students (PGRs).
3. Provide professional training for student representatives.
4. Standardise the Undergraduate Research Opportunities Programme (UROP) application process, and securing further UROP funding.

She tells a story to explain her first goal. "I came from the Chinese public school system. The academic pressure was crazy high, and it started in primary school – we'd be in school from 9am to 5pm, with six lectures a day from the very beginning."

"Everything got assessed – even PE and Art (okay, Art maybe not). But all hobbies – even art and music were seen as a path to a better future from early education onwards. Everything you learn is to help you get a better future."

"We were pushed to study hard, because we were told that if you are lazy for even a day, then everyone will outrun you, and you will not be able to catch up."

"With this kind of pressure, I was expecting exactly the same, or maybe even more ferocious competition at Imperial."

Yang says that while she does not feel there is a social barrier between home

and international students, "one thing we are different on is hobbies."

"A lot of the Chinese or Asian students I run into are eager to get work done in the library, and then enjoy Fridays and weekends. They start to revise in the middle of term or early in the holidays."

"So that competitive environment I mentioned earlier does exist for some Asians and international students at Imperial."

Despite all this effort, Yang observed that the grades of international students were not significantly better than those of home students.

This raised a question in her mind: "Do we actually need to build this ferocious atmosphere? Maybe we can study and learn in a more welcome, warmer environment, without getting too competitive."

For Yang, building this welcoming environment starts with her first goal for the year: addressing language and communication problems.

Yang's election campaign said she would 'lobby to introduce English-as-a-Second-Language courses' for non-native speakers. But upon assuming the DPE role, and talking to the Centre for Academic English (CfAE), she has come to the conclusion that the existing provision is sufficient.

However, she feels there is a stigma around using the service, admitting that she herself was embarrassed to use the support available.

"I was ashamed to join [CfAE courses], because I'd have to let my friends know that two or three years into my degree, I was accepting language support. Even my parents told me, 'You've been there for three years. There is no way you still have problems writing and communicating.'"

She is keen to outline the importance of such support in improving international students' grades. "We are intellectually at the same level, it's just that language support is going to boost us that little bit and put us on a level footing."

Furthermore, she hopes that it will go some way to addressing the loneliness felt by international students away from home.

This year, she intends to promote the existing CfAE service to students, and to

➔ CONTINUED ON 6

→ FROM P. 5: YI YANG

gather feedback on what would encourage students to use the service (she is already collecting feedback from a survey sent out earlier in the term).

The CfAE staff are friendly and approachable, she says. “They are willing to help, and actually want to get students involved. They have different courses: 15 minute one-to-one drop-ins to give you advice on spoken language, presentation for speaking, writing workshops, and more.”

Yang says the CfAE is also planning a social English course specifically targeted at helping students build relationships and make friends.



Do we actually need to build this ferocious atmosphere?

Alongside this, she wants to encourage departments and students to hold more socials (formal and informal) to improve rapport between local and international students. By holding socials, and promoting diverse groups in university coursework, she feels that ‘bubbles of information’ – the different worlds and sets of experiences inhabited by students – can be popped.

Her second goal (to strengthen postgraduate engagement) goes hand in hand with the first. She tells me that 70% of postgraduate taught students (PGTs) are overseas students.

“PGR students are here for three or four years and have time to socialise. But the PGTs – especially the Chinese students – have just graduated from a Chinese university, and are thinking of going back to work in China after graduating. So they stick together with other Chinese students, and don’t have the opportunity to socialise with others.”

Yang says she has been attending PGT welcome talks and social events to understand their difficulties, and will later work with Imperial to come up with solutions.

Her plan to introduce profession-

al training for student representatives feeds into this: more able student representatives will be better equipped to listen to the concerns of their peers and communicate them with the Union.

Her plans for postgraduate research students (such as PhD students) are focused on the mutual expectations document – a form signed by the student and programme leader at the beginning of the course, which outlines what one party can expect from the other. “Revising the document will set a minimum level of help that must be provided to all PGR students.”

UROPs

Yang’s final goal sits apart from her other three, and appears to come from her personal belief in the importance of helping students understand what research entails.

“I want to raise UROPs as an option for students. A lot of students do consider a PhD or research, and UROPs are a great opportunity to figure out what research is, before blindly throwing themselves into it.”

She says the data shows that some groups of students (departments, genders, ethnicities) are underrepresented in UROP placements. She is currently talking to Imperial’s Registry team, analysing the figures and reading a draft report they produced on the topic. Yang plans to lobby the College to provide further funding for UROPs, to help these groups secure placements.

Overall, Yang says she has enjoyed her job so far. There have been difficult moments – tears on some occasions – but she has been encouraged by the support she has received from Union and College staff. She says she is looking forward to the year ahead and says that students can follow her ICU blog to keep up to date with her latest work.

Yang’s parents bestowed upon her a name that urged her to “freely develop myself under whatever environment I’m in”. This year, she will set about helping other international students do the same.

NEWS THREADS

Weekly bulletin



Open letter calling on Imperial to ‘take a stand against war crimes’ gains over 1,000 signatures

Over the course of three days, an **open letter to Imperial** has gained over 1,000 signatures. The letter asks Imperial to issue a ‘point blank condemnation’ of the bombing of health facilities, the killing of medics, journalists and UN officials, and Israel’s ‘illegal blockade’ of the Gaza Strip.

It wants the College to ‘begin taking steps to stop the purchase of any goods made by Israel or Hamas’, and to use its ‘standing as a leading institution to lobby the government’ to demand a ceasefire.

Most of the signatories claim to be Imperial students, staff and alumni, although some members of the public have also signed.

UCL’s UCU accused of ‘horrific incitement to violence and terror’

The **University College London branch** of the UCU trade union has been condemned after it voted to support a motion containing the slogan ‘intifada until victory’, calling for a ‘mass uprising’ in the Middle East.

The language echoes that used by Imperial’s Marxist Society, which was banned from using the intifada slogan, and also called for a ‘mass uprising’.

Like Imperial Marxist Society, UCL UCU said it ‘strongly condemn[ed] all forms of violence’ and called for ‘equal rights for all peoples’. Both groups also called for a ‘socialist federation of the Middle East’.

The Union of Jewish Students responded to UCL UCU’s motion, calling it ‘a horrific incitement to violence and terror’. ‘We have written to UCL’s Provost to express disgust at the motion and call for urgent action in the wake of this’.

Foreign nationals who praise Hamas face deportation

Robert Jenrick, the UK’s immigration minister, has revealed plans to remove foreign nationals who incite antisemitism, even if their actions fall “below the criminal standard”.

He included praise or support for Hamas, the proscribed terror group, in his description of behaviour that could lead to deportation.

Speaking in the House of Commons, Jenrick revealed that the process of withdrawing visas and expelling foreigners who spread “hate and division” had already begun in select cases. Current laws permit this expulsion on national security grounds. (p. 4)

Just Stop Oil back in South Kensington

Just Stop Oil (JSO) has ramped up its activities in South Kensington over the past week. Last Thursday, the Natural History Museum closed its titanosaur exhibit, after two JSO protestors covered the replica dinosaur in orange cornstarch. The museum has since confirmed the protest caused no long-term damage.

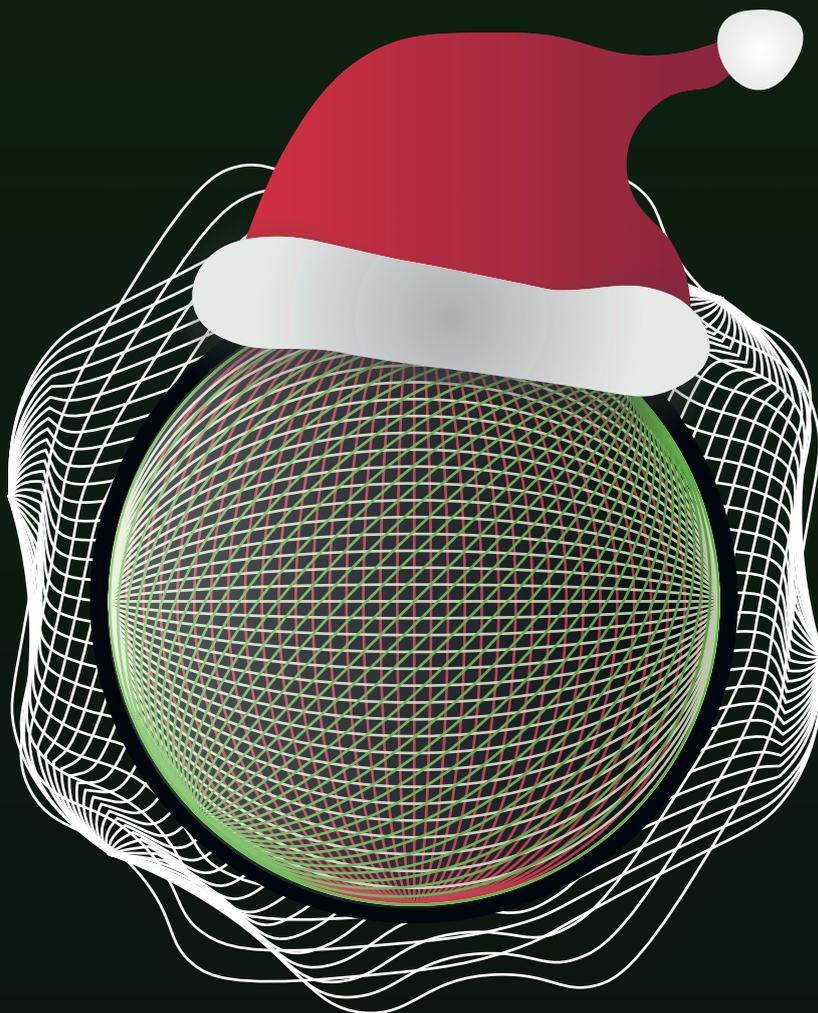
On Tuesday, JSO activists were stopped and searched by police outside the Science Museum, as they handed out leaflets. The following day, 35 ‘slow marchers’ were arrested on West Cromwell Road.

JSO is demanding that the UK Government stop licensing all new oil, gas and coal projects. Leaked documents published in August revealed the group’s plans to bring London to a standstill over a six-week period ending on 19th November.

We are always looking for story tips. You can contact us by emailing felix@imperial.ac.uk.

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DECIREL DOES CHRISTMAS!



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21:00 - 02:00

SCIENCE

Imperial student's DNA model reaches 4,000 supporters on Lego Ideas

The model celebrates the 70th anniversary of DNA discovery triumph.

Science Writer

ELIZABETH GLASSON

Science Writer

ELEANOR GOULDING

Science Editor

TAYLOR POMFRET

Currently, the ninth most trending model out of 2465 pending Lego Ideas reviews is an Imperial student's scientifically accurate DNA model, Lego DNA 2.0: Double Helix History.

**Support
Daniel's Lego
DNA!**



Daniel Khosravinia, who goes by the name "LegoDNA" on the platform, has designed a Lego set comprising over 2,700 pieces to commemorate the 70th anniversary of the discovery of DNA back in 1953.

Daniel is currently studying for a Master's in Biomedical Engineering, after doing his Biomedical Science degree at Kings College London, the setting of Franklin and Gosling's famous Photo 51 that depicts a DNA fibre.

Daniel's design is purely conceptual and built from a virtual building software tool. He hasn't made a physical model of Lego DNA, though this is his dream; if his idea reaches 10,000 supporters on Lego Ideas his concept will be made into a physical Lego set available in Lego stores across the world. Amassing over 4,078 supporters having been on the site for just under 3 months, Daniel's design's is on track to be reviewed by Lego and potentially be made into an official Lego set.

Lego DNA comes in two distinct parts. The main build of the set is a model of DNA that is approximately half a metre in height, comprised of a scientifically accurate sugar-phosphate backbone with hydrogen bonds in-between. Accompanying the main model is a multi-functional science lab emulating the experimental set-up of the DNA discovery triumph at King's College London and the University of Cambridge.

DNA Model

Deoxyribose nucleic acid (DNA) is made from two polynucleotide chains twisted forming a double helix. The nucleotides making up each strand consist of deox-

yribose (a pentose sugar), a phosphate group and a single base (adenine, guanine, cytosine, or thymine). The light blue blocks on Daniel's model are deoxyribose and the orange blocks are the phosphate groups. The nucleotides are joined by phosphodiester bonds between the phosphate group of one nucleotide and the deoxyribose of another. This forms the phosphodiester backbone.

Each DNA molecule consists of two strands of complementary nucleotide sequences running in opposite directions; they are anti-parallel. One of the DNA strands is the sense strand which runs in the 5' to 3' direction. Daniel has used arrows on the deoxyribose groups to show this. The sense strand provides the codes for the amino acids which make up the primary structure of proteins. The direction of phosphate groups is also different between the strands, this leaves a free phosphate group at the 5' end not in a phosphodiester bond (only bonded to one deoxyribose molecule). This can be seen as an orange circular piece of Lego on the model.

His model shows precision down to each atom on the bases. Adenine pairs with thymine with two hydrogen bonds and cytosine pairs with guanine with three hydrogen bonds. The hydrogen bonds are shown with white cylindrical pieces of Lego. For each base the first letter of the base name letter is written (A, T, C or G). Daniel also provides a genetic code puzzle for the builder to solve, adding another dimension of interactivity! The builder must work out which amino acids are being coded for by the sense

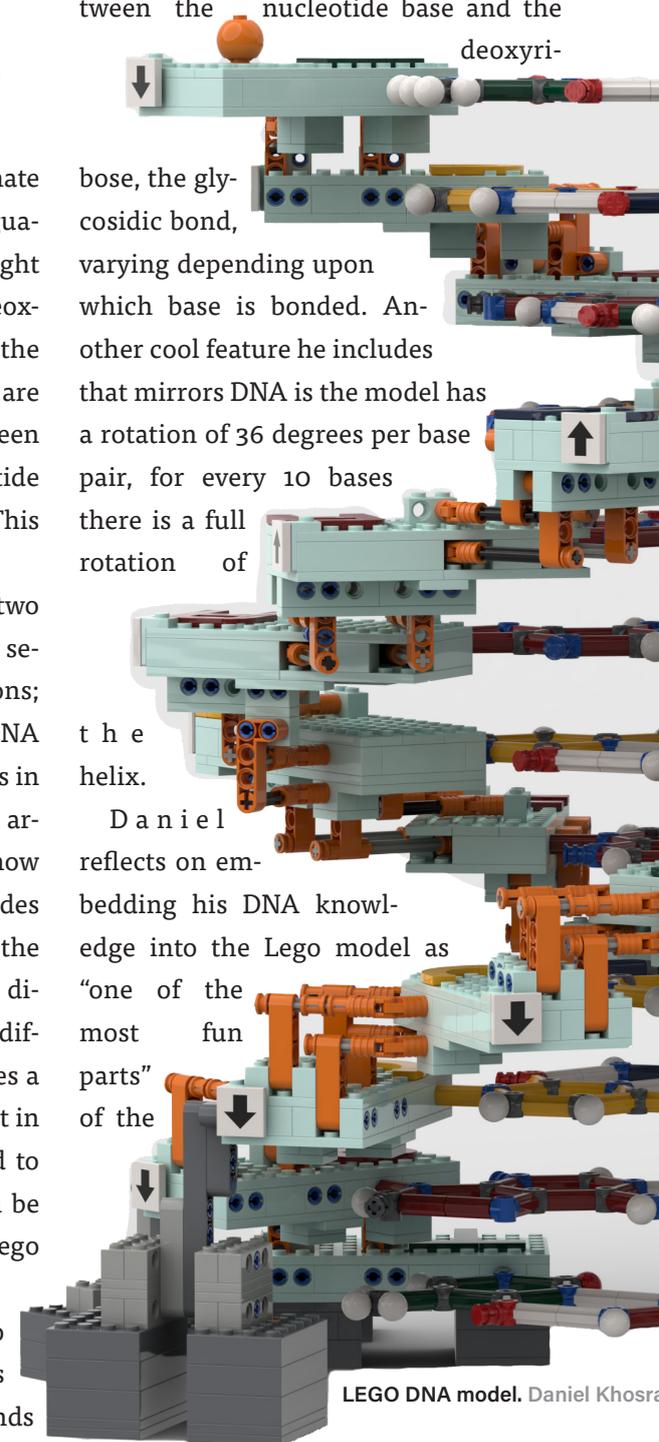
strand of DNA. The DNA model has 12 bases, and three DNA bases make up a codon and each codon codes for an amino acid. Therefore, the builder must solve 4 codons to determine the sequence.

Daniel's model provides further detail on the structure of DNA by including its distinctive major and minor grooves. These are the result of the bond angle between the nucleotide base and the deoxyri-

bose, the glycosidic bond, varying depending upon which base is bonded. Another cool feature he includes that mirrors DNA is the model has a rotation of 36 degrees per base pair, for every 10 bases there is a full rotation of

the helix.

Daniel reflects on embedding his DNA knowledge into the Lego model as "one of the most fun parts" of the



LEGO DNA model. Daniel Khosravinia

project. Conversely, getting his DNA structure stable in Lego form was not as fun. Daniel explains his solution for increasing the stability of the model: "It was really tough. What augmented my solution for the stability was the phosphates of the DNA. In each level, there are eight connections, and because they are really, well connected, it all sticks together. Because of the way

it rotates, the centre of gravity resides in the centre of model too, which significantly improves the stability.”

Labs

Rosalind Franklin came from a prosperous family and graduated from Cambridge in 1941. She then began working with the British coal utilization research association in World War II. Her main contribution to the modern model of DNA was her development of X-ray crystallography that took Photo 51, together with PhD student Raymond Gosling.

Maurice Wilkins was already working at Kings' College at the time of Franklin's arrival. His main specialty involved

the x-ray crystallographic equipment and different techniques within the field, as he was a nuclear physicist. As Wilkins and Franklin's work regularly co-existed, there were often tensions between the two.

These three scientists make up the King's College London section of the set.

James Watson and Francis Crick met at the Cavendish Laboratory in Cambridge. Watson worked there due to his fascination with the crystallography work taking place in the laboratory, while Crick was writing his dissertation on the X-ray crystallography of haemoglobin.

They

worked alongside each other, using DNA photography published by Franklin and Wilson, much without Franklin's knowledge. The imagery allowed them to understand the molecular structure of DNA, as their main strength was theoretically interpreting the science behind the images. It should be noted that their success was only possible with the aid of William Astbury and Lawrence Bragg who demonstrated that X-rays can be used to determine the positions of atoms within a crystal. Daniel

recognises these contributions, particularly of Rudolf Signer too, who produced extraordinarily pure DNA from the thymus of calves, of which he took 15 grams of extraordinarily pure DNA to London. While in England he distributed his samples to notable scientists, among them Maurice Wilkins, to promote further research in the field. Daniel pays tribute to Signer, with the following excerpt noted in the King's lab: 'Signer's DNA: Best DNA you've ever seen!'.

Photo 51 is an X-ray diffraction image of DNA, specifically the B form of deoxyribonucleic acid, that was taken by Rosalind Franklin and her PhD student, Raymond Gosling after she started working at Kings' College. The photo was labelled 'Photo 51' as it was the 51st photo taken after trialling a variety of different environments, using the hydrogen micro camera that is modelled in the Lego set. Photo 51 was a major scientific milestone as it was able to provide Watson and Crick with the evidence needed to create their 3D model of the DNA, as Photo 51 demonstrated that DNA took the form of a double helix.

Pictured alongside the micro camera is a hydrogen canister, which was crucial to improve the quality of the image taken in the lab, by limiting air fogging up the camera.

The inclusion of all five scientists that led to the DNA model we know today is crucial to the set's educational endeavours, as it shows the collaborative effort needed to make the scientific discovery. It also allows each scientist the validation they deserved and true acknowledgment of their efforts in discovering the 'secret of life'. The features of the set such as the blackboards and the desk where Photo 51 can be studied using Bragg's law, show the user the extent of the work that was conducted in order to achieve reliable and accurate scientific results.

Support the project!

In Daniel's Lego DNA model, we discover a profound celebration of science, curiosity and the power of collaboration. At its core, this remarkable creation serves as a testament to the scientific method, highlighting its pivotal role in one of history's defining discoveries. Daniel's ambition is to educate individuals of all ages and backgrounds about the significance of this scientific journey.

To bring this project to life, Daniel needs an additional 6,000 supporters. You can play a part in his venture by scanning the QR code and visiting the Lego DNA ideas page.

By becoming a supporter, you'll stay updated on the progress of the Lego set. We wish Daniel the very best on this exciting journey, and we strongly encourage *Felix* readers to help bring Daniel's dream to fruition!

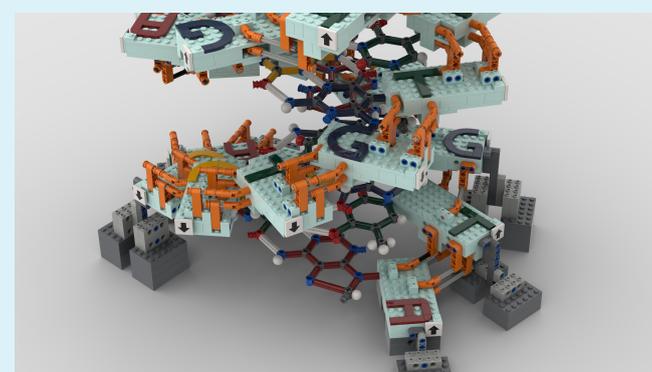
Lego DNA 2.0 - in detail:

Multifunctional lab



Included in the 2,700 piece set is a multifunctional lab setup featuring five prominent scientists involved in the discovery of DNA. Daniel Khosravinia

DNA model bases



Bases of DNA model - corresponding codons spell out Daniel's initials 'DK!' Daniel Khosravinia

King's lab



King's College London lab featuring Rosalind Franklin, Raymond Gosling, and Maurice Wilkins. Daniel Khosravinia

Cambridge lab



University of Cambridge lab featuring James Watson and Francis Crick. Daniel Khosravinia

ENVIRONMENT

Viviparous lizard: the slippery little speedster

— Last year's readers will remember our *Tales of Unsung Wilderness* series. We continue this with the viviparous lizard.

Environment Writer
SHREYAS KUCHIBHOTLA

I remember the first time seeing a viviparous lizard (*Zootoca vivipara*): Richmond Park, in late September last year, with the summer beginning to bid London a tearful goodbye. The air was brisk as I strolled along the vast expanse of grassland near the park's Pen Pond, flipping logs one after another. My mission, uneventful for too long, turned into such mechanic repetition, that this vaguely raptilian face, half-buried in the sand, did not catch the slightest of my attention. Placing the log back, it only took seconds for me to realise that I had found Britain's commonest native reptile. Eagerly, I lifted the wood up again to reveal the lizard which, in a sluggish state, was still puzzled from the disturbance, looking about

itself on alert. I recorded a short video of it running into the grass, and decided to give the raptilian friend no more hassle.

Since then, I have encountered this lizard's kind all across the south, in different sizes, shapes and colours, but with one thing in common – all I ever see is a brief flash of brown or grey as it makes a beeline for the nearest surrounding vegetation. Even when under a piece of wood, as the ape and the lizard sized each other up, it was always lizard that triumphed. Once, I almost to picked it up, but it managed to slip through my fingers and gave up its tail, a defensive strategy employed by many lizards called caudal autotomy. Kneeling over a fallen log with a writhing lizard tail in my hands, I could only



The shed tail of a Viviparous lizard at Richmond Park, London, 2023. Shreyas Kuchibhotla

seethe at this scaly Houdini who got the better of me, again.

Lizards are flighty. They have to be. In most places (perhaps not so ecologically starved as Britain), a walk in a rocky area on a sunny morning will show plenty of motion as hundreds of lizards flee from their basking spots at the first sight of danger. This is a natural response – most lizards are quite far down on the food chain, frequently snacked on by mammals, birds, snakes and even large arthropods, such as tarantulas and centipedes. As a result, their brief stints up on the rocks to absorb warmth are fraught with danger. For raptiles, basking is not for leisure – it is an unfortunate requirement by their anatomy that places them in constant danger by allowing themselves to stay exposed. Many have evolved to make their sunbathing safer. Some snakes (also under the family of lizards) practise mosaic basking, with only parts of their body placed in direct sunlight with the rest hidden in order to avoid being spotted. The viviparous lizard, or simply referred

to as common lizard, is coloured in drab shades of brown, with light and dark markings that mimic the appearance of dry scrub. This gives them an advantage when basking, making it harder for predators to locate them visually and allowing themselves more time to dive into the undergrowth (and of course, sacrifice their tail if necessary). Many times I have been within a few inches of a lizard without noticing it until it moved. Good for them, I suppose. Not so good for me.

Viviparous lizards are also interesting for their reproductive behaviour — both the Greek generic name *Zootoca* and the Latin specific name *vivipara*, mean “live birth”, as they give birth to live young, as opposed to most of the raptilian family which hatch from eggs. Young viviparous lizards, tiny and almost black, are very different in appearance from their parents, making them hard to recognise. Adding to this confusion, some Spanish and French populations of this species actually lay eggs (but are nonetheless still called viviparous). Additionally, be-

ing the terrestrial lizard with the widest species range, viviparous lizards are very well adapted to cold temperatures, and can brumate (the reptilian version of hibernation in winter which allows for occasional waking up and forage on warmer days) under wooden logs or in the upper layers of soil.

Brumation is the reason I finally defeated my photographic nemesis earlier this week, on my way looking for spiders in cold, windy and overcast conditions. Just before I left the site, I looked under a log buried deep in grass. Lo and behold, there lay two tiny brown lizards, huddling together for warmth. With my previous experience, I took out the phone at once so I could get a record shot, but the lizards seemed to be barely aware of my existence. So, after several months of frustration, I finally managed to get some photographs of the pair before retoring the log, leaving them to enjoy their slumber.

Britain may not be the best country for wildlife enthusiasts, but tiny creatures like these often remind us how much is still left to be discovered, if we simply take a couple of hours out of our life to explore the greatness of the wild.



One of two Viviparous/common lizards (*Zootoca vivipara*) found in a state of torpor under a log at Wormwood Scrubs Local Nature Reserve, West London, 2023. Shreyas Kuchibhotla

The Sophia Prize: a call for submissions

This £400 prize is open to submission for the whole academic year. It will be awarded to an ‘outstanding, inspiring, and accessible article that helps tackle climate defeatism and covers, or conceives of, an economic, cultural, or scientific innovation that helps fight global warning.’ If you have penned an article, or plan to write one, with something to say about this matter, please email it to *Felix* to enter the competition.

Last year’s winning article can be found in issue 1824:



A study recently published in *Atmospheric Chemistry and Physics* has shown an increase in hydro-

but you

didn't know that beavers used to be native to the UK. I didn't know this until a couple of weeks ago, when it was announced by Sadiq Khan (Mayor of London), Rewild London Fund, and London Wildlife Trust, along with several other partners, that they have reintroduced a family of five beavers to Paradise Fields wetlands in Ealing, West London. When you hear 'beaver', you probably think of the buck-toothed dam-building rodents (*Castor canadensis*) that populate North America's national parks, but you might be surprised to learn that the Eurasian beaver (*Castor fiber*) can be found in much of

Beavers back in Britain



Just keep swimmin! Ryzhkov Sergey

northeastern Europe (particularly Siberia) and select areas in western Europe. This included England up until 400 years ago, when excessive hunting caused



Air conditioner units, which are one source of HFCs. Dinkun Chen

fluorocarbon (HFC) emissions from factories in eastern China between 2015 and 2019.

HFCs are potentially ozone-depleting coolants, used as a greener alternative to

them to go extinct. The London reintroduction follows a string of successful beaver colony establishments into various southern England counties.

Other current wildlife restoration projects in the UK include European bison (*Bison bonasus*) in the woods of Kent, as well as protection of Scottish wildcats (*Felis silvestris silvestris*, 'Highland tigers') and Eurasian red squirrels (*Sciurus vulgaris*). Due to their ability to alter landscapes and support the survival of other wildlife, European bi-

son are considered 'ecosystem engineers'. One of the three bison females has already successfully birthed a calf in the wild – a positive sign for the future of

CFCs (chlorofluorocarbons) and HCFCs (hydrochlorofluorocarbons) in refrigerator units and air conditioners. Reported levels of HFC-23 from China are said to be inconsistent with expected reductions following the country's commitment to the Kigali Amendment of the Montreal Protocol in 2015. These findings were corroborated in



WITH ZANNA BUCKLAND

the herd. Protection schemes for the wildcats and red squirrels involve monitoring programmes, public awareness campaigns, habitat management, and rehabilitation of the animals.

These rewilding projects, and the beaver reintroduction scheme, were made possible by conservation financing like the Rewild London Fund. With enough of this funding going to the right organisations – wildlife trusts and conservancies – these projects generally prove successful at improving ecosystems biodiversity and restoring key species, and in the long run can contribute to nature-based solutions for broader environmental challenges like climate change.

criticism in how China's environmental commitments are reported on, likely fuelled by continuing distrust in its research methods and policies.

However, following a paper that found high levels of CFC-11 in the same region, the nation responded swiftly and coopera-

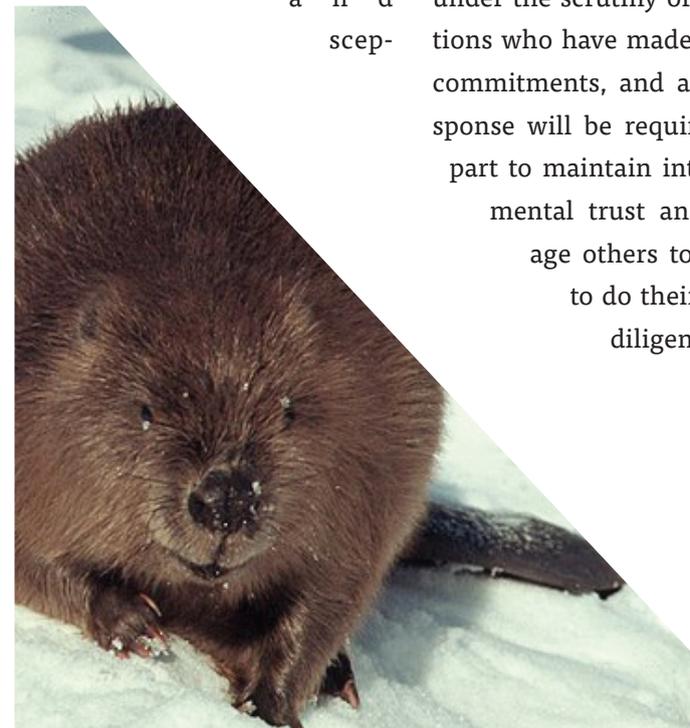
China exposed for high levels of unreported HFCs

a 2020 publication in *Nature*, which found global HFC emissions had increased, contrary to their estimate that they should have decreased by 87% following the protocol amendment. Despite their reports of a 99% decrease in HFC emissions, the new study has found China to be responsible for nearly half the HFC-23 contributing to the increase.

This is disheartening to say the least, and the worry here is not just in the potential harm caused by these chemicals, but in the way other nations interpret this news. There is a certain sensationalism and scepti-

tively to realign with its original commitments. Steve Montzka, one of the lead researchers on the HFC paper, seems confident that China will demonstrate a similar reaction following his revelation. It has actually been a crucial player in developing many of the world's major climate agreements, such as pushing through the '30 by 30' target at last year's COP15 for biodiversity, which was run by China's environment minister, Huang Runqiu. The 30 by 30 target aims to assign 30% of the world's land and oceans protected status by 2030.

Despite consistent engagement in environment conferences like COP15, China remains under the scrutiny of other nations who have made the same commitments, and a rapid response will be required on its part to maintain intergovernmental trust and encourage others to continue to do their own due diligence.



The Eurasian beaver. DPLA

COMMENT

Guide to the perfect houseparty

Because, let's be honest, everyone who found a place to live in London deserves to celebrate.

Comment Writer
DELIA GINCU

We've all been there. After spending first year in the College's student halls, the London rental market proves far less glamorous than anticipated – a series of torments ensue, which only end with the signing of a two year long lease for a shoebox-sized apartment. The years in this humble building pass slowly, and you vow to leave the modest abode behind in the search for what will hopefully be a somewhat more presentable find. Cured for the rest of your life from any of your leanings towards claustrophobia through exposure therapy, your re-entry to the housing market is tackled with motivation and hope.

Though you can hear the Rightmove gods' evil laugh in the back of your mind every time you dare check new rentals, it does little to abate your tireless search. Finally, after a few ignored offers that have brought you close to your breaking point, it comes — the long-awaited "The landlord accepted your offer!" WhatsApp message. Blinded by the prospect of having a living room bigger than a car trunk, you don't even question your agent's mysterious profile picture (maybe he's sponsored by Grey Goose?).

Now, the real work begins. Friend or foe, everyone you've ever spoken to

receives an invitation to the house-warming of an apartment you're due to move into in two months. The number of guests grows by the day, but the logistics of this party are a bridge that you will cross when you get to it.

Suddenly, it is Wednesday, and the party is Friday, and you realise the event planning has in fact not been ongoing and there are some potential issues that, three months ago, you did not factor in. The bridge you need to cross is seriously lacking structural integrity.

We've all been there, right?

Dealing with the consequences of such ambitious party announcements may seem an insurmountable quest - were it not for the perfectly curated "Guide to a perfect house-warming party" below.

1. **Establish that your neighbours will not pose an issue.** A make-it or break-it element. This is best done by testing the waters before you start inviting everyone you know and marketing the event as "the party of the decade". However, if, with the invitations already underway, the neighbours reveal themselves to be the type to knock at your door when the washing machine is running past 9PM, fear not. Crossing fingers has been known to help.

2. **Make sure not to invite more people than your apartment fits.** This is a tricky one. One can easily get carried away in the planning process and suddenly discover the guestlist triple-exceeds the square meterage of the living room. My best advice here: hope for cancellations.
3. **Set up ground rules with your invitees.** Of course, it would have been too much to ask to consider your flat has carpet floors before plotting this party. Easy fix: it's a shoes-off event and red wine is not desired. This should also aid with adhering to point 2. Two birds, one stone.
4. **Clean your apartment on the day of the party.** Note: it is best to have acquired a vacuum cleaner before this endeavour.
5. **Shop 'til you drop!** Although BYOB is the accepted norm amongst self-respecting hosts, it has yet to reach some invitees, usually the more prudent kind. In order to prevent death by awkwardness and/or panicked late-night runs to the dodgy corner shop seven minutes away, I would advise for preventative purchases. Chained to transparent liquids for carpeting reasons, one escapes the enormous burden

of infinite choice and may select one or two appropriate beverage types. Further, snacks are a non-negligible element of any good party. Consider guests will get hungry and they may raid your fridge for lack of alternatives. You do not want to find what's left of your 24-month Grana Padano laying next to the shoe rack in the dusk of Saturday morning. Stick to easily-digestible finger food, keeping in mind minimal effort, cost, and aftermath cleanup. Bread and hummus perhaps.

6. **Carefully curate your party playlist.** Unfortunately, good taste in music is something only few of us were endowed with at birth. To avoid torturing unsuspecting guests with "Another Love (HYPERTECHNO EDIT)" after naively handing the phone to your (then-)trusted friend to choose the next song, I advise the following: create an 8-hour long playlist with self-validated songs, connect to your speaker, hit play 10 minutes before event start, place phone in airtight container, secure said container with a key lock, hide container, hide key, and deal with potential consequences later.
7. **Enjoy!**



Making a house a home is perhaps the most important thing after finding a place. Delia Gincu

COMMENT

Science smart, people dumb

A cautionary tale for science publicists – how a potential paradigm shift is missing the mark.

Comment Writer
ANONYMOUS

An overlooked, but key, aspect of effective communication is empathy. When someone becomes knowledgeable in a field, they often lose sight of how much an average person would know about it. On a given topic, the best teacher is often not the smartest person, but instead someone who is enough of a layman to it that they understand which parts of an explanation require more elaboration and hand-holding.

A recent example of this juxtaposition emerged with the publishing of the paper ‘Assembly theory explains and quantifies selection and evolution’ in the science journal *Nature*. In the article, Abhishek Sharma, a chemist at the University of Glasgow, and his colleagues proposed assembly theory (AT) as a way of ‘reconciling biological evolution with the immutable laws of the Universe defined by physics’, through some creative reimagining of how ‘objects’ are conceptualised. In contrast to other similarly ambitious and high-concept theories that have been published in *Nature*, the common response to AT, at least on X (formerly Twitter), was one of confusion and even ridicule. The paper was described as incoherent and pseudoscientific, its conceit either too complicated and mired in its own argumentation or too simplistic that it need not even warrant its own paper.

This isn’t to suggest that AT is necessarily wrong or invalid; it wouldn’t have made it past six world-class scientists and *Nature*’s editorial team if it didn’t hold some value. The paper most certainly makes complete and utter sense to the authors — both in terms of its internal logic, and in its contribution to the field of the philosophy of biology. But what the reactions suggest is that there was, at the very least, an almost

fundamental mismatch between what the researchers intended to convey and what their audience understood; a failure to consider the thought processes of those reading the paper.

Take the first sentence of the abstract: ‘Scientists have grappled with reconciling biological evolution with the immutable laws of the Universe defined by physics.’ What does this even mean? What does reconciling mean, and why is this something we have to reconcile? The authors describe the incongruity, with respect to how both disciplines deal with the idea of ‘function’, but do not explain why this is a problem worth solving. Maybe they didn’t see this as something that required explanation! It takes an insightful mind to come up with a theory which resolves a fundamental conflict between two huge scientific disciplines, but perhaps even more valuable than that is knowing what a reader needs to fully grasp that insight.

It’s hard to fault these specific authors, considering they’re not trained writers – they’re researchers, who seem to have tunnelled too far into their niche. This is



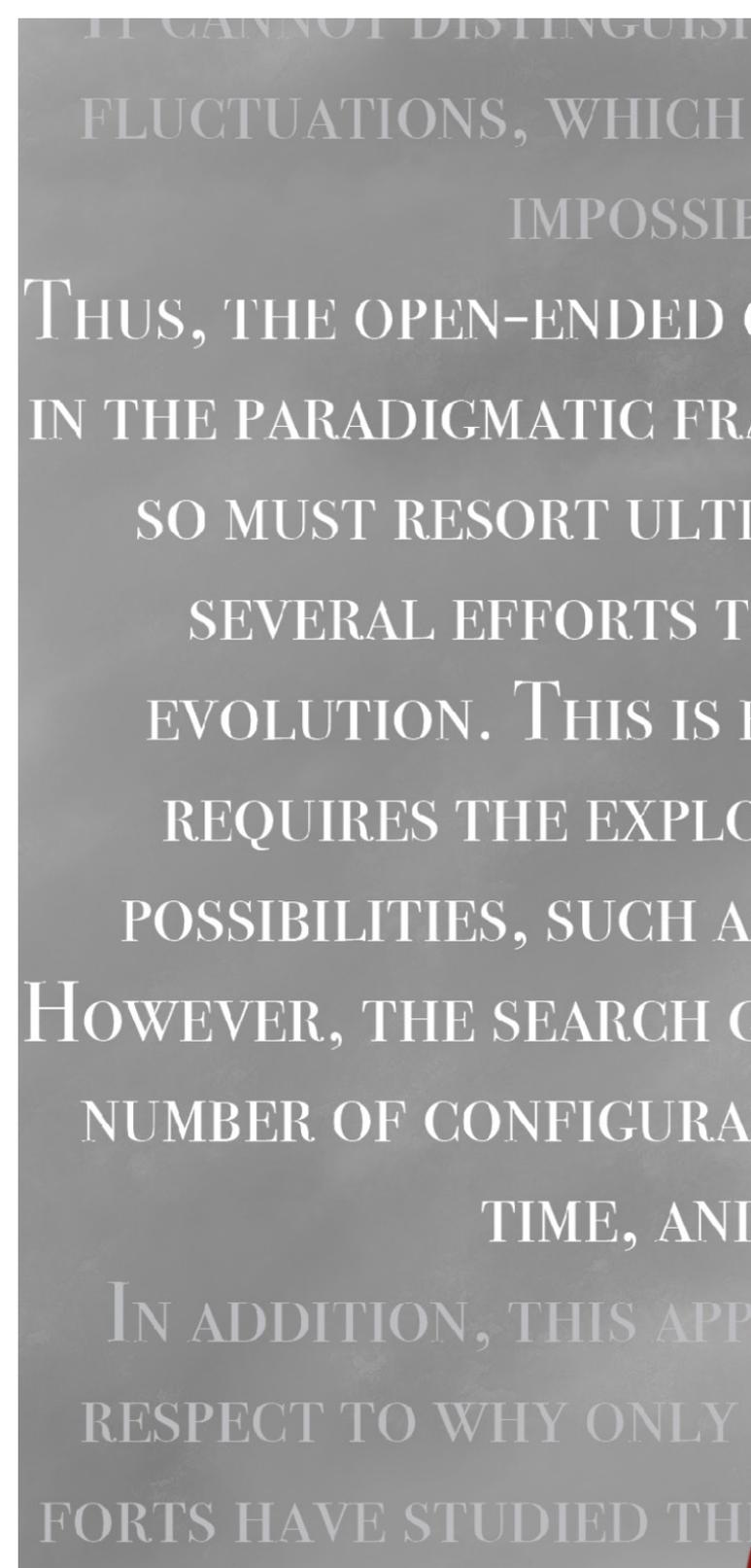
There was, at the very least, an almost fundamental mismatch between what the researchers intended to convey and what their audience understood.

where editors play a crucial role, acting as a substitute for the layman and bringing researchers’ ideas down to earth. All publications have their own style guides, part of which is always dedicated to making writing more accessible. And perhaps these rules do iron out some folds, making a piece easier to read! But, they don’t make up for explanations that are actually empathetic to the audience.

All style, no substance

The *Nature* News & Views section contains short-form summaries of research papers, with the express goal of being readable by anyone with a bachelor’s degree, even in an unrelated field. For example, the News

& Views piece ‘Immune treatment tackles chronic obstructive pulmonary disease’ meticulously condenses the original NEJM article into two pages and diligently follows the style guide, defining eosinophils and cytokines. But, for the non-biology students in the crowd, how does this sentence read? ‘Compared with drugs that block IL-5 or its receptor, the ability of dupilumab to block



An excerpt from the discussed assembly theory paper, Sharma *et al.* (2023), w

the IL-4 receptor alpha subunit (IL-4R α) means that it can suppress a larger number of inflammatory pathways because the IL-4 receptor is expressed on a wider range of immune and tissue cells than the IL-5 receptor is'.

Perhaps one can read this and understand what it is saying. But I'd argue that, without further context, that understanding is limited to the mere internal logic of that sentence and not much more. Dupilumab is a thing that blocks this other thing called IL-4 alpha, which stops inflammatory pathways because this does that and so on and so on. Even to me and my biology BSc, these words are mere nouns interacting with each other on the page, and nothing more. They gain meaning

and map onto reality only when I can understand the entire system; a luxury not afforded to me in the span of a two-page explanation.

Failures in understanding

Most popular-science explanations of Einstein's theory of general relativity will talk about the same few concepts: space-time, fabric, and bending light. Compare that with some made-up theory 'gloop relativity'. According to this, the universe is not fabric, but a viscous liquid. Stars and planets move around this congealed pool, light is like a bullet that pierces through the medium, bending the way goo does. Frankly, neither of these

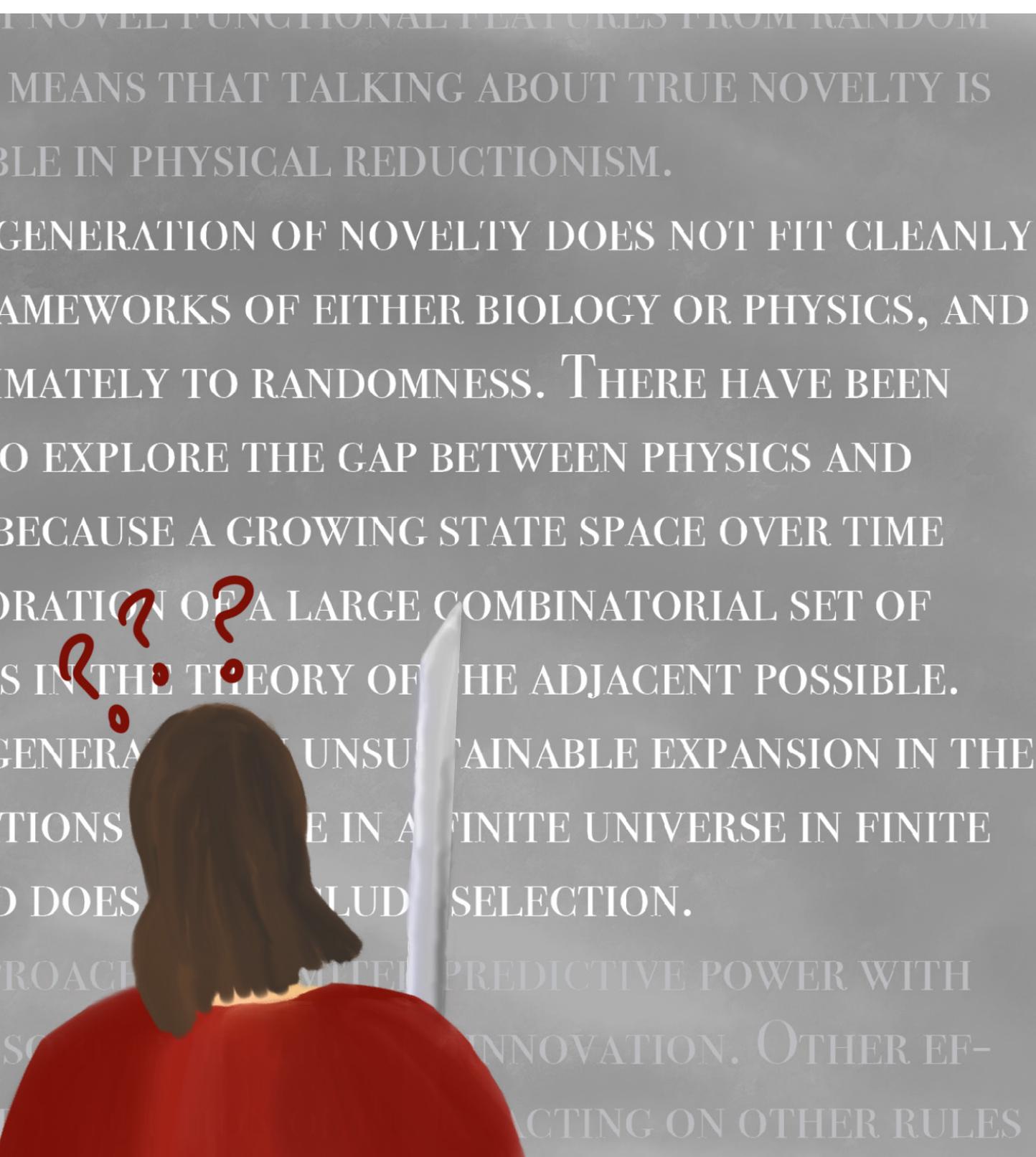
explanations, in their current state, hold any more water than each other; either could be equally as convincing if explained in an authoritative-enough tone. That's because, despite how true general relativity has turned out to be, nearly no pop-sci explanations actually explain it in terms of its proof, they only describe its surface-level claims.



These words are mere nouns interacting with each other on the page, and nothing more.

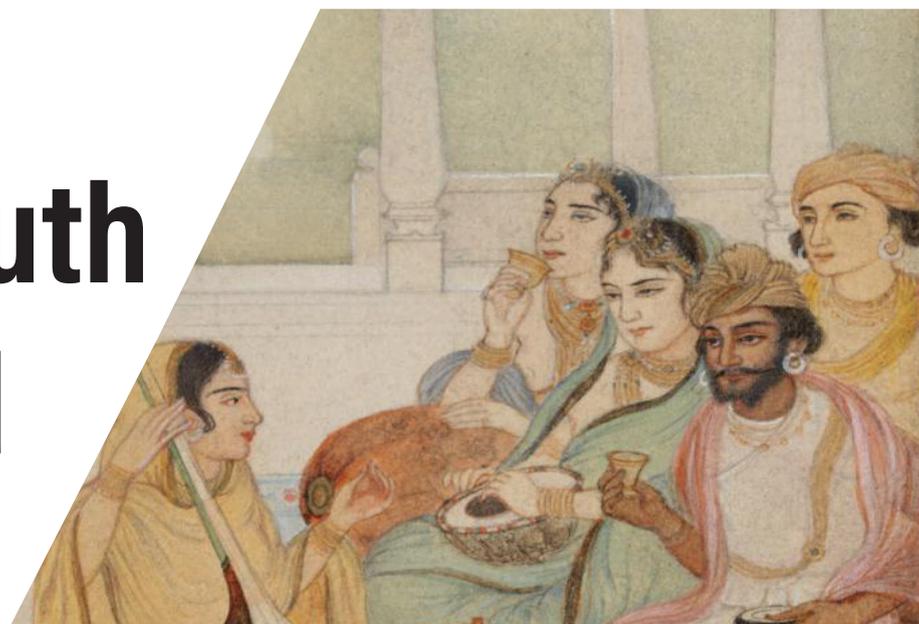
The same is the case for the News & Views on AT. It explains assembly theory in simple enough terms that someone could explain what AT is. But no one could come away from the article being able to argue for the validity of AT over a competing theory. The same is true with gloop versus general relativity. An effective explanation is one in which the recipient understands the underlying thought processes which led to the brilliant conclusion, not just the broad strokes. With this style of sci-comm, we're merely creating fun-fact generators — self-proclaimed science lovers whose brains are a pointillistic collage of disparate items, with no canvas to glue them together — when what we want is legitimate and transferable understanding.

Of course this is difficult. AT and general relativity probably are too complex to explain in only two pages. And perhaps, it is okay if a layman cannot comprehend the intricacies that justify AT. Nonetheless, it is preferable for the layman's understanding of science to evolve beyond a collection of statements built on a foundation of 'scientists proved x, ergo it's true'. An informed citizen isn't one who knows more, it is one who understands more.



ARTS

Beyond the Page: South Asian Miniatures and Britain, 1600 to Now



A music party scene by Abanindranath Tagore. Victoria and Albert Museum

A review of a new exhibit of South Asian art in Milton Keynes.

Arts Writer
SHREYA SHARMA

As I travelled from London to Milton Keynes to see the exhibition 'Beyond the Page: South Asian Miniatures and Britain, 1600 to Now', memories of my university days in New Delhi came rushing in – these memories always come to mind in gilded frames embellished with flowers and birds, inspired in large part by my study of Mughal Arts and Architecture.

The strongest memory is of my beloved professor, the late Dr Kavita Singh. She would zoom in deeply on digital copies of the Mughal miniatures to help us appreciate the tiniest of details such as the finesse of the Naqqashi carving on a tiny wine cup. However, 200 years of colonial rule meant that I would have to come to Britain to lay my eyes on the originals.

The underlying motif of the exhibition was the interweaving of the personal and the historical. What made it all the more powerful was the thematic, rather than chronological, curation of its collection. The artistic form of the South Asian miniature has never felt more animated and contemporary.

In the same room as the 16th century painting of a bloody battle scene from the *Akbarnama* (the official chronicle of Emperor Akbar), I also encountered the artist Hamra Abbas' re-imagination of the same painting in a post 9/11 con-

text. The digital animation, *Battle Scenes* (2006), featured random people from parks of London posing as warriors without armour and weapons, constructed in a playful GIF-like format. Abbas deflates the seriousness traditionally associated with war, while also celebrating the cosmopolitan nature of the city.

Similarly, artist Imran Qureshi's *The Artist's Younger Brother* (1995) imbued the grandiose format of the Mughal miniature with light-hearted informality. As Qureshi recalls to *The News* magazine: "While rehearsing a performance from the 1970s, I saw my younger brother standing at the back of the stage waiting for his turn. He looked so cute in a 1970s'



The artistic form of the South Asian miniature has never felt more animated and contemporary.

outfit that I thought why not replace the traditional kings and queens in miniature painting with common figures from our daily life." One such figure bore a resemblance to Amol Palekar, the post-boy of the 'middle-of-the-road' Bombay cinema of the 70s. This was a genre of films that engaged with the lives of common people living in urban cities in a realistic manner, often laced with humour and satire, in direct contrast to the larger-than-life, hyper-masculine main-

stream Bollywood movies of the time.

Realism of another kind characterised Ali Kazim's *Children of Faith* series (2022). Inspired by 18th century Indian portraits patronised by East India Company officials (placed adjacently), Kazim's work offered a scathing critique of the tragic crimes against children being committed in the name of religion.

A hall dedicated to love, loss, and longing led the viewer through painted erotic miniatures, exemplified by Madho's *The private pleasure of Raja Bhagwant Singh* (c. 1678). One also saw the theme of pursuit of kama (loosely translated as pleasure) go beyond sexual intercourse, touching upon themes like consumerism. *Because You're Worth It? II* (2022), a post-modern artwork by The Singh Twins, employed the grammar of the South Asian miniature to depict the violence embedded in our lust for more things. Borders overflowing with crumpled Kit-Kat wrappers, empty Coca Cola and beer bottles, and fish fighting for their lives, replace the flowered borders with exotic animal and bird species typical of Mughal art. Do we as a society deserve the pristine beauty embodied in the Mughal gilded borders? Can we reasonably use them as an escape the harsh, blood-soaked, plastic-choked reality of the 21st century?



Battle scene by Miskin & Asi. Victoria and Albert Museum

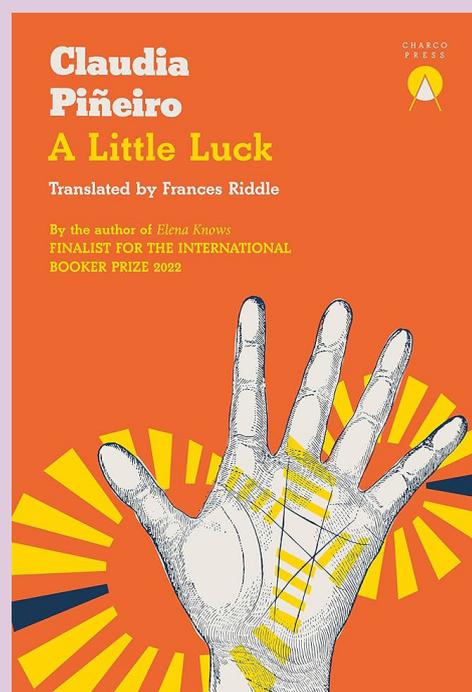
BOOKS

New writers, new November reads

Our new Books writers tell us what they love reading, and their recommendations for the coming month.

KATIA ZYKOVA

A Little Luck,
Claudio Piñeiro (2015)

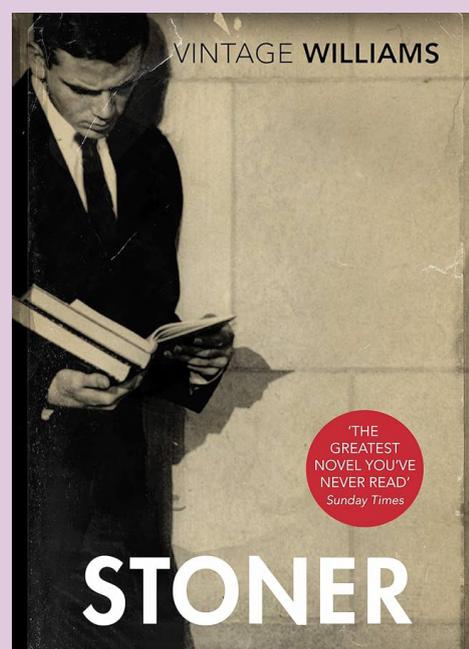


If Christopher Nolan were an author, this is the book he would write. The beauty of *A Little Luck* lies in Piñeiro's storytelling ability to unveil suspense. So, to give the briefest overview that I can permit, this is the story: a mother leaves her son – why?

Written like a logbook, the catharsis attached to every word Piñeiro writes bleeds into each page, giving the sense that tears must have stained them. This book is deep in the grey between black and white. It will leave you in despair; I love it!

DELIA GINCU

Stoner,
John Williams (1965)



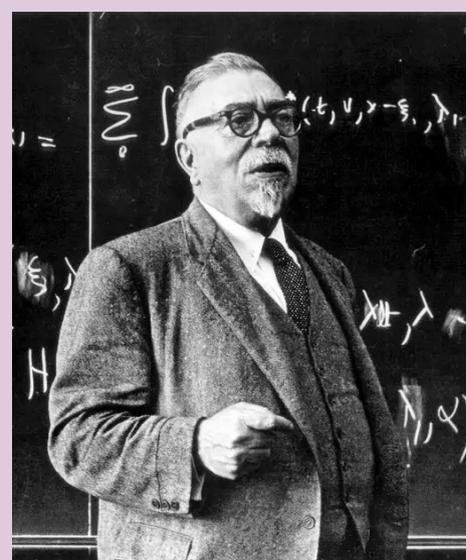
Set across early to mid-20th century Missouri, *Stoner* posthumously propelled the American novelist John Williams into bestselling ranks. The novel has a deceptively plain plot as it follows the life of the eponymous William Stoner, a son of two farmers. It follows him leaving behind a life distinctly set out for him to become a university teacher to his last days.

As Stoner braves an inexorable fate, the reader is placed to watch him stoically endure life's turns, from finding and losing love to facing his estranged daughter on his deathbed, catching a glimpse of what it ultimately means to be human.

Crafted with beautiful straightforward prose, I found *Stoner* to be an exceptionally moving and graceful depiction of what might be called the life of an ordinary man.

APOLLO YANG

Ex-prodigy: My Childhood and Youth,
Norbert Wiener (1953)



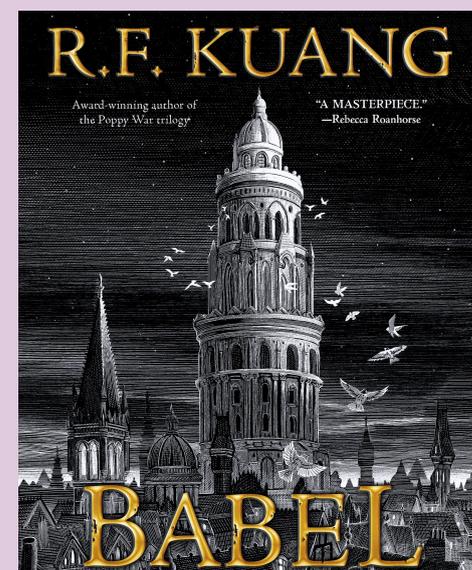
Norbert Wiener. *New York Times*

This autobiography documents the early intellectual development of American mathematician and computer scientist Norbert Wiener, from child prodigy to star of academia. I would say the most invaluable aspect of the book is its delicate and authentic depiction of the struggle between his inner feelings, a result of his internalisation of Jewish social norms, and intellectual maturity.

Wiener embodies an education dilemma not uncommon to many families today, keen to 'aid' their child's development; large, often fantasy-like expectations for academic success casting shadows over an inadequate focus on social development. The tragedy falls in the liminal space of parents being unaware of their shortcomings while insisting upon the legitimacy of their methods. This, for Wiener, concocts a heart-rending tale.

SELINA YEUNG

Babel,
R.F. Kuang (2022)



In the award-winning historical fantasy *Babel*, Kuang tackles the gritty themes of colonial history, social inequality, and abuses of power. Set in a fictional 19th century England, the novel follows Cantonese orphan Robin Swift as he is swept into a world of dark academia at Oxford. He and other foreign students in his cohort quickly realise their exceptional language abilities are being exploited to maintain the British economy's dominance over other countries, leaving them with a decision that may cost them their lives: join the student rebellion, or bend and conform. *Babel* is an introspective look at Western imperialism, a call for subversion of the status quo, and a masterful exploration of languages and linguistics all at once. Through riveting prose, Kuang asks us to contend with the horrors of imperialism, and encourages her characters and readers alike to examine their complicity in maintaining historically oppressive systems.

The fabulous art of trying

Helen Oyeyemi delivers the *New Statesman*/Goldsmiths Prize Lecture, in this year's London Literature Festival.

Books Editor

FIYINFOLUWA T. OLADIPO

Helen Oyeyemi has a subtle manner of speaking. It generates an air of certain mystery surrounding what she says with, quite metaphorically, a white fog. More stately, it points to an uncommon knowledge about words, and language overall, that she would probably refute me as saying she has.

This builds an image of Oyeyemi as possessing a series of esoteric qualities, idiosyncrasies, that have come to be adored over her 18-year career in fiction, and built in the fabulism genre a street that bears her. It proves storytelling is not merely a product, but a part of her being. It presents her as an appropriate candidate to deliver the *New Statesman*/Goldsmiths Prize lecture at the London Literature Festival this year.

The function of this Prize lecture is to reminiscence on the novel as a form of writing, to contemplate on its existence, and macroscopic purpose. The vultures are said to be on their way (either the novel has yet to fulfil its decade-spanning death or the vultures are, as it just happens, slow), and the novel is in need of the people willing to offer it a diagnosis, or at worse, prognosis. Nevertheless, the *New Statesman*/Goldsmiths Prize Lecture provides an opportunity to convene masters of the craft to Southbank Centre every year, and deliver, to an observant audience, their thoughts.

For Oyeyemi, the title of these reflection is 'Trying'. "What I'm going to do is make a series of comments and see if you agree", she states at the beginning. Her flair for the unabashedly self-aware calls for more applause, than just appreciation, if anything.

Helen Oyeyemi, born in Nigeria and raised in London, attending the Cardinal Vaughn Memorial School (in the nearby Holland Park) received an advance from Blooms-

bury for her first novel, *The Icarus Girl*, written while she was studying for her A-Levels. These just-stated five facts about her life were taken from Wikipedia, a website she says (in an answer to a member of the audience) she had once tried to delete entries of herself in its early days, upon learning of their existence. "I think there is a certain freedom that you can feel just from being an unknown element," she reflects, adding "but also [...] I guess it's not possible."

She conveys a useful ambiguity. Like there is some unknown variable that she would rather keep constant, a characteristic she would think should be shared by everyone. In a contemporary, digital sense of the word, she carries an 'aesthetic'.

The Icarus Girl, about an eight-year-old girl confronting a haunting doppelganger, was a freshman omen of her fabulousness. ('Fabulous', originating from the Latin *fabula*, meaning fable.) A review of her most recent work, *Peaces*, published in *The Guardian* begins "Helen Oyeyemi is a bamboozler, a discombobulator, a peddler of perplexity".

Other novels contain murderous animal-named writers falling in love with their muses, and the greed and corruption of gingerbread politics (to say it vaguely). The book I currently possess, *Boy, Snow, Bird*, reworks Snow White within 1950s Massachusetts. To be direct, she

tells stories. She posits, early in the lecture, a question to the hard realists among us, or "fictioneers whose metaphysical pragmatism prevents

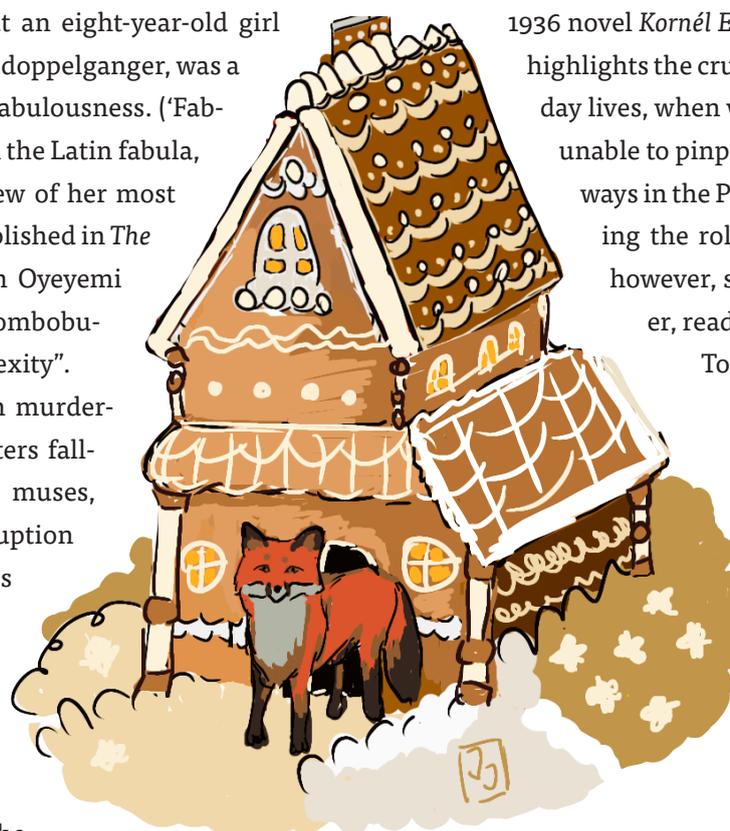
them from considering them escapists first": what distinction exists between reality, and the impossibility of escape? And if one is to be found, she asks, why then are we, as a collective, interested the novel form, sitting there before ink-filled pieces of paper for hours on end?

It seems fitting the fable has endured as an art form to portray the plain truth to us. For the outlandish to be made to construe the real. In this edition of the Prize lecture, Helen Oyeyemi makes convincing arguments for the imaginative and for imagination. She calls upon upon Franz Kafka and César Aira, helping her craft songs of praise out of a supposed eulogy. The title, 'Trying', comes out of a bookmark with the words 'You're still trying' written on it. It is placed in her copy of 1936 novel *Kornél Esti* by Dezső Kosztolányi. She highlights the crux of storytelling in our everyday lives, when we ourselves are occasionally unable to pinpoint its significance. In many ways in the Prize lecture, she is commending the role of the writer. In far more, however, she commends you, the reader, reading this right now.

To its end.



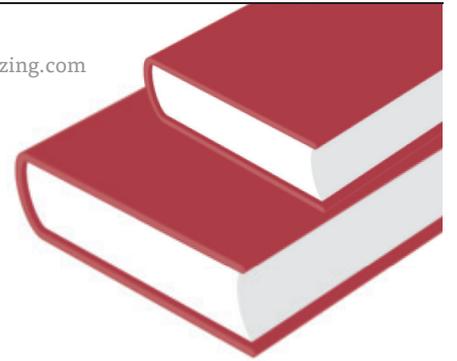
Helen Oyeyemi speaking at the *New Statesman*/Goldsmiths prize lecture. Southbank Centre



Fox outside a gingerbread house. Ioana Mihailescu for Felix

FOOD&TRAVEL

Adazing.com



Courting Cecil in Cecil Court

Cecil Court has treasurers of first edition books and classic old maps.

Travel Editor

CHARLOTTE PROBSTEL

Heading out of Charing Cross Station, past Trafalgar Square, and into Cecil Court, we discovered a quaint little street between the bustle that is Lon-

don's nightlife. The street was roughly 50 meters long and five meters wide, we were bordered by little shops filled with antiques, maps, and precious old books. For a moment, we had discovered the 1930s.

Despite it being 6:30pm on a Saturday, all the shops were closed, much to our dismay. However, there was one tiny store, with a sign reading 'OPEN' that gave us a glimpse of hope. We pushed open the locked door and the owner – a young man – came to our aid. "Are you open?" I asked. "No not really, but I still have to do some things so you two are more than welcome to take a look." We entered with gratified smiles.

The petite store was filled with books dating back to the 1920s, at least five doz-

en copies of the earlier editions of Alice in Wonderland, and poetry books that would be cancelled in our generation. Each shelf had the same sign: 'Please handle with two hands', to avoid breaking the books. My friend relived some of his childhood literature, while I smiled at seeing an old copy of *Brothers' Grimm Stories* – a classic from my home country of Germany. A thin book called *Ruthless Rhymes* was filled with six-verse poems of dark humor. Accidents, decapitations, stabbings – all portrayed in a humorous fashion.

The first page of all the books we opened included notes from the original owner – a birthday gift from an aunt to her niece in 1954, for example. Prices were noted there as well – ranging from

a hefty £30 to £80 for rare first editions.

Once the owner closed the store, we moved on to the only other store with its lights on: a map store. It too was closed, so we instead perused the maps through the windows.

They were all of the London Underground in various time periods, and we learnt a few interesting facts: Gloucester Road, which I used to pronounce as "Glochess-ester" used to be spelt 'Gloster'. There were many more stations along the Piccadilly Line than there are now, such as 'Brompton Road' between South Kensington and Knightsbridge. Nonetheless, it was wonderful to see that the lines had not changed colors or names over the past century, showcasing the wonderful consistency in our transport system.

If spices are lions, then London is a safari

rawpixel.com



A central London safari is unheard of – except in the abstract sense.

Food Editor

CHARLOTTE PROBSTEL

Last weekend my friend told me about her friend-date with her roommate in Chelsea, which involved taking a safari around London's culinary jungle, eating one course at each restaurant. Coincidentally, on that same weekend, another friend and I had dinner at Chipotle and desserts at Covent Garden's Burmese restaurant Lahpet. The concept – which sounds exhausting and almost as dubious as skip-lagging – is adventur-

ous in its explorative nature. If well-planned, a restaurant safari allows you to try a bit of everything in a very small-time frame.

Depending on budget and time frame, one can organise pre-dinner drinks at an outside bar while the sun still shines, appetizers at a tapas place, main dishes at any restaurant you fancy, dessert from a bakery, and post-dinner drinks at a rooftop bar. With a slightly smaller budget, you can eat larger meals at cheaper places to get your money's worth and enjoy a long talk with an overpriced cocktail in a sultry, exotically-decorated bar overlooking the Thames.

Similar concepts already exist in our society. All Imperial students who survived freshers' week know of pub crawls – but instead of beer, you enjoy different dishes. Both the cultures of pre-drinking before heading out for a night of clubbing and of indulging in pre-dinner cocktails in a lavish hotel bar opposite the restaurant

demonstrate this desire for options. Ice cream after dinner at a nearby gelateria and Japanese soufflé pancakes at Hefaire are other post-dinner rituals I have tried in London. The idea of splitting meals into smaller meals at different places due to incompatibilities may also resonate with athletes and vegan, coeliac, and halal eaters alike.

Because of all these intricacies, this does not necessarily sound fun for every dinner. Considering the strictness of London's reservation-only customs and the lack of free space in most restaurants at weekends, meticulous planning is required. You could also just wander around and take your chances, but in either case, it is a great new way to explore more of the different cuisines that London so famously has on offer.

Until next time,
Charlotte.

The Decisive Moment



An Athlete's Reaction. Charlotte Probstel

How street photography came to be.

Head Photographer
ROLANDO CHARLES

I wanted to inaugurate this new section of *Felix* with one of the most complex and multifaceted themes I could think of. I'll admit that my choice, 'The Decisive Moment', didn't require much effort, as it's probably the most famous mantra in modern photography. Regardless of originality, it is a simple idea to keep in mind when you are taking your pictures – both digital and film.

Henri Cartier-Bresson's book of the same name is perhaps the most acclaimed photobook of all time. Marking a milestone in street photography, many still follow its axioms when embarking on journeys in photography. It appeals to our universal desire as photographers to capture a single moment in time that represents an experience, a situation, a feeling. This is no better represented than in Cartier-Bresson's own *Behind the Gare Saint-Lazare* (1932).

In his foreword, Cartier-Bresson writes 'To me, photography is the simultaneous recognition, in a fraction of a second, of the significance of an event as well as of a precise organization of forms which give that event its proper expression'. However, fixing that dynamic aspect of everyday life into a still photograph is no easy task.

And what better aspect of everyday life than competition? Where every moment counts in the fight to win.

Charlotte captured a brief pause where only the immediate counts, as the choice of where to throw the ball has already been made. And the inevitable fact that it will land.

It is this aspect of timelessness that makes a moment decisive. The moment itself has already passed, and what stays behind is but an image to remember it by. *An Athlete's Reaction* is the making of an immortal memory, and for many of us, that's exactly what photography is for. I'm sure that Cartier-Bresson would have liked this photo that encompasses his famed mantra.

Scan the QR code
to submit for the
next theme 'Shout':



CATNIP

Key to South Kensington Tube Station remains lost

Lock & Key Correspondent
IRVING WASHINGTON

The key that opens the gate to the South Kensington station subway is still missing, a TfL spokesperson said this morning. According to TfL, the key was misplaced by an employee two weeks ago during the 'daily scrum call'. Station staff have been unable to get back into the subway since, causing mass confusion amongst Natural History Museum fans.

"Derek is always fucking doing this," said a fellow TfL employee who wished to remain anonymous. "Last year he took the station teddy bear with him on holiday to Sharm El-Sheikh to take pictures for show-and-tell, and we're still in an ongoing custody battle with the Egyptian authorities after he left it in the swimming pool bar. Apparently 'finders keepers' has been codified into Egyptian law since the reign of Ramses II".

Experimental physicists at *Felix* have calculated that walking from the station to campus now takes an estimated 36.67

seconds longer than it did previously, due to the disruption. Local students and museum-goers aren't the only people affected by the key loss. Speaking to *Felix* last Friday, the president of the Union of Annoyingly Loud Guitar Guys (UALGG) Beff Jeck said, "This is really the nail in the coffin for Sadiq Khan. Our union members have been forced to busk outside, where the lack of enclosing walls makes their playing actually bearable for the human ear. The number of people paying us to shut up has dwindled to almost zero." Jeck has

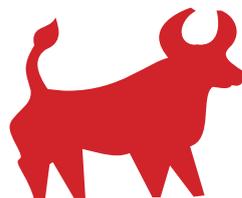
since tweeted that the UALGG would be seeking compensation from TfL and the Mayor of London for the disruption.

The loss of the key is the latest in a series of disruptions to TfL services since the announcement of funding issues relating to the Mayor's expansion of ULEZ. Mr Khan, however, has told journalists that he has listened to criticism and is expected to announce HE/SHE/ITLEZ, THEYLEZ, WELEZ and U(PLURAL)LEZ in the run-up to next year's election.



ARIES

This week the landlord tells you it isn't mould.



TAURUS

This week your boyfriend splitwises the flowers he bought you.



GEMINI

This week you call the flat's decision to switch to branded soap "an orgy of narcissism".



CANCER

This week Sadiq Khan announces that bed bugs are not ULEZ compliant.



LEO

This week on Remembrance Day you remember that time you went for the hug.



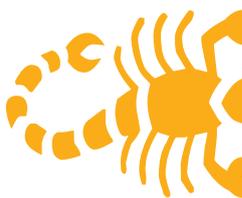
VIRGO

This week you hook up with the wrong type of cougar.



LIBRA

This week two boys in a trenchcoat are revealed to be four stoats in smaller trenchcoats.



SCORPIO

This week you swap out the garlic in a recipe for scrambled egg.



SAGITTARIUS

This week you are slightly too fascist for your Hinge date.



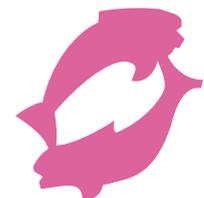
CAPRICORN

This week you go back to White History Month.



AQUARIUS

This week you get invited to a crypto conference. Retro.



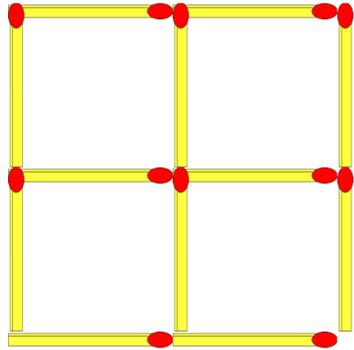
PISCES

This week the iconic cartoon action quartet will be renamed for legal reasons, the Underage Mutant Ninja Turtles.

PUZZLES

Last week's answers

Hello Puzzlers! Another matchstick puzzle today - can you move two matchsticks to turn four squares into seven (hint - they might not be all the same size)

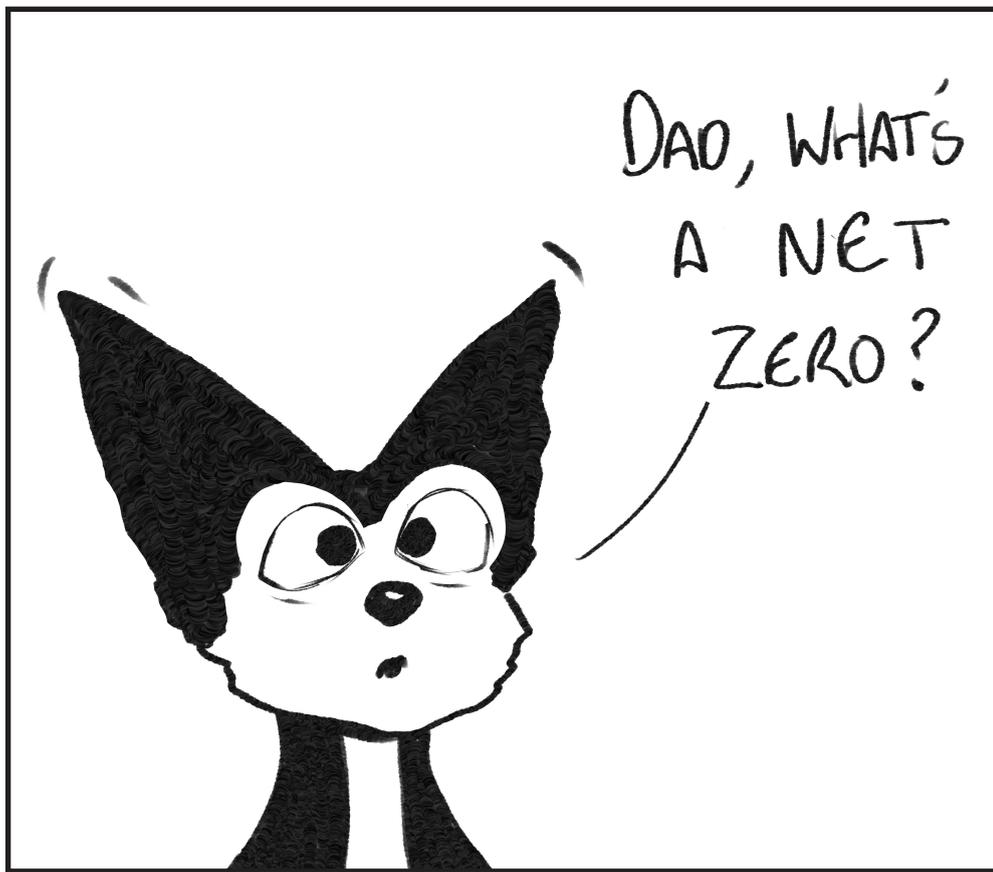


Four Matchstick squares

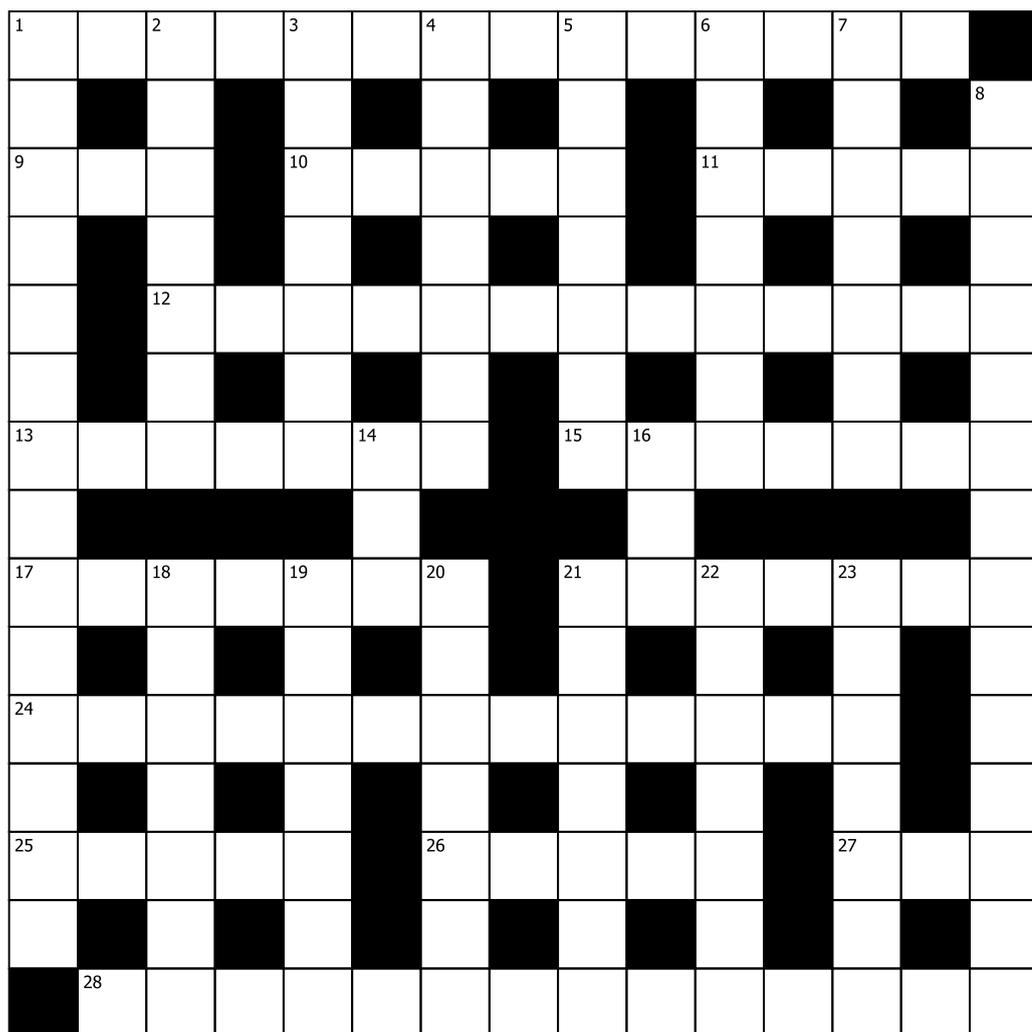
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FELIX #011



CROSSWORD



Across

- 1 Largest carnivorous marsupial, best known as a Looney Tunes character (9, 5)
- 9 Annoy (3)
- 10 Upset (3-2)
- 11 Decorate (5)
- 12 Another term for punctuation used in speech (8, 5)
- 13 Amount paid all at once (4, 3)
- 15 Breastbone (7)
- 17 Remaining in one's bank account (7)
- 21 placed side by side (7)
- 24 Spherical bacteria, often cause of skin infections (13)
- 25 Saying or phrase (5)
- 26 Animals known for regenerating their tails (5)
- 27 Fails to work - unsatisfactory (3)
- 28 1964 musical comedy film starring the Beatles (1, 4, 4, 5)

Down

- 1 Board game centred around collecting cylindrical sectors (7, 7)
- 2 5th largest worldwide religion, originating from the Indian subcontinent (7)
- 3 Arched openings (7)
- 4 Gap (7)
- 5 Cutting pliers (7)
- 6 A rough or drawing used for an oil painting (7)
- 7 2008 film starring Robert Downey Jr. (4, 3)
- 8 Coloquial title for popular gambling machine (3-5, 6)
- 14 Covered vase (3)
- 16 Hit lightly (3)
- 18 Belonging to the 6th most populous country in Europe (7)
- 19 Digger up of bodies (7)
- 20 Owing claws (7)
- 21 Curved structure holding up openings (7)
- 22 Bullies (5, 2)
- 23 Get-together (7)

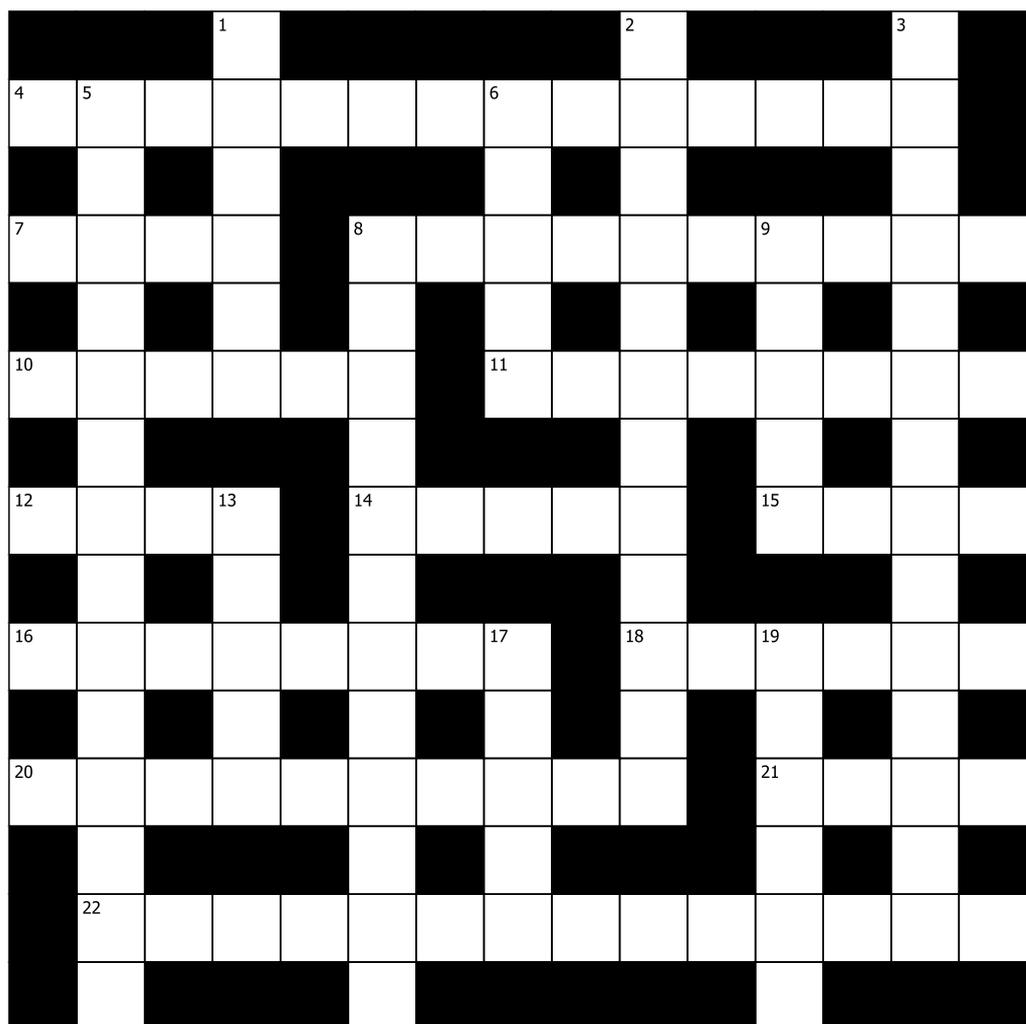
SUDOKU - EASY

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	3			5				
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	9						7	5
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CRYPTIC CROSSWORD



Across

- 4 Getaway location, home of severe reactions (1, 5, 2, 3, 3)
- 7 Edible poster? Left with five-hundred (4)
- 8 Filling, but merely a product of itself, ground up (6, 4)
- 10 Rattling scheme (6)
- 11 Silicon valley called, pulled funding (8)
- 12 A quite underrated acrylic (4)
- 14 Fair luck trades one for nothing and mild warmth (5)
- 15 Source of continental blockage (4)
- 16 Lamb with fancy shoe off'er rocker (4, 4)
- 18 Tat around part of toy car (6)
- 20 I change the signal, it's time for the news - distraught author loses husband (10)
- 21 Bird left a bit (4)
- 22 Atop the end struts, might give out (2, 4, 4)

Down

- 1 Odd Chained aloe brightens up the place (6)
- 2 Full-time cracker (12)
- 3 Battle arena promises a big event (10, 4)
- 5 Music quiz leads to wedding planning (3, 3, 8)
- 6 The convent's contents hold nothing but names (5)
- 8 Mouth books really say a lot (5, 7)
- 9 A millionth above a second - very small (5)
- 13 He makes a noble knot (5)
- 17 Large metal death-bringer (5)
- 19 Hey - slides down the snow, and up? Makes an odd noise (6)

SUDOKU - MODERATE

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		6	7			1		5
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4								
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