QUEEN'S UNIVERSITY BELFAST / LANYON MAGAZINE

ISSUE 01

ISSUE
01
WINTER
2022
QUEEN'S UNIVERSITY BELFAST

Lanyon

At the speed of light: How Queen's won the race to make gravitational history.

Stephen Smartt, Professor of Astrophysics

QUEEN'S UNIVERSITY BELFAST

Lanyon

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EDITOR'S LETTER

Nathalie Trott is the Director of Development and Alumni Relations.

Illustration Oriana Fenwick

Welcome to the Winter edition of your new alumni magazine: *Lanyon* – the fresh, new look for what you have previously known as *The Graduate*.

What's inside? Well, it's the highlight of the Queen's social calendar – but what does it really take to put on the SWOT annual fashion show? On page 18, we talk hairspray, dance moves and incredible student mobilisation.

I don't regret anything… apart from, of course, all the things I do. But while regret is an almost universal human emotion, where does it come from? *Lanyon* investigates on page 26.

Elsewhere, on page 12 we speak to Stephen Smartt – star gazer and multi award-winning astrophysicist, and on page 32 we find out what the Neolithic period can tell us about civilisation – and climate change.

Finally, did you know that alongside the print edition, Queen's eGrad is published once a month online? Sign up at the link below.

On these topics – and on all things Queen's related – we look forward to your contribution to the debate, online, by post, via email and on social.

Sign up to eGrad – and get Lanyon all year round

The Queen's eGrad is your monthly update on some of the biggest issues being addressed by Queen's people now. If you'd like it delivered direct to your inbox, please go to daro.qub.ac.uk/signup or scan the QR code (right).

CONNECT

WRITE TO US

Keep up with the latest news and views – and share yours.

Illustration Mari Kanstad Johnsen

CONVOCATION

This time last year, I was able to attend my first Convocation – from my desk in Cambridge – and this November, I'll be doing it again! It was amazing to see alumni from all over the world and exciting to hear from our Vice-Chancellor and to talk about the challenges and opportunities for the University. I'm keen to spread the word, so if you have time to attend in person or online, take a few hours out of your day to join your fellow Queen's grads as we play our part in the University's constitution!

Yi Kang Choo
(Law, 2021)

BRILLIANT BRIEFING!

I know it's Wednesday as I write this but sometimes it takes a while to plough through the 'non-urgent' emails!!

The conversation in the Friday Briefing about death and dying couldn't be more apposite, with the brand new Advance Care Plan for adults about to be launched. The cost implications of food allergies were absolutely spot-on – though as a coeliac for 30 years I'd like to see more work done on differential food costs for allergic or food-intolerant people. And "ruined my idea" was so close to the bone – the experience of every student ever who wants to change the world for the better!

Thanks for such a great Friday Briefing – even if it turned out to be a midweek briefing for me!

Monica Burns
(Politics and Social Anthropology, 1979)

DOWN TO A TEE

I was thrilled that Queen's University Association London was able to get back on the fairways for our annual golf event this year, played again at the superb Beaconsfield Golf Club. We already have a date for next year's event – Wednesday 31 May 2023 – and it would be great to see some fresh faces. The event is open to all alumni in or near London.

Jonny Bramley
(Computer Science, 1987)

SCHOLARSHIPS

I'd like to give a huge thank you to every one of my fellow graduates who contributed to the Queen's Graduates' Association Scholarships. The scholarships are funded entirely by the QGA and while the application process was pretty nerve-wracking, winning has been such an honour. The support of the QGA has supported me in my postgraduate studies in Midwifery – and will in time, I hope, benefit the many women, babies and families that I care for in my post as a midwife.

Stephanie Balmer (née Parkes)
(Advanced Professional Practice, 2022)

STRATEGY 2030

It was great to read the Graduate Guide to Strategy 2030. The content was interesting and the production values of the magazine excellent – it certainly caught our attention when it arrived.

Caroline Lambe
(MSc Animal Behaviour and Welfare, 2012)

MENTORING

I wanted to write to thank you for asking alumni to get involved in the mentor programme. People think mentoring is me giving back, and it is, but to be honest, I've also got so much out of the experience. I'm looking forward to doing it all again next year. I love to support and advise the mentees and really find it a rewarding experience.

Aisling Laverty
(Criminology, 2011)

NEW VIEWS

Just a quick note to say that the last edition of eGrad was great – and dare I say it, important. Brilliant to see the research on lead in water pipes. And I'll never look at an ancient temple in the same way again! Thank you.

John O'Donoghue
(Economics, 1981)

If you don't receive eGrad, our insider track update exclusively for alumni, you can sign up at daro.qub.ac.uk/signup. To read previous editions, visit daro.qub.ac.uk/publications

Stay in touch!

Keep up with the latest news from the University as it happens, and share your thoughts and news on our Queen's alumni Facebook page and LinkedIn.

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QUAD

News and views from campus and across the Queen's global community.

Below:
One Elmwood has 10,000m² of space for student services and activities..

NEW BEGINNINGS

One Elmwood opens

Ten thousand square metres housing 200 clubs and societies, two new venues, study and social spaces and an outdoor terrace. It can only be One Elmwood, the purpose-built new Student Centre and Students' Union that Queen's deserves.

Sitting right at the heart of the campus, One Elmwood will house both the Students' Union and University Services previously in the Student Guidance Centre, so students will have better access to a range of services and opportunities, all in one building.

With the help of the Student Experience Team and our dedicated employability team, for example, students can access advice on careers. They can also get: a comprehensive range of free, flexible and responsive support services from our Student Wellbeing Team; support from the Learning Development Service; and financial support, access to disability services, and visa and immigration help from our International Student Support Team. And the Students' Union will help students access vital support, along with giving them the perfect place to socialise and take part in activities.

Whether it's hanging out with friends over a coffee, studying in a tech-friendly space or going to a gig in the Mandela Hall, students will find everything they need at One Elmwood. We're looking forward to seeing you there.

> "One Elmwood is the Student Centre and Students' Union Queen's deserves

THE NUMBERS

1st

Our REF ranking for Agriculture, Food and Veterinary Sciences

99%

of our research environment was assessed as world-leading or internationally excellent

4th

Our rank for Health and Biomedical Sciences

CONNECT

go.qub.ac.uk/OurREF

IN BRIEF

Global innovation
The Global Innovation Institute, a new £58m institute dedicated to digital innovation, is on course to open in 2025 in the Titanic Quarter.

100th anniversary
Stranmillis College has celebrated 100 years of building better futures for all its students.

Scholarships
The Bright Future Collective is a new initiative that brings together local companies that want to change lives and contribute to real change across NI with students and young people from disadvantaged backgrounds.

TRAINING

InterSim Centre

The KN Cheung SK Chin InterSim Centre provides the very latest in simulation training for Queen's medical, pharmacy, dentistry, and nursing and midwifery students.

The Centre uses the latest technical equipment, including a pool of simulated patients, to help equip students with behavioural and communication skills.

SEAMUS HEANEY CENTRE

Creative Fellows

The Seamus Heaney Centre's Fellows, writers Wendy Erskine and Denise Riley and singer-songwriter Tim Wheeler, have been exploring creativity in all its forms with Queen's students and audiences.

Selected each year from the worlds of poetry, fiction, music, film and television, Visiting Fellows contribute to life at the Centre through workshops and masterclasses, public events and one-to-one tutorials with students, building on a strong literary heritage at Queen's that stretches back to the Belfast Group of the 1960s.

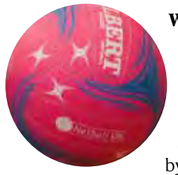
Clockwise from left:
Tim Wheeler, Denise Riley and Wendy Erskine.

SOCIETY

GOAL ATTACK!

We'll see you on court: meet the Queen's Netball Club.

Words Jo Caird / **Photography** Johnny Mooney



While some Queen's clubs and societies like to keep themselves to themselves, the Netball Club is not afraid to take their obvious camaraderie well beyond the campus. Take 'Kit Night Out' for example, the annual event started by the netballers but now taken up by other clubs, where members head out for the evening in their full team colours.

"The first time we did it we ended up in a nightclub in town, which was a bit weird," recalls recent committee secretary Emer Gribbon (BA Economics and French; MSc Data Analytics, 2022). "But it really built the team spirit, even if we got asked 'Did you win?' about 100 times!"

The social secretary who dreamt up Kit Night Out was also responsible for the weekly themed mixed sports club socials that now take place each Wednesday throughout the year at Queen's – "a great way of getting to know people across different clubs," says Gribbon.

Until recently, the main focus for netball has tended to be on the competition side of things: intervarsity matches and the Student Sport Ireland Netball League. But in the past couple of years there's been a move to open up the club. 'Social players' can now join a development squad, giving them the chance to play competitively and develop their skills.

Having been part of netball at Queen's since her second year, Gribbon has plenty of highlights to look back on, but her favourite, she says, was winning the Intervarsity Shield in last year's competition as part of the second squad. Part of what made it so special was her shared history at the club with four of her teammates on that squad: "We started on the same team and we're still on the same team. To do it with those girls was just so rewarding," she says.

What's so wonderful about this community, says Gribbon, is that even when matches don't go their way, everyone still has a great time. "On match days, we all go out for a night out – win, lose or draw. Obviously we always play to win but, regardless, we'll always enjoy each other's company and have fun." ■

GET INVOLVED To find out how you can support current students' activities, visit go.qub.ac.uk/annualfundnews

Annual Irish Intervarsities tournament 2022
Top: Alex Watson (Vice Captain of the 2s) and Kerri Heatley (3s).
Above: Cat Houston and Tamara Buamah (both 1s) against Ulster University Cup Squad.

Carl Frampton,
Former world champion boxer turned pundit for BT Sport, Five Live and the BBC.
Top traybake: Caramel square.

Aoife Major,
Second year, Psychology
Top traybake: Fifteens.

Carl and Aoife shared tea and traybakes at Deane's at Queen's.

TRAYBAKES

LET'S GO EAT CAKE

Carl Frampton, two-weight former world champion boxer, and second year Aoife Major find they have more in common than just a sweet tooth.

Words Lucy Jolin
Photography Angela Moore

The worlds of boxing and psychology might not seem to have much in common. But as two-weight former world champion boxer Carl Frampton and second year psychology student Aoife Major sit down to chat over tea and traybakes at Deane's at Queen's, Frampton is eager to know Major's thoughts on sports psychology. "It's fascinating, and that's why I love the subject – there are so many fields and so much to explore," says Major.

Frampton remembers when he first started as a boxer, sports psychology wasn't taken too seriously. "But I sought out an expert when I was having a turbulent time in the last three or four years of my career, and he put me back on track. It used to be, if you said you were speaking to a sports psychologist, you'd be asked what was wrong with you. It was seen as a weakness. But now, all the top athletes in the world will be speaking to one."

They move on to discussing the importance of good mental health, in the ring and in the classroom: Frampton supported the recent Charge Up Get Connected campaign, aimed at improving men's mental health at Queen's. "I was pleased to find there's a lot of awareness and support for mental health here," says Major.

And the two have a lot more in common, it transpires. Major and Frampton are from North Belfast: Major moved there when she was 10 and went to Blessed Trinity College, where she ended up as head girl, while Frampton hails from Tiger's Bay. They both decided on a path early in life. Frampton dedicated himself to boxing at seven, which was, he says, "probably too young. I was always in and out of the New Lodge and the Falls Road, training and fighting. But I never experienced the kind of animosity that other kids had, because of sport. I was single-minded and driven and I knew what I wanted to do."

Major took the academic route, inspired by a relative who went to Queen's. "That was the first time I thought about Queen's as being for someone like me," she says. "Then I got on the Pathway Opportunity Programme (POP), and I never wanted to go anywhere else." POP gives students, no matter what their background, the opportunity to come and study at Queen's. "There are so many benefits – you get a bursary and grade reductions," says Major. "And it really helped when I applied. There's a lot more to applying to Queen's than just your marks."

Frampton has been involved with POP since he received an honorary degree from Queen's in 2019, awarded for distinction in sport. "It was a proud moment for me. I felt a wee bit out of place, though, sharing my day with people who had worked really hard at school! Schemes like POP are so important. I think people from Belfast sometimes see Queen's as out of their league – it's great the University is trying to change that."

> **"I felt a wee bit out of place, sharing my day with people who had worked really hard at school!**

So, what's the secret of these two self-starters who have worked hard to achieve their goals? Frampton remembers almost giving up in his late teens when he was beaten in the Irish Championships by a boxer whom he knew he should have beaten. "I was 18 or 19 and wasn't putting enough effort in." He thought about giving up but his then girlfriend (now wife), Christine, and his family persuaded him to stick at it. He went to work, drew the same boxer the next year and beat him convincingly.

"It's all about resilience, isn't it?" says Major. "I'm determined to study for a Master's once I finish my degree, and then enter clinical psychology and research. For me, it's about putting myself out there. I've always tried to be confident and just push myself forward." ■

GET INVOLVED For more, visit qub.ac.uk/alumni/PathwayOpportunityProgramme

UNIVERSITY MATTERS

Professor Ian Greer, Queen's President and Vice-Chancellor.

Illustration Oriana Fenwick

Funding for Northern Ireland universities has been cut by almost half in just 10 years. The consequences will be long-lasting.

Since 2011, funding for tertiary education in Northern Ireland has been reduced by 40 per cent, making us the only region in the UK to have reduced investment in further and higher education. Currently, student fees in Northern Ireland are £4,540 a year, with the NI Executive providing approximately £4,000 per student annually. As graduates, you will be aware of the benefits of a university education, not just in terms of fulfilling your potential or enhancing your employability, but also in meeting new friends and engaging in a wide range of new academic and extra-curricular activities.

Every year, approximately 5,000 talented young people leave Northern Ireland for study outside NI. Fewer than a third return. This educational migration impacts negatively on our local economy, which urgently needs more highly skilled people as it transitions into a knowledge-based economy. With only a modest inflow of students from other parts of the UK, the net loss is significantly more than 25 per cent of our young people. This is an unsustainable position for the NI economy.

Pressures on the Northern Ireland budget lead to a potential reduction in funding for tertiary education. Indeed, the initial planned NI Executive budget for the next three years would result in Queen's facing a further budget cut of anything between five and 15 per cent. The only way we can respond to such financial pressure and protect the sustainability of the University is to reduce the number of places for NI students at Queen's – at a rate of approximately 500 for every five per cent reduction in funding. This would have catastrophic consequences for our economy and our young people, particularly those students from widening participation backgrounds, whom we have worked hard to attract and retain (indeed we are ranked first in the Russell Group in this category).

These potential funding reductions come at a time when a demographic change in our population will see the number of 18-year-olds increase by 19 per cent by the year 2030. Our universities in NI will need an extra 5,000 places just to maintain the current levels of provision, which we know are not meeting the demand of our local and international businesses. For example, we are currently advancing new City-Region growth deals across NI that will create many thousands of new, high-value jobs in sectors that will transform the local economy and create growth. A lack of skilled graduates threatens the impact and sustainability of such investment on our economy.

Universities play a significant role in economic development: at Queen's, we contribute almost £2bn per year to the economy; through research, we drive innovation to ensure our companies are competitive globally; and through education, we deliver the skills that create our talented, young workforce. That is a major selling point for the region, particularly in terms of attracting foreign direct investment and supporting our indigenous businesses. We are an anchor institution focused on enhancing Northern Ireland and our people.

Investing in the future fuels a growing economy that in turn is crucial to the prosperity of Northern Ireland. Investing today – or failing to do so – will be tomorrow's legacy. ■

GET INVOLVED You can follow Professor Ian Greer on Twitter using @QUBVChancellor

Moving at the speed of light

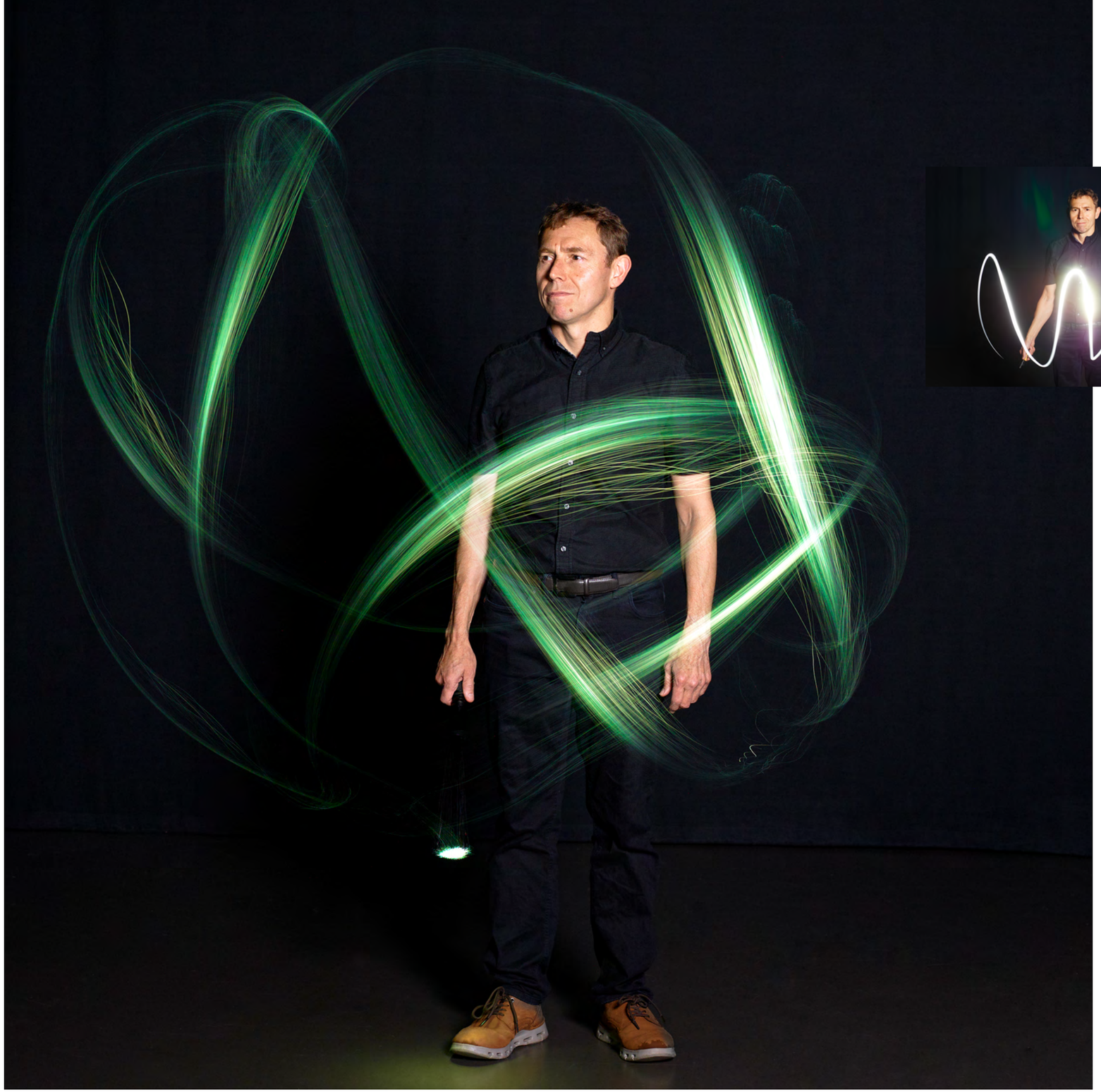
In 2017, Professor Stephen Smartt tracked a ripple in space. What happened next changed the world.

Words Jo Caird / **Photography** Angela Moore

It's 17 August 2017. Professor Stephen Smartt – keen marathon runner, triathlete and Professor of Astrophysics – has just returned from a lunchtime run. Sweaty, out of breath, Smartt goes to check his email. The alert he receives sets his pulse racing even more.

The message? A collaboration of gravitational wave observatories in the USA and Italy have detected a signal – a ripple in space and time, travelling at the speed of light. This in itself isn't the exciting part – after all, gravitational waves had been observed a couple of years earlier, proving Einstein's general theory of relativity and winning the scientists involved the Nobel Prize in Physics. But it means that there is now a small window of opportunity to identify the source, something that has never been done. Scientists around the world leap into action: the race is on.

"I thought, 'Woah, this could be it!'," recalls Smartt. "Everyone around the world was thinking, can we find the source? When stars merge and emit gravitational waves, the game is to find them as quickly as possible so that we don't lose out on early, critical data within the first few hours."



Gravitational wave detectors are deployed across the globe but, as Smartt explains, they can't pinpoint exactly where waves come from, just help to narrow down the search. "In this case, it was an area just above the horizon around about 130 million light-years away. It's our job to point our telescopes in the right direction – it can be a big chunk of sky but there can only be one thing that's emitted the gravitational waves. We rule things out. We survey that sky for anything that wasn't there before but has popped up since the gravitational wave detection. The gravitational wave signal is exquisitely timed but poorly localised."

Just 11 hours after getting the alert from the observatories, a number of Chilean telescopes seemed to be leading the race, identifying a likely candidate for the source: a tiny point of light in a galaxy called NGC 4993. But it wasn't until 24 hours later that one team, led by Smartt, took the first definitive spectrum – a graph showing the intensity of light being emitted – of the object.

"I stayed up all night to work with our team on site in Chile and to see the spectrum that came through," Smartt remembers. "As soon as I looked at it, I knew we'd got it. It was truly groundbreaking and a triumph for a very talented group of theoretical astrophysicists who had predicted how this event would emit light."

SCIENCE FICTION

It could all have been so different. Smartt only became interested in space in his final year at Queen's. As a child he loved science and science fiction but "never thought of it as a career", he says. He didn't even own a telescope.

Having done well in maths and physics at school, an electrical engineering degree seemed like a good fit. Within a few months of starting at Queen's, however, he knew he'd made a mistake: "I wanted to do something more fundamental than engineering," he says.

So he completed his first year in electrical engineering, then transferred to physics and applied mathematics. He heard about a summer placement with what was then the Astrophysics and Planetary Sciences Division at Queen's – popularly known as the 'Space Group' – and decided to apply. "I didn't really know what the project was but I thought it sounded interesting: something to do with stars," he says. Smartt wasn't set on astrophysics at that stage – a summer placement in particle physics based at CERN (now home to the world's largest particle accelerator) had also caught his eye. "I didn't get it," he says. "But I did get the one in astrophysics. So that was it."

Particle physics' loss was astrophysics' gain. Smartt began a doctorate in the chemical make-up of massive stars (typically defined as those with a mass 10 times larger than that of our Sun) in our galaxy, the Milky Way. He was awarded his PhD in Astrophysics from Queen's in 1996 and has never looked back. He spent three years as a staff astronomer at the Isaac Newton Group of Telescopes on La Palma in the Canary

"As soon as I looked at it, I knew we'd got it. It was truly groundbreaking

Islands before taking up a postdoctoral position followed by a fellowship at the University of Cambridge, and then returned to Queen's. Since then, Smartt and the groups he has led have made a series of significant discoveries relating to stellar evolution (the process by which a star changes over the course of time), supernovae (the most powerful stellar explosions) and the source of gravitational waves.

Throughout all these years studying the goings-on of the night sky, however, it's always been the physics that's guided him, rather than any romantic notions about the majesty of space. "Some people think we sit and look through telescopes and wonder what that is, but in reality it's all basic physics and mathematics and computer programming," he says.

MOVES AND FLASHES

In fact, Smartt rarely looks through telescopes. Nonetheless, telescopes are critical to his work, which relies on enormous quantities of data gathered by telescopes all over the world, from Hawaii to South Africa and from Chile to the Canary Islands. These large sky survey projects – known as time-domain sky surveys – allow Smartt and his team to keep track of anything new that appears at any time, not just because they're always working, but also because between them they cover the entire sky.

The telescopes are fitted with detectors capable of making very detailed physical measurements – the number of photons being detected from a particular object, for example, or the number of photons of a particular wavelength – which are then processed immediately by Smartt and his colleagues with a view to identifying unusual activity.

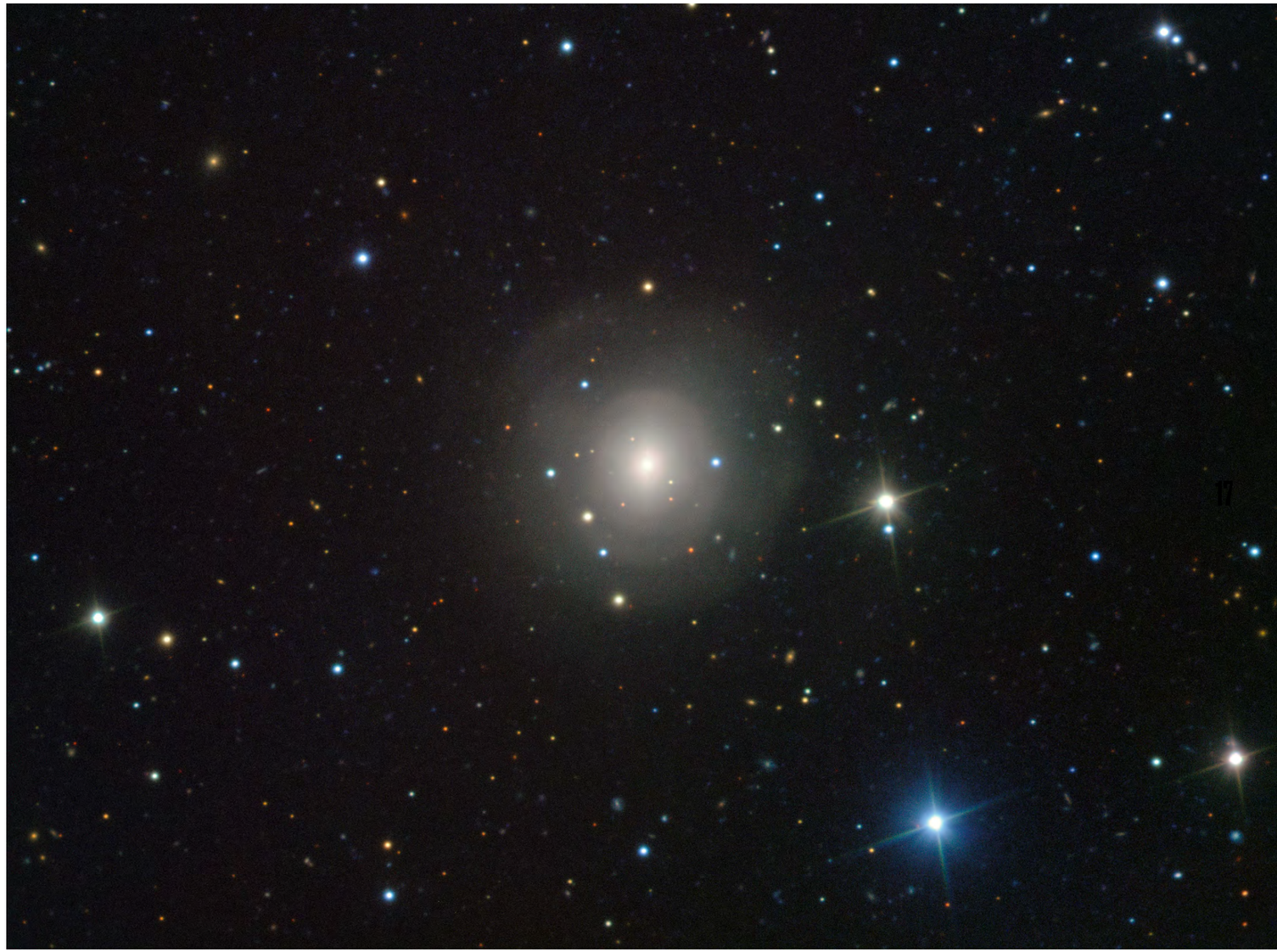
"We find everything that either moves or flashes and then get ready to do the same thing the next night," he says. Mergers of small objects like neutron stars, which might only be around 10km across, might flash and disappear in just a few days. Then there are superluminous supernovae produced by the explosion of objects perhaps 40 times the mass of our Sun, that go on for many months because it takes time for the energy in them to radiate away. "Having identified moving and flashing objects, the task is then to find a model to explain why we detect that energy," says Smartt. "We need a physical theory to explain exactly what we are measuring."

As well as working on the data themselves, Smartt's group makes it publicly available so that other scientists can search for objects in the sky. "If anyone finds anything that they think is interesting, they can go back and, weather permitting, they're guaranteed an image of that bit of sky from our surveys," explains Smartt.

They do this partly because they have to: four of the telescopes gathering data for the Queen's group were developed as an asteroid impact early warning system funded by NASA; they're there primarily to enable scientists around the world to identify asteroids and thereby give advance warning to communities that might be affected by an asteroid strike. But Smartt would release the data even if it wasn't required. "Sometimes you might want to work on the data yourself but competition is a good thing," he says. "There's certainly too much data for us to exploit ourselves."

As well as being awarded a CBE for services to science, Smartt's work on the gravitational waves, along with his pioneering use of digital sky surveying, led to him being elected as a Fellow of the Royal Society in 2020. In a career full of honours, this is the most significant as far as he is concerned. "I'll never forget those eight incredible weeks in 2017, but election to the Royal Society is the thing I'm most proud of. It's recognition from your peers that you have achieved at quite a high scientific level," he says with typical modesty. "I was very happy with that." ■

OUTREACH To find out more about the team's outreach work, visit qub.ac.uk/research-centres/astrophysics-research-centre/Outreach/



Above: This image from the VIMOS instrument on ESO's Very Large Telescope at the Paranal Observatory in Chile shows the galaxy NGC 4993, about 130 million light-years from Earth. The galaxy is not itself unusual, but it contains something never before witnessed, the aftermath of the explosion of a pair of merging neutron stars, a rare event called a kilonova (seen just above and slightly to the left of the centre of the galaxy). This merger also produced gravitational waves and gamma rays, both of which were detected by LIGO-Virgo and Fermi/INTEGRAL respectively.

HAIR! MAKE-UP! BLOOD PRESSURE!

SWOT was set up to raise money for essential medical supplies. Almost 40 years later, their annual fashion show is one of the biggest events on campus. ➡

Words Megan Welford







Today, SWOT is a Queen's institution. The lights, the catwalk, the outfits, the dance routines... and those legendary moments such as when the men's Gaelic football and rugby team members take their tops off. But less known are the hidden bits: the hours of practice, the endless petitioning of local businesses for sponsorship, the sleepless nights. And what about the name?

SWOT is the brainchild of one person and named as an in-joke between her and a friend. "In 1984, I was a third-year medic spending my Friday nights working at A&E in the Royal Victoria Hospital in Belfast, but I had ambitions to go to Africa and help people there," says Dr Anne Carson (Medicine, 1987). "However, my immediate reality was somewhat different. I spent downtime studying and learning how to stitch, and my friend used to call me a swot."

One day, while taking part in a squash match at Trinity College Dublin, she spotted a group of medics running blood pressure clinics to raise money for charity. That evening, advised by a friend who worked for the World University Service, she applied to set up a charity that could raise money to buy medical supplies. In honour of the friend, she called it the Students Working Overseas Trust – SWOT.

The newly formed trust was soon so successful at running blood pressure clinics in shopping centres around Belfast that they started to cause unforeseen problems. "People called us the 'Wee Doctors'," Carson says. "We wore white coats and had a homemade banner. Back then, people never went to the doctor, and the men who were waiting for their wives to shop would give us a pound or two to test their blood pressure, and we referred them to the GP if necessary. But we ended up referring so many that we skewed the results of an important study running at the time – the World Health Organization's MONICA hypertension study. So the University asked us to stop."

By then, SWOT had already raised more than £35,000 to buy equipment, which Carson planned to take out to a hospital in Uganda where she had arranged a placement. "I had a donated ultrasound machine, a suction machine and re-sterilised needles from the Royal. Incredibly, the security team at the airport let me put it all on the plane – for free! It was definitely a very different time."

Carson worked in a city hospital in Kampala run by Franciscan nuns. "I drained abscesses and treated slim disease and leprosy – the experience was wonderful!" She also got swept up in a coup against the then Ugandan president. "I was performing a C-section while troops shot at each other across the compound. It was foolish, but I was 21 and I didn't have £500 to change my flight back. We only had a wind-up telephone in the compound, so thankfully my parents had no idea. Was I scared? I come from Tyrone, from the 'murder triangle', and it wasn't anything worse than I was used to." And it meant SWOT was up and running.

Back home, as well as eventually being allowed to take up blood pressure clinics again, the committee found other, creative ways of raising funds, including a fashion show that would go on to become the Queen's event of the year. "The catwalk thing really ➡

got people's attention," says clinical professor Gerry Gormley, a medical student and a committee member in 1995, when the fashion show was in its infancy. "It was fun, exciting, something everyone really looked forward to. There was such a vibrancy about it, and it really brought our year group together."

In 2003, Gormley returned to Queen's to teach medicine, and has since mentored members of the SWOT committee, supporting however he can – including participating in the staff dance. "We used to be left to ourselves to choreograph it," he says, "and really it was like dads dancing at a wedding. Bringing in a student choreographer was a step change, and in 2018 we did a pretty slick routine to Justin Timberlake's Can't Stop the Feeling. Dancing doesn't come easily to me, but I don't mind making an eejit of myself for a good cause." Year on year, the show has become more spectacular, he says. "In 2018, they brought in the world dances, from Irish dancing to the African and Caribbean Society. That made it about more than fashion; it was about celebrating diversity and making change, and it really made your heart sing."

But despite the glitz, glamour and photographers from Ulster Tatler, there's a moment halfway through the event, says Gormley, when everyone remembers what they're there for. "They pause the dancing and show a montage of what they've done with the money raised. I think it was 2017 they played Coldplay's Fix You, and it was really emotional. You remember how privileged you are, and it's a window on all the need in the world. It really stops you in your tracks."

In 2018, SWOT raised more than £70,000 for health projects all over the world. The then president, Niamh Murphy (Medicine, 2019), took £8,000 to a hospital in Bali, where she worked in paediatric oncology for four weeks. "We worked with the medical director there to make a plan," she says. "They needed beds, so that's what we bought. The treatment the patients got depended on how much money they had, and there were hundreds of people in the waiting room, some sleeping on the floor." The students pay for their own travel, so every penny goes to the hospitals they work in.

Murphy, now a paediatric trainee, was inspired by what SWOT did, but hadn't realised how much work it would be until she was elected on to the committee. "You're continuously calling the businesses," she says, "trying to set up meetings to raise funds or to borrow clothes. You're constantly practising the dance routines, so you're always a wee bit tired – you lean on each other. You have to be really organised throughout the year so you don't fall behind in your work. One of my main memories from the year is spending every Sunday in the Students' Union practising the dances, having numerous cups of tea, then having dinner all together." The stress, she says, comes from just how much everyone wants the night to succeed. With a crowd of 1,200, each having paid £40 or so for a ticket, the stakes are high.

Alongside the boys' dance, another highlight for Murphy was the girls' wedding dance, complete with grooms and other bridal features. "A group of us went to a bridal shop ➡








WHAT DOES IT TAKE TO RAISE £70,000 AND COUNTING?

55 CANS OF HAIRSPRAY
252 CANS OF RED BULL
350 METRES OF GAFFER TAPE
400 HOURS OF REHEARSALS
143 CHOCOLATE BARS
65 HEEL PLASTERS
20 TUBES OF BLACK EYELINER
2 MILLION SEQUINS (AT LEAST)
405 BOTTLES OF WATER*

*** We think. Truth be told, no one was counting at the time, what with the costume changes and the adrenaline and everything, but eye witnesses tell us there was a lot. A lot a lot. Of everything. Especially chocolate. Definitely more than last year.**

in Belfast to choose our wedding dresses. It was brilliant. We had become so tightknit over the year – you're with people you didn't know before you joined the committee, but you spend so much time together. We're still friends now."

For anyone on the committee, especially the president, the best dance is the last one. "The committee comes out last," Murphy says, "so we're all waiting behind the curtain. When you come out on stage it's such a fantastic feeling, the crowd cheering all the work you've done and finishing up together, as a team."

Carson, now a radiologist and chair of the British Medical Association's Northern Ireland Consultants Committee, doesn't make it to the fashion show every year, but she's nonetheless extremely proud of what SWOT has become. "I love to see how it's developed," she says.

"As well as doing good, it gives students confidence, makes them work as a team, and creates such a sense of belonging and achievement. It makes them more well-rounded people and, therefore, better doctors." ■

GET INVOLVED If you'd like to support next year's event, email editor@qub.ac.uk

Je ne regrette rien

Regret is an almost universal human emotion. But where does it come from, and how can we use it to our advantage?

Words Lucy Jolin / **Illustrations** Kate Pullen

Watch the legendary Edith Piaf perform Non, je ne regrette rien, and it's easy to be carried away. "I regret nothing," she sings. "Not the good things that have happened, nor the bad – it's all the same to me." Who wouldn't want to be that person, acknowledging mistakes, refusing to let them define us, moving on and letting go? Of course, us mortals are not Piaf. The lights go up, we shuffle out of the auditorium – and we continue to live with our regrets. But exactly how we do that is up to us.

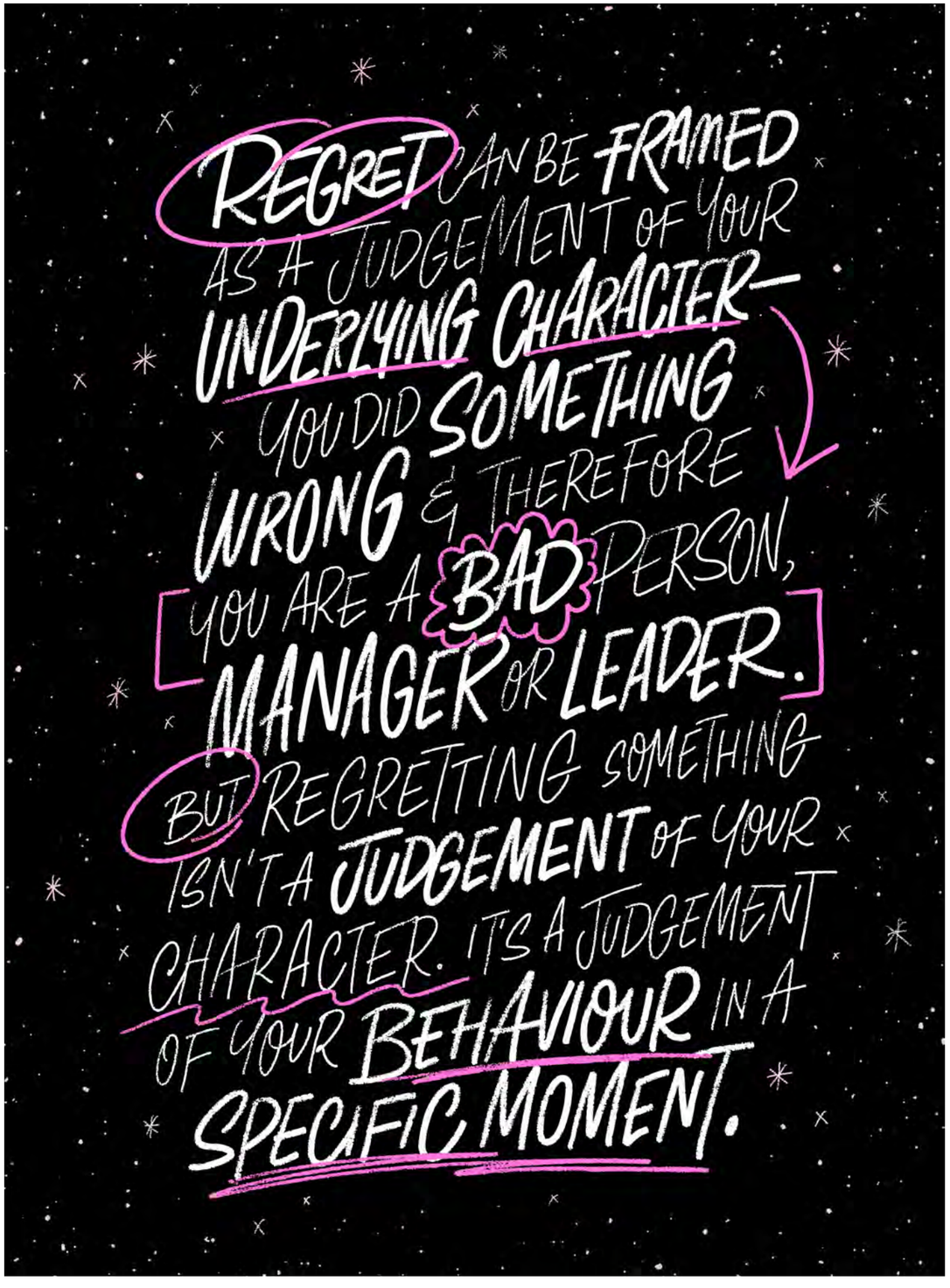
"Regret can be framed as a judgement of your underlying character – I did something wrong and therefore I am a bad person, manager or leader," says Dr Joanne Murphy, Reader in Leadership and Organisational Change and Co-director of the Centre for Leadership, Ethics and Organisation. "But we can think about it in a more constructive way. Regretting something isn't a judgement of your character. It's a judgement of your behaviour at that time. If we frame regret as a particular example of bad decision-making at that time, which can be learned from, boost performance and deepen meaning, that's much more positive."

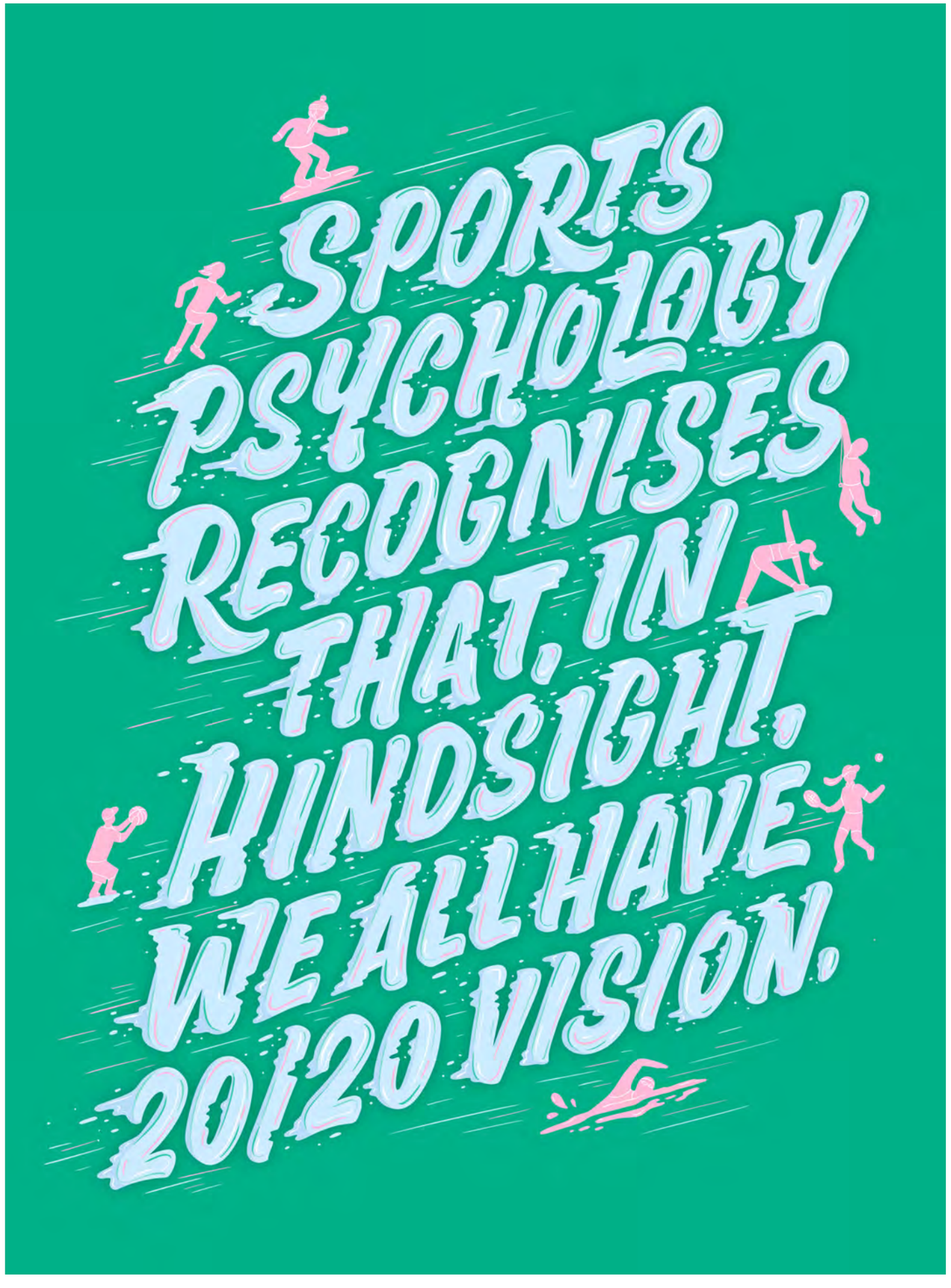
Psychology classifies regret as a counterfactual emotion: it results from a comparison between an outcome which did happen and an outcome that would have happened if you had chosen differently, says Professor Teresa McCormack at the School of Psychology, whose work looks at how regret can help children make better decisions. "We typically use the word regret when considering choices that we have personal responsibility for," she adds. "But there are occasional exceptions. For example, after issuing a public statement, Tony Blair was described in the media as having 'expressed regret' for the Irish Potato Famine even though the famine was not a result of his personal choices."

It's hugely powerful to see a leader expressing regret, says Murphy. "They're saying: I'm not perfect, I made a mistake, I see the mistake, I'm holding myself to account. We've even seen people start to express regret around Covid in terms of the decisions they were making, but they probably still feel too vulnerable as leaders to talk about that in a detailed way."

But regret is not just about looking back. Anticipatory regret – looking ahead and realising that we'll regret a choice that we haven't yet made – plays a big role in the decisions we make. If you've ever seen the BeGambleAware advert – featuring a wrestler pinning impulsive gamblers to the floor to encourage them to avoid 'bet regret' – then you'll be familiar with the concept. "I'm sure that ad is informed by the literature on anticipated regret," says Professor Aidan Feeney, Deputy Head at the School of Psychology. "Asking an already addicted gambler to anticipate the regret they will feel if they go to the bookies isn't going to work. But if you have somebody who may go on to develop a gambling addiction, that kind of anticipated regret intervention might work. In health psychology, for example, researchers ask people to anticipate the regret they will feel if they don't go for a cancer check-up. Some studies have found that asking people that question increases the number of people who go for the check-up."

Our capacity for regret develops as we grow. Children need to think counterfactually to experience regret, says McCormack. "They need to make the comparison between what happened and what could have happened if they had chosen differently," she says. "The research consensus ➡





is that most six-year-olds report an emotion classified as regret – they just don't call it that, as they don't yet have the vocabulary."

Adults use both 'adaptive switching' – making a better choice second time round because you have experienced regret from a bad decision the first time round – and anticipatory regret to decide on a course of action. "We are interested in finding out when children can use regret in that functional way, to help them make better decisions," McCormack says. "Because we do know that children are not always the world's best decision-makers!"

Of course, she points out, it's not necessary for children to experience regret to learn how to make good choices. "But there seems to be something about making that comparison between the actual and the counterfactual that's powerful in terms of motivating a different behaviour next time round. It's as if the counterfactual shines a light on what the right thing to do actually was. We want children to think: 'If I had chosen differently, then that would have been the outcome. So, when I'm faced with that choice again, this is what I should do.'"

Not all adults are able to do this, of course. In the world of elite sport – where a single action can result in decades of scorn and abuse – it can seem impossible to move past counterfactual regret. But some can do it, says Professor Ross White, Research Director on the Doctorate of Clinical Psychology at the School of Psychology, who works with high-performance athletes. In 1996, Gareth Southgate famously missed a penalty against Germany, resulting in England's elimination from the Euros. ("I never felt anger," he said, many years later. "I just felt regret, remorse, responsibility.") But this experience became a vital part of his journey as manager to the young team that made it to the final of the Euros 25 years later.

"A penalty miss for Southgate could lead to a development of a line of thinking and equip him to help others who might be experiencing high-stress scenarios just like he did," says White. "But if someone else had missed the penalty, it could be that their mindset doesn't necessarily lend itself well to transforming that experience into something more positive. How we interpret and respond to challenging experiences has been a key focus on Carol Dweck's work on the concept of a growth mindset. Whilst a growth mindset is characterised by a belief that skills and abilities can evolve and develop through our experiences, a fixed mindset is one that sees skills and abilities as unchangeable and impervious to experience."

Sports psychology works to transform these moments. It recognises that, in hindsight, we all have 20/20 vision. It acknowledges the individual's choice in the moment, and that the choice was made in a particular context. "When we're out of the context, we can now look back, see that things could have gone differently and help the person to see it as an opportunity to learn," says White, himself a clinical psychologist.

This kind of work has only recently become more accepted in a world where acknowledging challenging emotions such as regret can be seen as weakness. "It's been a real shift," says White. "People like the gymnast, Simone Biles, for example, have spoken eloquently and confidently about mental health and wellbeing. She talked openly about the decision-making process and why she had decided to withdraw from three finals at the Tokyo Olympic Games. And despite some backlash on social ➡

media, she indicated that she had no regrets about the decision to withdraw because she was modelling to others the importance of putting the person before the athlete."

Self-forgiveness, he points out, can be an important process in transforming the regret that we experience. "The Four Rs approach developed by Marilyn Cornish at Auburn University in Alabama, USA, supports people to build self-forgiveness. The Four Rs are: Responsibility – taking ownership over our actions and the consequences that follow; Remorse – expressing sorrow for what happened; Restoration – taking steps to repair what was harmed, such as a ruptured relationship; and Renewal – committing to learning from the experience and doing things differently in the future."

But regret isn't always a positive force. Cherie Armour, Professor of Psychological Trauma and Mental Health and Research Director in the School of Psychology, specialises in post-traumatic stress disorder research. She warns that when it comes to overcoming trauma, it's far more complicated and difficult than simply viewing regret as a psychological tool allowing us to learn from past mistakes.

"Trying to make sense of what happened, and its aftermath, is really difficult," she says. "Trauma is outside the realm of everyday experience, and people typically question what they or others could have, or should have, done differently. It's important to realise that even if we or others had done something differently, it may not have changed the eventual outcome. Accepting that it happened and forgiving ourselves and others facilitates psychological growth and recovery."

In this world, adds Armour, we must be very careful about implying that a person who regrets a situation around a trauma can learn from that to prevent themselves experiencing another trauma in the future. "Doing so is a bit like victim-blaming. It's saying if you could learn from this, or you regret this enough, you won't be in that situation again – placing responsibility onto the person who experienced the trauma. And, of course, given that trauma is sudden and unexpected and includes events such as natural disasters and interpersonal violence, that's just not the case."

Reflecting on a situation and thinking about how it might have turned out differently can, of course, be beneficial, she says. But it must be healthy reflection. Otherwise, we ruminate: continuously going over and over an event. "Which is not healthy at all. So, I do agree that regret and reflection can help us learn and grow – but not in the context of experiencing trauma. There is a threshold between reflecting and ruminating, and getting the right balance can help people to process those memories in a positive way towards psychological health."

And as we get older, our ability to undo our mistakes is limited – and dwelling on that is associated with poor mental and sometimes physical health, says Feeney. In fact, he points out, research shows that people who are aging healthily tend to avoid opportunities for regret. "Older people shouldn't ruminate on regrets. If you're not able to undo the decision or engage in compensatory behaviour, all you're left with is the rumination." So perhaps, when we listen to Piaf's anthem, we should think less about the famous opening, and more about the less well-known final line. "I regret nothing... Because my life, because my joys today, they start with you." ■

CIVILISATIONS

Can culture survive climate change? Professor Caroline Malone reckons we should ask the Neolithics. ➡

Words Victoria James / **Photography** David Vintiner

"No man is an island", the metaphysical poet John Donne famously wrote, and – to archaeologists like Professor Caroline Malone, who has wielded her trowel and a remarkable array of scientific instruments under the baking Maltese sun for more than three decades – an island may be an excellent microcosm for studying humankind. Of clearly defined size, isolated from the varied cultural and biological influences of larger land masses, they present an excellent study subject through which to explore foundational questions of human societies' beginnings, flourishings and falls.

In the case of Queen's FRAGSUS project, which studies the Neolithic civilisations that flourished in Malta between 5300 BC and 3000 BC, the islands are also an excellent environment in which to tackle difficult questions.

"I devised the project to combine an environmental mystery with the study of a remarkable population we'd excavated, as well as an intriguing economic story," explains Malone, the founding scholar of FRAGSUS. (The project's full title is 'FRAGility and SUStainability in restricted island environments: Adaptation, Culture Change and Collapse in prehistory'.)

It's a mystery large enough to have occupied an entire professional lifetime. The origins of FRAGSUS lie back in the mid-1980s, when Malone was finishing her PhD. And while no mystery is ever entirely solved, many revealing and powerfully relevant answers have emerged from the decades of research carried out by Malone and a large international team. "We've had more than 70 students, around 15 postdocs and 19 senior academics from Belfast, Malta and Cambridge working on this project," she notes. "It's launched several careers and we've really been able to grow capacity in people's skills."

It began when Malone and her husband, archaeologist Simon Stoddart, visited Malta in 1986 and were offered any site they wanted to excavate. They selected a location first excavated in the 1820s, recently rediscovered by a local man who had recognised the landscape depicted in a watercolour from that period. The site turned out to be extraordinary. "We excavated until 1994 and in that time discovered an enormous filled-in cave system that contained the remains, in disarticulated bits, of more than a thousand people. It was the first major excavation of a large population." Alongside the human remains were figurines and a wealth of scientific information. But that first phase of work generated as many questions as answers.

"We found that after Neolithic peoples arrived in Malta from Sicily and the eastern Mediterranean around 5800 BC, they cut down all the trees. Arboreal pollen was reduced, and was replaced by grasses and weeds, and the islands may then have been abandoned for a millennium," Malone explains. "We felt this was central to understanding environmental change during the Maltese Temple Culture."

ENVIRONMENTAL MYSTERY

Those initial findings framed the "environmental mystery" that was to define the FRAGSUS project for the next two decades. "The picture we had from the pollen samples, combined with the people we'd excavated, spanned 3800 to 2400 BC – a significant culture that recolonised Malta and survived intact without a break for almost 1,500 years," says Malone. "That was an uncommonly long span. Normally, such cultures are more boom and bust. Populations arrive, grow, then disappear again. But on a small island with very limited environmental capacity, these people had to find a way to sustain life, and that endured – right up until it ended."

FRAGSUS delved into the economic story of what people ate, farmed and built. "You have a whole nation stuck in this tiny space that's smaller than Northern Ireland's Lough Neagh," Malone explains. "We wanted to know how many people there were, how they lived and, especially, what they did to the place to destroy ongoing opportunities."

To do so, the FRAGSUS team drew on a wide array of established and emerging analytical techniques – to extract environmental data from pollen, soil, human and faunal remains, and molluscs-invertebrates – that would yield information about human diets, and isotopes indicative ➡

"You have a whole nation stuck in this tiny space smaller than Lough Neagh. It was a mystery

Left: Caroline Malone examining three figurines: seated figure, terracota snail and the 'Sleeping Lady'. The enigmatic terracotta 'Sleeping Lady' figurine from Ħal Saflieni can be interpreted in various ways. She may represent an ancestor, a deity or perhaps the long sleep of death, or indeed a ritual trance. The figurine dates from between 3000 and 2500 BC.

Right: The unique group of stone figurines from the Brochtorff Xagħra Circle Gozo are known as the Shaman's Cache, and were associated with the elaborate death rituals that took place in the burial cave, perhaps orchestrated by a ritual specialist. The finish and detail of the figures might represent the gradual decay of individual personalities of the dead from sharp focus to simple rough-out, which may reflect the cosmology of ancestors among the Temple People of Gozo. Note the ritual dress shown by headdresses, hair, necklace, belt and skirts on some of the figures.

"The data provides a base to explore how humans coped when the natural world began to fail their needs

of climatic conditions. "Such data provides a solid base upon which to explore past human impact on the natural environment, and to identify how humans managed to cope when the resources of the natural world began to fail their needs," Malone and co-authors wrote in the first of their landmark three-volume findings. "FRAGSUS was designed to explore and record a long human sequence that could challenge established theories and interpretations."

Despite constantly evolving technology, and what Malone describes as "a very good team of young people" conducting the fieldwork, Malta's environment didn't easily yield up its secrets. There's no lake or river on the island, making it hard to get to ancient pollen, which had to be sourced in hard-to-access sea valleys. Soil core sampling is a challenge in an environment that's notorious for soil loss. "Every autumn there is heavy rain, then every summer it dries up, so soil is either washed or blown away. Thousands of years of soil build-up can be lost in a very short time," says Malone. "It's so relevant around the world today – we need to look after our soil."

The picture built up by FRAGSUS's multi-stranded approach was of a human occupation of Malta that ended around 5000 BC, followed by a thousand years of sporadic presence, but no sustained settlement. After that, the island was resettled. The cultural evidence, such as pottery, points to communities from Sicily, "but within a generation or two it becomes different. Malta's civilisation is on its own path, completely cut off. And you can see, even today with migrants crossing the Mediterranean, how Malta is a difficult island to reach."

These people really dug in, says Malone: there's significant population growth and a consolidation of agriculture. The FRAGSUS team discovered these people ate beans, peas and barley, as well as wheat. Bone remains suggest domesticated animal populations were small, because on an island with no rivers, only springs, it's not easy to keep a milking

> "With no balances, people are greedy for everything. But when what's to hand is limited, people are much more resourceful

cow that requires 70 litres of water a day – "a reminder that even today, large-scale dairy farming is incredible demanding on resources," notes Malone. Researchers have nonetheless discovered pottery containing milk products – evidence of cheesemaking – and isotopic study of human bones implies milk consumption.

This is a civilisation that achieved equilibrium by living within its resources. "One cow, one pig and 12 sheep seemed to be standard," says Malone, "indicating that's the sustainable limit for a household unit. And, in fact, that ratio continues right through to the 18th and 19th centuries in Malta." Without the capacity to raise many animals to maturity, beasts would be slaughtered early. That created opportunities for feasts, and there is evidence for spectacular feasting sites at the structures that give the Maltese Temple Culture its name.

"Many of the temple structures are created as arenas," says Malone. "There are tethering points, storage facilities and large deposits of pottery and cooking equipment. Young bullocks were probably slaughtered and the entire community would come together, boil up the meat and feast."

Over time, as the landscape became progressively desiccated, evidence reveals people eating less meat and more cereal and almost no marine food. "They were probably under dietary stress," Malone observes. There was another kind of population pressure revealed by DNA sequencing from unusually challenging remains – the suitability of bone for this type of analysis degrades quickly in warm southern European and north African climes. They revealed the "second most interrelated person ever found in Neolithic Europe", the result of a union between close blood relatives that suggests very small populations.

By 2350 BC, the Temple Culture had all but disappeared, following major climatic events that caused widespread desiccation across much of the Mediterranean and north Africa. "The distinctive Temple Culture doesn't survive after that," says Malone. "The rituals and traditions have gone."

Spanning more than 1,500 years of history, and 35 years of scholarship, what conclusions can be drawn from the fate of Malta's prehistoric Temple people? "It shows us dramatically that living prudently and in balance with resources is fundamental," Malone says. "With no balances, people are greedy for everything. But when there's no opportunity to move, and what's to hand is limited, people are much more resourceful with what they have. It's a very compelling story for all people." ■

Below from left:
Post-excavation work on the FRAGSUS project involved processing over half a ton of pottery sherds for detailed analysis;
The immense stone statue built into the structure of the Tarxien Temple on Malta (the original is now in the National Museum of Archaeology);
The FRAGSUS team excavating Bronze Age silos on In-Nuffara on Gozo to obtain economic data for the second millennium BC;
The Temple of Ħaġar Qim, Malta, now protected by huge tent covers from erosion, showing one of the entrance thresholds.

Hair and make-up, Nadira Persaud.

DATASET

OPEN SPACE

Professor Ruth Hunter and the greenway project that will transform the lives of future generations.

Words Peter Taylor-Whiffen
Photography Angela Moore

CONTEXT
A decade ago, East Belfast was one of the most deprived areas in Northern Ireland. Many of its people suffered disproportionately poor health, low skills, low educational attainment and a poor living environment – a situation so bad that in 2014 the Rough Guide to Ireland described East Belfast as "inadvisable to visit". But then £40m of funding from the National Lottery and various Government departments developed the Connswater Community Greenway, with the aim of turning the area into a "shared, welcoming, safe, peaceful and open space".

BACKGROUND
"The Connswater Community Greenway encourages physical and social activity, exercise and non-car commuting," says Ruth Hunter, Professor of Planetary and Public Health at the Centre for Public Health. "When it was first planned in 2010, Professor Frank Kee [Director of the Centre for Public Health] knew it would be vital to evaluate the public health impact of the greenway. I was the post-doctoral research fellow on the project."

METHODOLOGY
Hunter's work on the PARC Project (Physical Activity and the Regeneration of Connswater) conducted an evaluation of the public health impact of the urban greenway. Together with colleagues across Queen's (from fields as diverse as sociology, psychology, economics and urban planning), Hunter and Kee conducted a survey of 1,200 residents, collecting data on their level of physical activity, mental health, social environment and perceptions of their local environment. "After the greenway was opened in September 2017, we repeated the survey using a combination of methods to assess the impact of the new urban greenway," says Hunter.

FINDINGS
"We learnt the greenway had made a significant improvement to people's lives, particularly those in low-income communities," says Hunter. "Today, local communities report improved mental wellbeing and quality of life. Our modelling has also found that if the greenway prompts just two per cent of residents to go from being physically inactive to the Government's recommended amount of weekly physical activity, the greenway will pay for itself in 40 years. People's attitudes towards their local environment are much more positive as well, in terms of aesthetics, safety and their sense of belonging to place."

OUTCOMES
Hunter now leads a consortium called GroundsWell to evaluate the contribution of urban green and blue space to the prevention of non-communicable diseases in urban settings. Part of this work involves a five-year follow-up of the public health impact of the Connswater Community Greenway itself, the longest piece of research thus far into the impact of urban greenways. "We will be evaluating public health and the impact of the greenway on reducing diseases, saving lives and reducing the burden of chronic diseases on the NHS, but this has never been 'just' a health project," she says. "We're interested in social return on investment – tourism, visitors, employment, productivity, car dependency, flood alleviation and climate change." They're also working with the Department of Infrastructure to see how they can help with the monitoring and evaluation of the 25-year, £100m Northern Ireland Greenway Strategy. "And we're looking not just at public health but also planetary health – how these spaces can help promote things like sustainable energy sources, sustainable housing, sustainable food sources and food security for low-income families. The idea is that a project that was funded initially with National Lottery funding becomes embedded into government policy to improve the lives of generations to come." ■

Professor Ruth Hunter is Professor of Public and Planetary Health at the Centre for Public Health.

THE CONNSWATER COMMUNITY GREENWAY PROJECT

The Connswater Community Greenway project aimed to have an impact on seven key areas: land and property values; labour employment and productivity; flood alleviation; climate change; health; tourism; and quality of place. A study in 2020 (Social Return on Investment Analysis of an Urban Greenway) on behalf of the PARC study research team suggests that the greenway "provides an amenity to help towards meeting the United Nations Sustainable Development Goals, and improve community health and wellbeing".

Urban greenway characteristics
- Accessibility
- Aesthetic
- Amenities/equipment
- Management modalities

Uses
- Social interaction
- Relaxation and leisure
- Places to practise physical activity

Environmental regulators
- Temperature regulator
- Carbon sequestration
- Pollution regulator
- Water regulator
- Biodiversity

Health determinants
- Individual behaviour
- Economic and social environment
- Living environment
- Physical environment

Outcomes
- Improved physical and mental health
- Co-benefits for social wellbeing and economic and environmental outcomes
- Impact on health and social inequalities

LISTEN HERE

Professor Michael Alcorn describes the groundbreaking Sonic Arts Research Centre as a "laboratory for music".

Interview Clare Thorp
Illustration Stuart Patience

Sound is all around us, all the time. But when was the last time you actually listened – properly listened – to those sounds? I'm always amazed at how easy it is to forget how critically important listening is to our lives, right from when we're in the womb. Listening is the sense that we switch off last when we go to sleep and switch on first when we wake up. Yet too many of us take our listening skills for granted.

And that, essentially, is what my work at the Sonic Arts Research Centre (SARC) is all about: we're stretching and exploring people's perception of sound and music and finding new ways of engaging and interacting with it. At the heart of the centre is the Sonic Laboratory, packed with an extraordinary range of cutting-edge technology. The result is probably one of the most special listening environments in the world – an immersive audio experience, where sound opens up narrative experiences that are like aural cinematography. It feels like you are sculpting sound in three dimensions.

Our vision at SARC is to give researchers and students the tools to explore the magical space between creativity and a lab-based, empirical approach. Watching our PhD students working together – some with a computer science background and others with a more compositional approach – can be fascinating. Quite often they end up with the same sorts of results, yet they've come at them from entirely different research paths. SARC is a laboratory for music – we're pushing the boundaries of what music is about; how it's created, performed and engaged with by audiences.

The SARC building itself sits next door to the University's Chemistry and Chemical Engineering School, and I always like to think that we're being just as experimental with the work that we're doing as they are in their own fields – just maybe without the white lab coats. There are people from psychology doing work on perception, we have people working on oral history using the audio facilities and others are involved in a research project looking at sound and conflict, in collaboration with the Senator George J. Mitchell Institute for Global Peace, Security and Justice. It's the go-to place at the University for anything to do with sound and audio.

While people expect experimentation in the visual arts, they're less accustomed to it in relation to sound. At SARC, we're not restricted by conventional instruments or approaches. In fact, we actively seek out those gaps in the creative process that allow us to find new ways of creating and writing music. That could mean gathering bits of scrap metal and using their unique sounds alongside computers to make a beautiful piece of music. Or, as in one of my pieces, Leave No Trace, where I examined the space between composition and improvisation, with me generating a digital musical score in real time played as it's being played by a string quartet.

Often I'll ask my students to listen to a recording of rain on a metal roof and debate if it is music or musical. I'm sure we've often listened to similar sounds in a tent or caravan! I ask them to consider where these things begin and end as aesthetic experiences; if you listen to it in the right way, it is the most joyous listening experience you can have, and that excites me in the same way that listening to really great music does. I hope that's what SARC can do for everyone – encouraging us all to listen in a much more analytical and perceptual way, and enabling us all to press reset on how we listen to the things around us. ■

Professor Michael Alcorn is Associate Pro-Vice-Chancellor for Strategic Projects.

NETWORK

ALUMNI LIFE

Your directory of what's going on for the alumni community.

Illustration Fabio Buonocore

DEVELOPMENT

Make a difference

A Queen's education is so much more than just walking away with a qualification tucked under your arm. It's about friendships made and experiences shared – and that's why the Annual Fund is so important.

The Fund has made an enormous impact this year, providing more than £114k of funding for projects within key areas such as: supporting student mental health and wellbeing; developing the next generation of healthcare professionals; and helping students lead a healthy, active lifestyle through sport. By giving to the Fund you're supporting a range of activities where that support is most needed, helping to inspire today's generation in the same way you were inspired.

So if you'd like to find out more, visit go.qub.ac.uk/annualfundnews or contact stephen.oreilly@qub.ac.uk.

EVENTS

14 OCTOBER 2022
QWG IrFUW Conference and Social Dinner
Canada Room and Council Chamber, Queen's University
Queen's Women Graduates (QWG) hold a social dinner for the Irish Federation of University Women's Conference.

9 NOVEMBER 2022
QUAS Annual Lecture
The New Club, Edinburgh
A Queen's University Association Scotland lecture on Air Pollution and Public Health with guest speaker Professor Frank Kelly.

18 NOVEMBER 2022
QGA Charter Day Dinner
Great Hall, Queen's University
The Queen's Graduates Association marks the creation of Queen's as an independent university in 1908.

22 NOVEMBER 2022
QUAL Annual Dinner
Royal Thames Yacht Club, London
Queen's University Association London holds its annual dinner at the world's oldest continuously operating yacht club.

30 NOVEMBER 2022
Convocation Annual Meeting
Great Hall, Queen's (and online)
Join the meeting live in the Great Hall or livestream direct to your device.

28 JANUARY 2023
QWG AGM
Canada Room and Council Chamber, Queen's University
The Queen's Women Graduates AGM is open to members of QWG.

To find out more about all upcoming events in and around Queen's, visit:
daro.qub.ac.uk/ForthcomingEvents

HITCHED AT QUEEN'S

From South Korea with love

If you and your fiancé are from different countries, which one should you marry in? Ju Yoon (2009, Computing and Information Technology) and Ronan Hart had a simple solution: both. So they followed up a three-day extravaganza in South Korea with a wedding in the Great Hall. "My parents couldn't attend, but they had visited me while I was here, so they were familiar with the building," says Yoon. "That meant a lot. It was a fun-filled, low-key and relaxed day in such a beautiful setting."

> "A fun-filled and relaxed day in such a beautiful setting

DIRECTORY

Your directory to alumni life…

Social media

Stay connected to what's going on at Queen's and with each other by following us on our Facebook, Twitter and LinkedIn accounts.
▶ **daro.qub.ac.uk/social-networks**

Queen's associations

Queen's has an extensive network of associations and alumni chapters around the world, including London, Dublin, USA, Scotland, Canada and Malaysia.
▶ **daro.qub.ac.uk/qubassociations**

Allstate NI Queen's Graduate, Student and Alumni Volunteer of the Year awards

Each year we celebrate the best of Queen's students and graduates, those who are making a positive impact on the University and wider society and alumni who continue to give something back for years after graduation. Nominations for next year's awards open in March and run for eight weeks.
▶ **To find out more about the awards and make a nomination, visit qub.ac.uk/alumni/AlumniCommunity/GSVOY**

Graduate career support

The expert Careers, Employability and Skills team are still here to support all graduates as they navigate the job market. Recent graduates can access an enhanced career support service for the first two years after graduation (MyFuture login will be required to access enhanced services), with all graduates able to access advice and guidance through the Careers website and social media accounts.
▶ **qub.ac.uk/sites/graduate-support**

Queen's Sport membership

Graduates can make use of a range of membership levels, including all-inclusive, fitness and swim options. Prices range from £21 to £69 a month.
▶ **queenssport.com**

Reunions

If you are looking to arrange a reunion (on campus or elsewhere) with former classmates, the Alumni Relations team can provide support. Through its extensive database of graduates, they can circulate invitations and promote your event as well, and if you would like them to publicise your event, they can include it on the DARO web pages, eGrad newsletter and social media.
▶ **daro.qub.ac.uk/events-reunions**

Queen's Library Associate Membership

To support your journey of lifelong learning, Associate level membership is available to all graduates for an annual fee of £69.
▶ **go.qub.ac.uk/librarymembership**

RECREATION

FRONT ROW

Queen's University Ladies Boat Club – from 1974 to the current day – along the Lagan.

Photography Angela Moore

THE FAMOUS FIVE

When the photo below appeared on the front page of the Belfast Telegraph in 1974, the five members of the Queen's University Ladies Boat Club were deluged with fan mail – including from inmates at the Maze Prison! "That was the year the Boat Club really started to take off," says Mary Wells (Geography, 1976). "I'd never rowed before, but when I met the four girls at Fresher's Week, they desperately needed a fifth member, and I felt I couldn't let them down. Then we really bonded and were really enthusiastic – we had some high ambitions and broke so much new ground." While the first annual ladies' dinner took place in Janet's front room, the club celebrated its 50th anniversary in 2019 in Belfast City Hall, with members attending from across the generations, including some of the current crop, shown right. ■

Left (from left): Queen's Ladies Boat Club 1974/75
Mrs Linda Brown (née McNeill); Mrs Carol Morgan (née Walker); Mrs Laura Gardiner (née Brown); Mrs Mary Wells (née Keown); (At the front) Ms Janet Maybin.

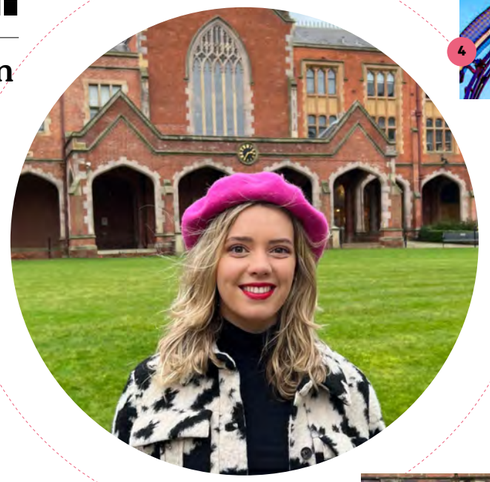
Below (from left): Queen's Ladies Boat Club 2022
Lydia Carson (Medicine); Abbie McCrum (Master's English Literature); Clara McClements (Biomedical Science); Victoria Wilson (Medicine); Meghan McDermott (Human Biology).

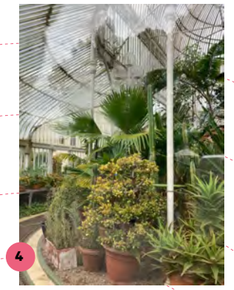
"We really bonded, had some high ambitions and broke so much new ground

Mary Wells

NOW YOU'RE TALKING...

New Students' Union president Emma Murphy talks chips, coffee and Belfast's best bookshop.





1 Favourite night out

Now I'm obviously a grown-up adult, so instead of all-out clubbing all the time you'll find me in places like The Spaniard – a little tiny nook – and The Cloth Ear just across the road in the Cathedral Quarter. They've got a lovely atmosphere and live music. Some of the adjoining places like The Thirsty Goat have outdoor seating, so it's a nice atmosphere. Back in my first year, though, you'll likely have found me at Limelight, an old favourite from school. It is a club that holds concerts, with a student night on Mondays and lots of indie nights.

2 Best for books

Coffee and books were staples in my first year, and most of the time you'd find me in No Alibis bookshop. It's Northern Ireland's oldest independent bookshop. They specialise in crime fiction, but they have everything under the sun, and it's also just been featured in [the BBC's adaptation of Sally Rooney's novel] Conversations With Friends. I also really liked to treat myself to a nice coffee when I was going in for lectures, so my friends and I would go to Junction, or the Students' Union itself. And even now, having District across the road from me is such a temptation.

3 The place to be

I was so excited to meet the Derry Girls writer Lisa McGee last year, when she was awarded her honorary doctorate. Obviously, Queen's has the connection to Seamus Heaney, and it's very cool to think about, but it's great to have connections to big names of the modern era like Lisa. I'm from Belfast originally as well and Queen's is something I've had my heart set on from the beginning: I've always really wanted to do English, and I just really felt that the department here was great. Plus, my dad came here for his doctorate in Physics!

4 Escape routes

I love a bit of nature to clear my head, especially if I've been in the library from nine to five or doing very late nights, so my favourite places on campus are the little space in the middle of the quad and the Botanic Park. You can see people and say 'hi' instead of being somewhere that's just heaving with everyone doing exams. And if I want to get right away, I head to Portrush. Obviously I love the beach but I'm not averse to a go on the Big Dipper at 'Barry's' either. Going there and getting fish and chips is just a great time over summer.

5 What's next?

I'll have to decide between work, more study... or travel! I went on the online version of the Washington-Ireland Programme last summer and that policy landscape is really interesting to me. I've always been tempted to go back and do a Master's in English, but I'd also love to travel a lot more. Stranmillis is still home for now – it feels like a little student community – but I'd like to either move to Dublin or somewhere further afield. Some kind of job where you feel like you're making a difference seems to be where my heart lies.

ONE ELMWOOD Emma Murphy (English Literature, 2022) is the first Students' Union President at One Elmwood. Visit qubsu.org/Events for what's on.

Words: Kat Brown Photos: Alamy / Pacemaker Press International.