Ancient worlds in sharp relief.

Our archaeology tours sift the dust from vanished worlds to bring the antique past vividly to life. Across the globe, from the Parthenon to Pompeii and the Ottomans to the Incas, we explore the achievements and significance of great civilisations.

The Greeks and Romans feature prominently, but our diverse programme includes many other ancient peoples in some beautiful corners of the world. Leading the way are our peerless lecturers – who are not merely experts in their field but passionate and insightful with it. And, typically of MRT, we enjoy special access to working digs and key sites.

Our archaeology tours in 2018 include:
Classical Greece | Israel & Palestine | Pompeii & Herculaneum
Orkney: 5,000 years of culture | Cave Art in Spain | Lands of the Maya

‘A miraculous combination of imaginative vision and precise logistics.’

‘Challenging but extraordinary.’

Image: Parthenon Frieze, engraving c. 1880.
Contents

02 LETTERS

Camendium

07 DON’S DIARY
Dr Holly Krieger.

08 MY ROOM, YOUR ROOM
Professor Dame Ann Dowling (Girton 1970).

11 SOCIETY
The Cambridge University
Underwater Exploration Group.

13 BRAINWAVES
Professor David Runciman.

Features

14 THE LOST KEY
Porters spill the beans: CAM goes behind
the scenes at the Lodge.

20 SMASH THE PATRIARCHY
What does feminism mean to the
Cambridge women leading the charge?

26 FRUGAL INNOVATION
Professor Jaideep Prabhu explains
why doing more with less is the future
of research and development.

30 PHILANTHROPY MATTERS
How will philanthropy impact
the University’s future?

36 ONE HEART-STOPPING MOMENT
The new Heart and Lung Research
Institute hopes to supply answers to
some of the world’s deadliest diseases.

Extracurricular

43 SHELFIE
Dr Spike Bucklow.

44 STUDENT LIFE
Getting out of the bubble.

45 CAMBRIDGE SOUNDTRACK
Alexander Armstrong (Trinity 1989).

47 UNIVERSITY MATTERS
Sarah d’Ambrumenil,
Head of OSCCA.

48 CROSSWORD

Publisher
The University of Cambridge
Development & Alumni
Relations
1 Quayside
Bridge Street
Cambridge CB5 8AB
Tel +44 (0)1223 332288

Alumni enquiries
Tel +44 (0)1223 332288
contact@alumni.cam.ac.uk
alumni.cam.ac.uk
facebook.com/cambridgealumni
@Cambridge_University #camalumni

Advertising enquiries
Tel +44 (0)20 7520 9474
sharon@lps.co.uk

Services offered by
advertisers are not specifically
endorsed by the editor. YBM
Limited or the University of
Cambridge. The publisher
reserves the right to decline
or withdraw advertisements.

Cover
See Red Women’s Workshop

Copyright © 2018
The University of Cambridge.
CAM is published three times
a year, in the Lent, Easter and
Michaelmas terms, and is sent
free to Cambridge alumni.
It is available to non-alumni
on subscription. For further
information please email
contact@alumni.cam.ac.uk.
The opinions expressed
in CAM are those of the
contributors and not
necessarily those of the
University of Cambridge.

YBM
CAM is produced for the
University of Cambridge
by YBM Limited. ybm.co.uk

Editor
Mira Katbamna
Commissioning editor
Steve McGrath
Design and art direction
Steve Fenn and Tom Pollard
University of Cambridge
Morven Knowles
Seventy years ago, women were, for the first time, admitted to degrees at Cambridge. Prior to 1948, women studying at Girton and Newnham sat University exams but were unable to graduate or become members of the University. It was a landmark moment for women’s education – and for the University.

It feels appropriate that this anniversary falls in a year in which we are also marking the centenary of some women gaining suffrage – and in which many, many more women are demanding change. On page 20 we ask young Cambridge feminists about what the movement means to them and on page 47, Sarah d’Ambrumenil, Head of the Office of Student Conduct, Complaints and Appeals explains why alumni have a role to play tackling harassment and sexual misconduct.

Elsewhere, on page 14, we go behind the scenes with Cambridge’s porters to find out what this iconic role entails, and on page 30 we investigate why, in politically challenging times, philanthropy is so crucial to Cambridge’s success.

On this, and all other matters, I look forward to your letters, emails and tweets – a small selection of which are printed opposite, and a great many more online.

Mira Katbamna (Caius 1995)
Churchill May Ball saved me from the nominated task of “looking after all the needs of the headline band” at the tender age of 18. It was Black Sabbath.

David Bullock
(Churchill 1969)

Female pioneers
This is a special year for me, and my contemporaries, who were admitted to Girton and Newnham in 1948. Twenty years ago, we – and all those who had preceded us as students at Girton and Newnham – were invited to celebrate the 50th anniversary of the admission of women as full members of the University.

The occasion was a very happy one. Having collected our gowns at the “vesting area” at Girton, we drove to Cambridge in four coaches, each accompanied by a police outrider. St John’s Street and Trinity Street had been closed to traffic. Bells pealed, flags flapped. King’s Parade was full of spectators who cheered as we clambered from the coaches.

As we entered the Senate House, a fanfare was played by Crispian Steele-Percy. There were speeches and an oration delivered by the University Orator. We then proceeded to a marquee for tea and champagne.

It is now 70 years since women became full members of the University. Of my own group of eight friends (who met annually until this became difficult), three have died, along with many others who would have attended the 1998 celebration. I think it would give us survivors great pleasure if CAM would recall the momentous change in the status of female students at Cambridge in 1948 and the joyful celebration of 1998.

Kathleen Kunmer
(Girton 1948)

Admissions
Dr Sam Lucy’s article helped to dispel many of the myths around admissions. There has been a lot of focus in the media recently about widening access to Higher Education, and to Oxford and Cambridge in particular.

Cambridge already does a great job with link colleges for each area of the country. As a senior teacher in a state comprehensive in south Wales, I accompanied some of our brightest year 12 students to a very inspiring talk recently from Dr Jonathan Padley (Churchill). The Welsh government’s Seren programme, now in its third year, is having a big impact on the number of students considering and applying to Cambridge.

The problem that state schools face is that without past students who attended Cambridge or Oxford, running mock interviews or masterclasses in niche subjects can be very difficult.

I would urge CAM readers to get involved. If you want to help the next generation and widen access to Cambridge, please contact your local state comprehensive or sixth form and ask what you can do to help. Those of us already in education are not the best interviewers as we already know the students!

Lucy Bunce
(King’s 1993)

I read Dr Lucy’s article on admissions with great interest (CAM 82). Were I to go through this process now, I wouldn’t have a hope of being accepted; I was a prime example of someone who benefited from the outdated system of “connections”.

Many members of my family, going back several generations, were at Trinity, and this proved the deciding factor. I didn’t have to sit an entrance exam; instead, I had lunch with Harry Williams, the admissions tutor, and was told, “Yes, you can come, as long as you get your physics A Level” (I had failed it the first time round). So I came in 1959 as a budding medic, managed to get my degree, and qualified in 1965.

Perhaps I should never have been accepted, but I went on to have a reasonably successful career in general practice. I suppose my patients would be the only people to say if I should have been allowed to become a doctor! But I must thank Trinity for the lenient and informal, if now unacceptable, admission system they had 60 years ago.

Tim Paine
(Trinity 1959)

Praise
Your magazine has been a source of great joy to me throughout the years and I always find myself eagerly awaiting the next issue.

Maria Haka Flokos
(Girton 1980)
The Alumni Festival is back, offering the perfect opportunity to meet up with old friends and hear directly from Cambridge’s world-leading academics about the revolutionary research taking place at the University.

CAMPAIGN

Cambridge campaign marks £1bn milestone

The Dear World... Yours, Cambridge campaign for the University and Colleges has passed the £1bn mark, after donations from more than 47,000 contributors from across the globe. Launched in 2015, the campaign aims to raise £2bn, enabling Cambridge to deliver answers to critical issues of our time.

“We are extremely grateful to all those who have contributed so generously to this campaign,” said Dr Mohamed El-Erian (Queens’ 1977), co-chair of the campaign. “As an alumnus of Cambridge I am privileged and honoured to be part of the work that is having such a profound impact.”

Vice-Chancellor Professor Stephen Toope added: “There is still much to do; but with generosity such as this from our alumni, friends and partners, I am confident that the University of Cambridge will remain an unstoppable force for knowledge, inclusivity, greater understanding and the betterment of our shared world.”

Find out more about the campaign at cam.ac.uk/YoursCambridge
**CAMPAIGN**

£85m Dolby gift is biggest ever to UK science

The University has received an £85m gift from the estate of sound pioneer Ray Dolby – the largest philanthropic donation ever made to UK science.

The Dolby family’s gift has enabled the Dear World…Yours, Cambridge fundraising campaign to surpass £1bn – halfway to its £2bn target. The money will support the Cavendish Laboratory, the world-leading centre for physics research where Dolby received his PhD in 1961. Its flagship building, expected to open in 2022, will be named the Ray Dolby Centre, and will host the Ray Dolby Research Group.

“My father’s time at the Cavendish provided him with an environment where he got a world-class education in physics, and many of his successful ideas about noise reduction were stimulated by his Cambridge experience,” says Dolby’s son, David. “Our family is pleased to be able to support the future scientists and innovators who will benefit from the thoughtfully designed Ray Dolby Centre.”

**TWICKENHAM TRIUMPH**

Double win for Blues rugby teams

It was a double celebration for the men’s and women’s teams at Twickenham in the 136th Varsity match, the first time both teams have shared victories at rugby’s HQ. The women’s dominant 24-0 win, coming nearly 30 years after the first game and three years after the inaugural match at Twickenham, is the 13th time they have won. The men’s team, featuring former World Sevens Player of the Year Ollie Phillips in his last ever game, recorded back-to-back victories for the first time in a decade, and extended their record of wins to 64-59.

**TWO-MINUTE TRIPOS**

SUBJECT

SHEEP CAN RECOGNISE FIONA BRUCE. DISCUSS WITH REFERENCE TO LAST NIGHT’S NEWS HEADLINES.

Baa. Well, hello, Dolly. What’s that you’ve got in your mouth?


Why, it’s a picture of well-known TV newsreader Fiona Bruce. Are you searching for her? Has she fallen down a well? This is a bit surreal, isn’t it?

Baa. Baa, baa, baa.

No, you’re quite right to walk away. I’m not Fiona Bruce. Wow, that’s amazing. I never realised sheep had the capacity for facial recognition.

Baa. Well, we’ve known for some time that sheep are capable of recognising fellow sheep and our beloved shepherds. But scientists led by Professor Jenny Morton at the Department of Physiology, Development and Neuroscience wanted to find out if we could recognise people from photographs.

I suppose picking Fiona Baa-ruce made sense.

As did including Baa-rack Obama, which works much better as a pun. Anyway. The study used pictures of celebrities to train sheep to recognise faces. Which, it turns out, we can do.

That’s amazing. I always thought sheep were stupid. You know, sheep-like.

Sheeple. Not like us clever humans. Actually, we sheep might be cleverer than you think. Professor Morton says our brains are similar in size and complexity to those of some monkeys. This allows us to be used in studies looking into how brain disorders such as Huntington’s disease affect cognitive abilities over time.

Yeah, fantastic. Amazing. Oh look, my friend just sent me a gif of a penguin dancing and wearing a jacket. Awwww. It also might enable us to silently plot how we would run the world much, much better than you, while looking like we’re just eating grass.

Baa.

Wait. What? Did the sheep just say something? Did anyone else hear that?

Baa.
SMALL GROUP TOURS

SICILY

7 nights from £1095

TREASURES OF SICILY

Experience the wonders of Sicily staying in Catania, Agrigento, Palermo and Giardini Naxos or Taormina

Special Event – Palazzo Private Visit

Solo Group Departure (30 Oct 2018)

NO SINGLE SUPPLEMENT (limited dates/availability)

RUSSIA

7 nights from £1245

RUSSIAN CAPITALS

Explore St. Petersburg and Moscow, with travel on the new high-speed 'Sapsan' train

Visit St. Isaac’s Cathedral, the Church on the Spilled Blood, Peter and Paul Fortress, the Hermitage and the Kremlin

SPECIAL EVENT – FABERGÉ MUSEUM

GEORGIA, ARMENIA

10 nights from £1695

THE CROSSROADS OF EUROPE & ASIA

Stay in Tbilisi, Kazbegi, Dzoraget, on Lake Sevan and in Yerevan. Visit monasteries and rock-carved churches

Special Events – Garni Temple & Wine Tasting

Azerbaijan and Kiev extensions available

2 LUNCHES & 2 DINNERS INCLUDED

JORDAN

9 nights from £1795

DISCOVER JORDAN

Stay in 5-star hotels at the Dead Sea, and in the city of Amman, ancient Petra and bustling Aqaba

Visit holy Mount Nebo, Madaba, Kerak Castle and Jerash

Special Events – Perspectives of Petra

SOLO GROUP DEPARTURE (10 Jan 2018)

JYPRUS

7 nights from £795

KYRENIA, NORTH CYPRUS

A 7-night stay in Kyrenia on a half board basis

Visit the dramatically sited St. Hilarion Castle, romantic Bellapais Abbey, ancient Salamis, Famagusta and Nicosia

Special Events – Local Restaurants

NO SINGLE SUPPLEMENT (limited dates/availability)

NAMIBIA

17 nights from £3595

GRAND TOUR OF NAMIBIA

Discover Windhoek, the Kalahari and Sossusvlei areas, Fish River Canyon, Swakopmund, Damaraland, Etosha National Park and Mount Etjo

Special Event – A Castle in Africa

12 DINNERS INCLUDED

020 3733 6853 | vjv.com/cambridge
I’m proud to see my second years swagger with confidence – they are the grizzled veterans now.

Dr Holly Krieger is the Corfield Lecturer in Pure Mathematics and a Fellow of Murray Edwards.

Returning to Cambridge after the holidays, I find myself wishing my neglected email inbox was an actual metal box, so that it could be opened gingerly with a large stick. The first message I open is from a journalist in my home state of Illinois, with questions from a local paper. “Holly – how is life in a foreign country? Are you viewed as exotic since you’re a woman mathematician and a Yankee?” After debating for a while the pros and cons of knocking on colleagues’ doors to ask them whether they find me exotic, I decide to answer the interview questions later and deal with the comparatively pleasant mathematical and administrative emails.

As Director of Studies for Murray Edwards’ mathematicians, I spend most of the first week of term organising supervisions and meeting with students. The first-year students have already been through a couple of long orientation meetings by the time I see them, and are wide-eyed with nervous smiles. I note the contrast with the second years, who, I’m proud to see, swagger with confidence – grizzled veterans of a now-familiar battlefield.

As students settle in and I become comfortable with my teaching and supervising routine, I spend more time on my research. This term, I’m co-organising an international meeting in dynamical systems, held in Oaxaca, Mexico. The conference brings together mathematicians in the various aspects of dynamics I work on – complex, algebraic and arithmetic. These interdisciplinary conferences are by far the most interesting to me: most of the creativity and new ideas in my mathematics are inspired by work that, at first glance, isn’t connected to my own.

After two years working alongside colleagues from other disciplines at Murray Edwards, I have realised that mathematics conferences don’t much resemble those of other fields – and not just because of our love of blackboards. The portability of research in pure mathematics (when it comes down to it, really, we only need a pen and plenty of paper) means that we tend to use conferences as a time to get serious work done. Most evenings, you’ll find small groups of mathematicians hunched together over paper or puzzling things out on a blackboard, testing out ideas and exchanging techniques.

Oaxaca is no exception to the working-conference paradigm: I learn the details of an interesting paper recently written by two postdocs in my field, and have a series of discussions that begin a new collaboration for me. Before heading to Mexico, I felt smug about the prospect of some winter sun, but, in truth, I am so busy with work that I don’t realise until the fourth day that I’ve forgotten to bring my sunglasses. I return to Cambridge without any apparent change to my mathematician’s pallor.

After term officially ends, admissions interviews begin. Cambridge is filled with eager applicants and nervous parents. I’m involved in a YouTube channel called Numberphile, which produces mathematics videos accessible to the general public, and so I get a few emails from students who have seen my videos and are curious about studying maths at Cambridge. Weaving through the visiting masses on Trinity Street one blustery December evening, I’m stopped by what turns out to be a very enthusiastic maths applicant, telling me how much he enjoys Numberphile and how he dreams of studying here. Maybe I’ll teach him as a student here next year; maybe he’ll teach me as a colleague at a conference in a decade. I thank him and wish him luck with his interview, thinking of the future as I make my way home.

The Corfield Lectureship in Mathematics was established thanks to a gift from Nick Corfield (St John’s 1978), to encourage young women to study maths and to support the progression of female students and young researchers in their academic careers.

“After two years at Murray Edwards, I have realised that mathematics conferences don’t resemble those of other fields – and not just because of our love of blackboards.”
Room F35

Professor Dame Ann Dowling (Girton 1970) and third-year mathematician Andrew Pritchard discuss space-time, infinity and corridors.

Professor Dame Ann Dowling and Andrew Pritchard are discussing a problem of infinity and space-time that has long baffled their contemporaries. Where do Girton’s corridors begin, where do they end, and have they shrunk?

“I always remember Girton having these infinitely long corridors,” Dowling says. “But it’s funny – they don’t seem so long now. And they used to have a very strong smell of polish, which I’m not detecting.” Pritchard agrees. “When I came up for my interview, it just seemed like a complete maze. I’ve been here for three years and I think I’ve walked them all now…”

Dowling is the first female President of the Royal Academy of Engineering and was the first female Professor in the Department of Engineering and spent her third year in Room F35, which sits right in the middle of one of those endless corridors, “about as far away as you can get from the bathroom,” points out Pritchard.

Pritchard doesn’t feel the need to decorate his space, he says: his shelves contain only a few books (including GCHQ’s Puzzle Book), a couple of tins of shortbread and a Go board.

Dowling, however, did not travel light. “I brought so many clothes!” she remembers. “Piles and piles of clothes. I remember standing in the tiny room I had in the first year and wondering where on Earth I was going to put them. And I had a moped which I’d ridden since I was 16, which was very useful for getting into town.”

In the early 1970s, town was the place to be. “I don’t remember Girton having a bar,” Dowling says.

“There were three women-only colleges and the rest were all men-only, and we spent a lot of time hanging out at the men’s colleges. My boyfriend at the time, who later became my husband, was at Churchill, so I spent quite a lot of time there. Or coffee at a greasy spoon. We did a lot of sitting around and talking.”
Students these days, she says, seem to organise their leisure time far more than she ever did. “And they have all the technology, of course. We used to have to queue up for the payphone. My mother liked to hear from me once a week.” Then there were the ‘Girton songs’ sung on special occasions (which Dowling insists she cannot remember: luckily, Pritchard points out, Wikipedia has recorded their words for posterity) and the Bed Race down the A10 from Cambridge to London. “Us girls drove the bed, as we were lighter,” she says. “And we had four or so men pushing. We didn’t know that they had disconnected the handbrake! Every now and then you’d see a bed on the verge which hadn’t quite made it.”

Pritchard’s spare time also remains determinedly analogue. “Parties do go on, in rooms and bars, but not this room!” he says. “I tend to stay in college. We play pool or cards, and twice a week the board game society meet up. The room is so quiet, it’s great for working.”

Their time at Girton, both say, helped them find their paths. Pritchard has discovered that he’s more interested in pure mathematics. “Proofs, and logic, and that kind of thing,” whereas Dowling is the opposite. “I did find that I was more interested in the practical application of mathematics,” she says, adding with considerable understatement, “and things came out OK. Although I did adhere to Cambridge mathematician GH Hardy’s famous maxim that no mathematician could work for more than four hours a day. That used to be my mantra!”

Andrew Pritchard is a third-year aiming for research or teaching. Professor Dame Ann Dowling OM DBE FRS FREng is the first male President of the Royal Academy of Engineering. She led the Engineering Department at Cambridge until 2014.

**TWEET OF THE TERM**

“Gravity is a mystery. We know what it does. But we don’t know what it is.” This cover of the @Cambridge_Uni alumni mag is just drop-dead gorgeous.

Matt Potter (Caius 1990)
@Cambridge_Uni

**A CAMBRIDGE GUIDE TO...**

**The new ice rink**

Ninety years after David Gattiker (Christ’s 1929) dreamed of winning a Blue for ice hockey on a University rink, work has begun on the Cambridge Ice Arena – and it is all down to Gattiker himself. Gattiker captained the University team during his time studying chemistry in Cambridge from 1929 to 1931. Later, he helped to smuggle uranium ore out of Germany during the second world war. But he never lost his love of ice, and, before his death in 1993, he bequeathed most of his estate to the University to build an ice rink for the city. Thermal insulation and solar panels will make it one of the most energy efficient in Europe, and the new facility will host competitions, displays, training sessions and more.

**GLOBAL CAMBRIDGE**

After successful events in India, Hong Kong and Beijing, Global Cambridge will be visiting Cardiff, Dublin, Geneva and Singapore showcasing and discussing how the work of leading Cambridge academics is changing our world. For more, visit: alumni.cam.ac.uk/gc18.

**MERCHANDISE**

Celebrate your time at Cambridge with a high-quality, handmade gift from Annotated Studios. The company offers bespoke rings, cufflinks, pendants and charm bracelets engraved with the University or your College crest, as well as a personal inscription. Custom-made pieces are created from reclaimed or recycled precious metal, promoting sustainability, and the University receives a 10 per cent donation from: sales.annotatedstudios.com/cambridge.

**HONOURED**

Cambridge academics have been recognised in the New Year Honours list. Professor Sir Keith Peters was awarded the Knight Grand Cross of the British Empire for Services to the Advancement of Medical Science. Professor Diane Coyle, Cambridge’s inaugural Bennett Professor of Public Policy, was awarded a CBE. OBEs were awarded to Ian Goodyer, Emeritus Professor of Child and Adolescent Psychiatry and Dr Tina Barsby CEO of Cambridge-based crop science organisation NIAB and Fellow of St Edmund’s College.
AQUILA Magazine: big ideas for curious children!

From The Story of Humankind to Supervolcanoes, this highly-regarded publication has a great line-up of articles you will probably want to read yourself.

Ideal for lively 8–12 year-olds, AQUILA is an advanced and philosophical magazine that introduces young readers to a thought-provoking mix of Science, Arts and General Knowledge.

AQUILA is not like any magazine you will find on the newsstand; it is more like a special club for inquisitive kids who will soon discover a community of other youngsters just like them. With a new topic every month each issue is jam-packed with challenge and fun; readers can explore concepts beyond the range of the school classroom and build strong foundations for their future education.


☑️ Perfect Birthday Gift for 8–12 year-olds
☑️ Challenging Puzzles & Experiments
☑️ Teachers & Parents love AQUILA

April issue: Pop Art

AQUILA investigates post-war consumerism and the roots of the Pop Art movement. What links Andy Warhol’s time capsules to grave goods of the ancient world? Explore graphics, printing and repeating patterns; experiment with oxidisation and discuss the meaning of lowbrow versus highbrow in Art.

AQUILA Gift Subscriptions include a Welcome Pack and your gift message. Visit our website or call 01323 431313 9am–4pm weekdays.

www.AQUILA.co.uk
In search of Atlantis

The Cambridge University Underwater Exploration Group positively enjoy being thrown in at the deep end.

Most of us join societies to meet new people – join the Cambridge University Underwater Exploration Group (CUUEG) and you’re likely to meet new species, too. “On one trip to the Farne Islands in Northumberland, the seals were so friendly that it was like being with huge puppies,” says current chair Isobel Hambleton, a third-year PhD biochemist at Clare. “They swam right up to us, so we could stroke them. In fact, it became a bit difficult to swim, as they were so interested in our equipment, which was very brightly coloured – they were fascinated with it. They kept trying to nibble it. It’s quite hard to discourage a seal...”

These close encounters go back a long way. The club, also known as the Cambridge University Sub Aqua Diving Club, was formed in 1956, making it one of the oldest scuba diving clubs in the UK. Nicholas Flemming (Pembroke 1957) – a distinguished marine geoarchaeologist and former director of the British National Oceanographic Data Centre – led its first expedition, in 1958, to map the underwater city of Apollonia in Libya. Since then, members have explored underwater sites from Malta to the Red Sea, carrying out research on everything from how diving affects intelligence to the British government’s claim to the uninhabited granite island of Rockall. Hambleton recalls a recent trip to the Valentine tanks site off the coast near Swanage, where a group of the experimental amphibious vehicles sank in 1942. “They’re all still there, and they’re fantastic to dive around,” she says. “But it won’t be long before they all disappear: one really big storm and that will be it. So it’s good to see these things while we still can.”

University is the ideal place to learn scuba diving, says Marius Weber, a fourth-year physicist at Churchill: it is cheaper and more convenient than doing it by yourself, and there are plenty of experienced members to learn from. He joined CUUEG in his third year.

“I’d been inspired by things like Blue Planet, and I like looking at new things and having new experiences,” he says. “I guess you could describe it as being similar to going on a walk, but the environment is so fantastically different.”

“I remember doing a training dive at Gildenburgh Water, an old clay pit near Peterborough. The owners have put in submerged attractions, and we were swimming into an old van. I’d just got myself a dive light and as we were going in, I saw this huge pike, slightly longer than my shoulder. When I shone my torch at it, I saw a whole load of colours – reds and blues – that I’d never realised were on a pike. The pike didn’t care at all that we were there. It didn’t move.”

Scuba diving, by its very nature, is collaborative: you can’t dive safely by yourself. That is part of the attraction, says Hambleton, and it is why expeditions and meet-ups are crucial to CUUEG. “It’s a sport, but not a competitive sport. You’re always going at the speed of whoever you are diving with. I think that’s quite different from doing a sport where, if someone is very experienced, they will go off and leave you. You dive as a team.”

cuueg.org.uk
Renew your connections with Cambridge this summer

Why not try a different way of re-connecting with Cambridge and immerse yourself in the University's **International Summer Programmes** with over 200 courses to choose from. Catch up with your degree subject, or try something totally different. Join adults of all ages and backgrounds from more than 60 countries, including the UK. Come for one week or two, or even all six, between 8 July and 18 August. Stay in Queens', St Catharine's, Gonville & Caius, Newnham, Selwyn, or be non-resident.

**OUR PROGRAMMES**
Interdisciplinary, History, Medieval Studies, Ancient and Classical Worlds, Science, Literature, Creative Writing, Shakespeare, English Law and Legal Methods, and **NEW for 2018**: Art and Visual Culture, and Business and Entrepreneurship

+44 (0)1223 760850
intenq@ice.cam.ac.uk
www.ice.cam.ac.uk/intsummer

---

The Cambridge Executive MBA

“Being able to study alongside my job was a huge plus for me. I didn’t want to take a career break and the format of the Cambridge EMBA made this possible.”

Tim Mantora
Master Engineer, IC Design, Broadcom UK Ltd
MEng (Churchill 2002)
Cambridge EMBA 2017

The Cambridge EMBA is a 20-month degree programme designed for senior executives

Find out more: www.jbs.cam.ac.uk/emba
We need to consider what it means for democracies to fail forwards.

Professor David Runciman is Head of the Department of Politics and International Studies and a Fellow of Trinity Hall.

Because I write and teach about politics for a living, people sometimes ask whether I’ve relished the last couple of years. Even if Trump is bad for the world, isn’t he good for my line of business? It’s true that demand is definitely up. What once seemed like technical or academic questions have exploded into life. The minute workings of the American constitution can now seem like life and death issues. Events about Britain’s relationship with Europe that would once have attracted 20 people now pull in crowds of 200 or more.

How democracy works matters for all of us in a way that it hasn’t before in my adult lifetime. But the bigger question is whether it still works at all. That is much harder to answer. In tumultuous times, there are twin temptations in how we think about what’s happening. The first is to look for historical precedents that will map where we are heading. The second is to assume that no one has ever lived through anything like this before. In this case, we really have been here before.

In these uncertain times, it’s hard to come up with a rule of thumb to guide us. Still, mine would be this. Where history currently speaks loudest is where we should be open to the idea that what is happening is new. Where it all seems new is where we need more history.

David Runciman’s new book How Democracy Ends (Profile, UK; Basic Books, US) will be published in May. He leads the democracy research strand at the Leverhulme Centre for the Future of Intelligence (lcfi.ac.uk), which is exploring the social and political impact of AI.

"It is likely that democracy will fail in the 21st century in ways that we are not yet familiar with. Our democracies will not implode. But they may simply fade away."
The job runs from the sublime to the ridiculous. They always think they’re being original, but we were pulling the same stunts as students 40 years ago.

Cambridge’s porters spill the beans.

WORDS WILLIAM HAM BEVAN PHOTOGRAPHY DAN BURN-FORTI
The black bowler may be customary, but today’s College porters are called on to wear any number of hats during a day’s (and night’s) work. They might take on the role of security guard, student counsellor, postal worker, tourist guide, conference assistant, locksmith, receptionist or crime prevention officer – and even, on occasion, do a little of the heavy lifting that Cambridge outsiders might assume their job entails.

That list is not exhaustive. Weeks after joining King’s as Head Porter in 2014, former police officer Neil Seabridge found himself being measured up for a top hat. “Nobody told me I had a ceremonial role when I applied for the job,” he says. “But I was soon dressed in my number one uniform and top hat to lead the procession for the King’s Sermon, carrying a silver-topped mace that was presented to the College by one of my predecessors back in 1645.”

Surprises are very much part of the territory. A recent recruitment advert at Homerton specified a “reliable, committed team worker who enjoys the unexpected”. And although Head Porter, Gordon Murray, had previously served in the Household Cavalry, for the City of London Police and as John Major’s close protection officer when in Cambridgeshire, he admits that he still faces situations he has never encountered before.

He says: “Even after 30-odd years in public service, I’m never surprised at being surprised. Unexpected events spring up in all communities, and an academic place of learning is no different. Some are comical and some less so.”

“The job runs from the sublime to the ridiculous,” says Seabridge. “It can be chasing geese off the front lawn or fishing students out of the river at 5am.

“And we get all the japes you’d expect, with traffic cones appearing in peculiar places. They always think they’re being original with their pranks, but we were pulling the same stunts when I was a student 40 years ago.”
As with so much in the University’s history, the role of porter developed in piecemeal fashion. A “keeper of the gate” is mentioned in King’s 1453 Founder’s Statute, with duties that included making torches for the Chapel, waiting on tables in hall, and having to “duly and diligently shave the Provost, Fellows, Scholars and other persons” (indeed, the roles of head porter and College barber were combined until 1861). However, Pembroke did not appoint a porter until the early 17th century, when a new court was added. Until then, gatekeeping was the responsibility of a scholar or ‘sizar’ – a poor student who acted as a part-time College servant.

By the time The Student’s Guide to the University of Cambridge was published in 1866, the role had been somewhat standardised. The book, aimed at prospective applicants, notes that a porter’s duties varied by College, but “in all cases he has to keep the gate, he has to be ready to be called up at any time of night in case of illness or any emergency, to see to the carrying of luggage, and to fetch and carry the letters to and from the post office, and to see to the lighting of the courts and staircases”. It further notes that undergraduates had to pay between five and 10 shillings a term for these services, plus one halfpenny for each letter received. With five mail deliveries a day, this must have added up to a significant income for the porter and his assistants.

For much of the 20th century, middle-aged retirees from the police and armed forces formed the backbone of the University’s cadre of porters. Some Colleges would always seek to recruit from particular regiments; in others, a handful of families supplied generations of porters and other College staff, with plum roles passing down from father to son.

While these traditional backgrounds are still well represented, most lodges are gradually becoming as cosmopolitan as the body of students they watch over. “At King’s...”
we’ve got two other retired police officers, a former railway worker, an estate agent and a chap who had his own design company,” Seabridge says. “One of my porters has a PhD in Chemistry and had a former career as a research chemist at ICI, and among the relief porters is one of our ex-graduate students, who left with a Classics degree.

“We did a tally the other day of the languages spoken in the lodge. We have English, French, Estonian, Russian, Swedish, Classical Latin and Greek, Italian and Spanish, a smattering of Danish and Norwegian... It all illustrates the varied experience they can bring to the College.”

Even at the turn of the millennium, the job was overwhelmingly a male preserve. It was not until 2009 that Helen Stephens became the first woman to take charge of a Cambridge porters’ lodge, joining Selwyn after spells as Deputy Head Porter at Trinity and the first female porter at Jesus College. She says: “I still ask myself why it took 800 years, when women have been at the forefront of the University for a long time. But I just applied for the job and was fortunate to be given the chance.”

Cheryl Bowran, who was appointed Head Porter at Newnham College after 14 years as a senior prison officer, says: “Having a female...
CCTV and electronic locks have made the task somewhat easier, but some Colleges present a special challenge. King’s attracts more than 350,000 visitors a year, and is a much-used thoroughfare for University members travelling between town and the Sidgwick Site. “The College wants to be welcoming,” Seabridge says, “but we have to apply basic security measures to allow that spirit of openness to continue. It’s good that students feel safe in the King’s environment, but the bad news is that they drop their guard. They’ll leave iPhones lying around, or leave their front doors open. That absence of self-protection sometimes surprises me, so I have to keep encouraging them to take responsibility.”

Sarah Hendry, who spent 25 years in retail before becoming a porter at Pembroke, agrees. “Students can definitely get too comfortable, probably because it’s their first time away from home,” she says. “Within weeks of the new freshers coming in, we go round checking doors. If they’ve gone away and left their doors open, we lock them out!”

Asked how the job has changed over recent years, many porters report that the pastoral side of the role has increasingly come to the fore – something driven by greater awareness of welfare issues. “My number one priority is the students,” says Hendry. “They’re under my duty of care while they’re at College. Often on a night shift, students will just come in for a chat. They want to have a rant because they’re feeling stressed, so we’ll chat about anything – perhaps just a TV programme or a film – and if they want to get something off their chest, they can do that.

“However, there are times when you’ll see a student’s pattern of behaviour change, and you’ll have a word with the Tutorial Office, the Dean or the nurse. More often than not, you’ll find that it has been noted already. A maxim that rookie porters learn early on is that a lost key often signifies more than a lost key: students might have an ulterior motive for showing up at the lodge. “That sort of thing does happen a lot,” says Bowran. “They come to see us with reasons that seem a little specious, and they might actually need a friendly chat, or a bit of support with something. We are often good sounding boards.”

“During exam term, the porters go out and buy sweets. There’s always a big bowl of them on the front desk that we encourage the students to take. It’s a way of giving them an excuse to see us, and letting them know there’s someone who cares. If need be, we can say, ‘You’re a bit quiet nowadays. Is everything all right?’”

Most Colleges now provide mental health training for porters so they can recognise and deal with acute problems and know when to seek further help. Stephens says: “We see a side of the students that is not always visible to their academic contacts, and it’s a good thing that mental health is being talked about far more openly. We’re lucky at Selwyn, as the College has invested heavily in training me and my team and supporting our members: later this year we will be doing a two-day course on mental health first aid.”

But as well as looking after junior members, porters are charged with enforcing discipline. When College rules are broken, the two sides of the pastoral role must be balanced; and this can present one of the job’s thorniest challenges. “It may sound a bit trite, but I rely on the three Fs: be firm, fair and friendly,” says Seabridge. “You need to beef up the firmness in some exchanges, but you should still be fair and friendly.”

Miscreant students (and sometimes staff and fellows) would do well to remember that honesty is the best policy when dealing with porters. “Remember, there’s nothing secret in a College,” says Hendry. “Someone always talks. So you’re far better off coming to say, ‘Yes, it was me – I broke the door. I was drunk and stupid.’ It’s a lot more painless to go to the senior tutor off your own back, rather than be reported by the porters’ lodge. I’m not the biggest disciplinarian in the world and I’ll always give people the benefit of the doubt. But if someone’s a repeat offender... well, there’s nothing worse than the wrath of an angry porter!”

So what attributes are needed to succeed at the job? A good level of intellect is the first requirement, according to Murray. “You don’t need to be academic, but a lot of the day-to-day tasks are now computer-based, and they’re always changing and modernising. Above all, you need to be a great listener, not just a good one. If you just sit and nod, you may not pick up on some of the things that a student is trying to express to you. You have to ensure that every one of them feels part of the College and no one is excluded.” Bowran says: “It demands a lot of common sense and the ability to think on your feet. We get all sorts of bizarre situations all the time that you can’t prepare for. And you have to be a practical person to deal with door locks and broken bikes.”

All agree that it is a career unlike any other, with a unique set of rewards. But one form of job satisfaction gets a particular mention. “You see this fresh-faced student come in looking like a rabbit in the headlights,” says Hendry, “and you get to watch them grow and turn into a young adult over three years. That’s the part I enjoy the most.” Murray agrees. He says: “It’s a real privilege to go with the Praelectors and Senior Tutor at the head of the procession to the Senate House, to hand the students over to the University and see them receive their degrees. That’s a sheer delight.”

head porter is still quite a novel idea for some people, and you do get some comments. But I take it in my stride – I know I’m here because I have the skills and ability to do the job.”

She admits that her previous career is the subject of occasional ribbing from the students. But while wielding keys and regulating access might be the most conspicuous aspects of both jobs, for around 40 years Colleges have differed from prisons in allowing inmates to come and go as they please. “No College should be a fortress,” says Murray. “But safety and security are paramount. You just have to be proportionate.”
SMASH THE PATRIARCHY

2018 is going to be a big year for feminist thought and action. But what does change look like to the Cambridge women leading the charge?

WORDS ANNA-MARIE CROWHURST

The ‘fourth wave’ of feminism was first heralded by The Guardian, with journalist Kira Cochrane citing the sudden mass of “protests, marches and talks”, the popularity of Laura Bates’s (St John’s 2004) Everyday Sexism project, Caroline Criado-Perez’s campaign for female representation on British bank notes, the No More Page 3 petition, as well as the Reclaim the Night and One Billion Rising marches.

Five years on, and the visibility of feminism is greater than ever. The Huffington Post hailed 2017 ‘The year of the feminist’, calling the Women’s March “the biggest one-day protest in history”. In December, the American Merriam-Webster dictionary announced that its word of the year – based on the number of word definitions looked up on its website – was ‘feminism’. The explosion of the #MeToo hashtag, which women around the world use to write about having experienced sexual assault and harassment, continues to receive widespread media coverage.

A space has opened up in which new questions can be asked, rule books can be ripped up and entrenched behaviours challenged. But what does it mean to the young women who are leading the charge? Do they see the new feminism as clearly defined? And where do they think feminism is going?

“Modern feminism is what ‘feminism’ at its core has always been about: striving for equal rights for all people, regardless of gender,” says Heenali Patel (King’s 2008), communications officer for the Fawcett Society and founder of 1000women.co.uk, a website that focuses on the mental and sexual health challenges faced by minority ethnic women. “Being a modern feminist involves campaigning to change the law for a fairer society; challenging sexist attitudes and gender stereotypes; and showing solidarity with others who fight for the rights of oppressed groups.”

CUSU Women’s Officer, Lola Olufemi (Selwyn 2014), coordinates the work of the University’s Women’s Campaign, and points out that feminism today is about more than how any given culture defines what a feminist, or feminism, should look like. “I call myself a feminist, a black feminist,” she says. “It means I believe in the ultimate goal of liberation for everybody. I think feminism allows people to imagine liberatory futures and goes well beyond the concept of ‘equality’. Feminism is justice work. But it’s entirely dependent on context and the way gender is perceived where you are; its social and political meanings.”

That intersectionality – taking into account human factors such as ethnicity, sexuality and economic background – is vital to understanding feminism in 2018. Jinan Younis (Jesus 2013) is assistant politics editor at gal-dem – a magazine for women and non-binary people of colour – and was part of a team that successfully lobbied for sexual consent workshops that are still being run by student unions today. Younis came to the attention of the media at the age of 17 when she set up a feminist society at her high school (shockingly, it took more than a year for the school to officially approve the society), and says that creating a more inclusive, more diverse type of feminism is vital. “I think the future of feminism has to be intersectional. We need to actively work really hard to make sure we are as inclusive as a movement and that we’re not leaving anyone behind. It’s like Audre Lorde famously said: ‘I am not free while any woman is unfree, even when her shackles are very different from my own.’”

Many people consider the chief defining characteristic of feminism today to be its expression via social media and the internet, both of which provide effective platforms for the dissemination of ideas and campaigns. Historian Dr Lucy Delap agrees that, while the DIY ethos of activism has always been a hallmark of feminism, the accessibility of the movement – as a result of the internet – is new. “What’s so powerful about both Everyday Sexism and the #MeToo campaign…”

1910

OPPOSITE A suffrage poster from a unique collection – the largest of its kind in the UK – held at the University Library. The poster shows a Lancashire cotton worker protesting at the fact that she has not been informed about changes to factory rules and regulations. “There’s a beautiful contrast between the fiery colours of her shawl and the grey in the rest of the picture, and the use of the woman’s vernacular speech against the sign,” says historian Dr Lucy Delap. “It reminds us that the suffrage struggle wasn’t just about middle-class women – it was speaking for working-class women as well.”
"They have a cheek I’ve never been asked"
is the sense of authentic voices,” she says. “It’s all about women saying, ‘This is my experience’ – and that has been radically democratic. It’s really given a boost to the profile and audibility of feminism.”

She adds that the role that men are being encouraged to play might also be new. “It’s never been very easy for men to say, ‘Yes I’m a feminist’. But I do think that that has changed,” Delap believes that self-proclaimed feminist Barack Obama, for example, is a hugely important “feminist icon”. She adds, “You go to today’s feminist conferences and you see lots and lots of men there. Twenty-first century feminism is more comfortable about men’s presence.”

Younis believes the rise of social media in feminism is especially important for more marginalised groups. “Social media can be a place that’s deeply accessible,” she says. “It provides a space for people to meet, connect and join forces with others across the world. It helps people feel less isolated in their experiences. But the dark undertone of social media must also be recognised, as it opens up another space for women to be attacked.”

Olufemi also thinks social media has been a crucial tool. “It allows people to reframe feminist thought,” she says. “Mainstream feminism insists that it was the suffragettes who invented feminism and that it has moved forward along straight lines. Social media allows us to learn about the stories of people who have been written out of feminist narrative because of their radical work, be they women of colour, trans, queer or disabled.”

The second wave in the UK, known as the women’s liberation period, is considered to have begun around 1970. The issues that concerned this generation of feminists, Delap says, included sexual objectification, and workplace and gender pay gap issues including representation of women in leadership roles. But the lack of a distinct ending is where the wave metaphor comes unstuck. Many people believe this happens at the end of the 1970s, but Delap points out a “proliferation” of feminism in the 1980s, including the founding of many feminist bookshops and the launch of many women’s studies courses.

The third wave is generally defined as attempting to move towards a more intersectional feminism, recognising difference, yet remaining inclusive. “The third wave is seen to be all about young women who are sexy and wear high heels and lipstick, and are still feminists,” she says. “Girl power, riot grrrl, all that stuff, but with a decidedly vague beginning and end point.”

And, in Delap’s view, the fourth wave is still defining its parameters. “Some people would say it’s about media-savvy social-media feminism, about moving away from the culturalist feminism of the 90s – which was to do with the recognition of identities and analysis of language and imagery – to get back to more material demands for better pay for women, for an end to sexual harassment,” she says. “Something exciting is definitely happening – I notice it among my students. But no-one seems to know what the waves are about. Let’s just call ourselves feminists and be done with it.”

A SHORT HISTORY OF FEMINISM

Historian Dr Lucy Delap says the waves metaphor often used to describe the rise and fall in the popularity of feminism over the years is problematic for many feminist historians because it is impossible to date the periods precisely.

The first wave, she says, is usually agreed to start around the 1860s, when suffragism “became a live issue”, and ends “roughly around the time when some major countries enfranchise women. Women were saying, ‘We want to have equal rights, we want the right to attend university and become a doctor or a barrister – and we want the vote’.” Discussions around patriarchy, men’s sexual objectification of women and sexual harassment in the workplace were also significant.

In 1888 Clementina Black, one of only three women delegates to the Trades Union Congress, was the first to propose a resolution that where women do the same work as men, they should receive the same wage. The motion carried. Fifty years later, as this poster demonstrates, women were still fighting for equal pay, as they are doing today.
1971

ABOVE: Members of the National Women’s Liberation Movement go on an equal rights march from Speaker’s Corner to 10 Downing Street to mark International Women’s Day in London on 6 March 1971. One woman is carrying a placard calling for ‘Equal Pay Now’. On the right, a woman is holding a copy of the Trotskyist newspaper Red Mole.

1977

BELOW: Grunwick Strikes. The treasurer of the Grunwick strike committee, Jayaben Desai, had been picketing for a year. The sign on the left of the image reads: “Defend the Right to Organise”.
1983

RIGHT: Caribbean-American writer, poet and activist Audre Lorde lectures students at the Atlantic Center for the Arts in New Smyrna Beach, Florida. Lorde was a Master Artist in Residence at the Central Florida arts centre.

1992

BELOW: Young, Female and Black by Heidi Safia Mirza, whose comparative study challenged the widely-held myth that young black women consistently underachieved at school and in the labour market.

1973

LEFT: A poster by See Red Women’s Workshop from the book Feminist Posters 1974-1990. The group grew out of a shared desire to combat sexist images of women and to create positive and challenging alternatives. Women from different backgrounds, including prominent member Sarah Jones (Newnham 1971), came together to make posters and calendars that tackled issues of sexuality, identity and oppression.
And it’s certainly true that social media has given feminist voices a powerful scale and reach. “The #MeToo movement has definitely ramped up the pressure on institutions that have, at best, turned a blind eye to sexual harassment,” says Patel. “It’s been encouraging to see so many women around the world supporting each other, amplifying each others’ voices, and acknowledging how traumatic speaking about sexual harassment and abuse can be.”

So what’s next for feminism? Patel believes #MeToo has created a tipping point. “We’ve got to use this moment to make it clear that we should never tolerate abuse or harassment,” she says, “and we must counter sexist attitudes by placing a higher value on emotional intelligence and empathy in the way we educate and go about our daily lives.”

“I think where we go next is de-centring the linear narrative of feminism,” says Olufemi. “Younger people’s feminism should not only be about identity, but how identity is linked to oppressive structures. Feminism is about more than just the self; feminism includes fighting against austerity, racist policing, borders, prisons and other issues. Learning from the work of older feminists is important, to enable you to think about what works and what hasn’t.” Younis agrees. “More accessible feminism is awesome – that’s what gal-dem is doing,” she says. “Feminism needs to be something everyone can feel involved in, particularly those who have always been told certain spaces aren’t meant for them. As a magazine written by women and non-binary people of colour we’re providing a platform for those traditionally excluded from these spaces to flourish.”

However, visibility is not an answer in and of itself, and many young feminists believe the real battles are still to come. Patel cites Brexit as “one of the biggest challenges to the rights of women in the UK”. “So much of our equality law is written into EU legislation,” she points out. “Some of the rights we now take for granted could be affected, including rights for pregnant women at work, part-time workers (42 per cent of women work part-time) and women fleeing violence. It’s something we all must campaign to defend.”

Patel also sees global challenges ahead, from the Trump presidency and from the rise of far right groups seeking to restrict women’s reproductive rights and “actively propagate misogynistic attitudes”. “There’s never been a more important time to protest, petition and use your voice to show solidarity with women experiencing violence or oppression,” she says. “The moment we stop fighting for our rights is the moment we leave them vulnerable to being eroded or taken away altogether.”
On 26 January, 2001, an earthquake of magnitude 7.9 hit Gujarat, India, killing over 25,000 people. Mansukhbhai Prajapati, a rural potter, escaped with his life but lost all his stock. All around him were people like him, coping with devastating loss and enormous practical problems. So he set out to help them in his way: he designed a fridge that would keep food fresh without electricity, using the only resource available to him – the clay with which he made pots.

One of Prajapati’s small, squat fridges – the Mitti Cool – sits in the corner of Professor Jaideep Prabhu’s high-ceilinged, light-filled office at the Cambridge Judge Business School (CJBS). No wires run out of the back: fill the top with water and it keeps the contents cool by the natural process of evaporation.

The fridge is a superb example of the concept the Jawaharlal Nehru Professor of Indian Business and Enterprise highlights in his book *Jugaad Innovation: Think Frugal, Be Flexible, Generate Breakthrough Growth* (co-authored with Navi Radjou and Simone Ahuja).

*Jugaad*, a Hindi word, is the art of overcoming harsh constraints by improvising an effective solution, using limited resources. Anyone can do it, with anything, and it can happen anywhere. All it takes is ingenuity.

“The fridge is frugal, because it runs on water, which cools as it evaporates,” explains Professor Prabhu. “It’s flexible, because you don’t need electricity. And it’s inclusive, because it’s for people who would like to have a fridge but can’t afford one – and even if they could, they might not have access to electricity. It’s a good-enough solution that works. It addresses a large part of the problem, meets an unmet need, and uses resources that are already available.”

Professor Prabhu’s journey of discovery began, naturally, in India, where he grew up. That India was very different from the one that the world now knows. “Everything was centrally planned,” he remembers. “The state was all-powerful. We were more or less equal, but equally poor, so we instinctively understood the"
“Enthralling, good-humoured, finally heart-rending... This production is worth a trip to Belgium.” - The Telegraph -

LIVE TRENCH THEATRE on the Battlefields of World War One

Journey’s End

by R.C. Sherriff

PERFORMED IN ENGLISH

A WAR. A PLACE. A PLAY.

1918, Somewhere on the Western Front. Six men in a bunker anticipate a massive attack.

10 October > 12 November 2018

Kruimazijn, Ypres, Flanders, Belgium

www.meshtheatre.com/tickets
importance of being frugal. In those days, you either became a doctor or an engineer, and that was your ticket out of India. I studied to be an engineer.” He left in 1989, along with most of his graduating class, switching from Engineering to Business and studying for a PhD in Marketing at the University of Southern California.

Shortly after Professor Prabhu’s departure, India changed. The then finance minister Manmohan Singh (a Cambridge alumnus) scrapped hundreds of rules and regulations that governed how businesses could operate, with the aim of growing India’s economy. Younger people still left India, but now their ultimate aim was to go back. Indian businesses such as Tata went global. Western companies came to India not just to set up back office operations but also to do research and development.

In 2008, after posts at the University of California, Tilburg University in the Netherlands and Imperial College, Professor Prabhu became the first Jawaharlal Nehru Professor of Indian Business and Enterprise at CJB. In 2009, he was appointed academic director of the Centre for India & Global Business, set up to study India’s role in the global economy from a business perspective. “This, in itself, was indicative of the new India,” Professor Prabhu says. “It would have been slightly whimsical to have a centre devoted to the global role of Indian business 20 years earlier.”

Up to this point, Professor Prabhu’s main interest had been innovation in western corporations. The received wisdom was that this was where innovation happened: with big budgets and massive research and development teams pushing the tech frontier. Now he had the opportunity to study innovation in India – and he soon realised that the Indian approach was vastly different from corporate innovation in the west.

“In India, it was all about being affordable,” he says. “Doing more with less. Taking advantage of the limited resources you had. The process was not terribly structured. Indian innovators might have a plan, but they would switch from one plan to another, partly because the environment was changing rapidly. And a lot of the solutions seemed designed to bring people who are outside the formal economy into the formal economy, so they were inclusive.”

His views about innovation, based on western corporations, were challenged. Travelling around India, talking to people from all sections of society, he realised that innovation can happen anywhere. “And it wasn’t so much about technology; pushing the tech barrier for the sake of it. It was about identifying an unmet need and then figuring out: ‘Is there a technology already around that I can use to produce an affordable and accessible solution for this unmet need?’”

Many of the best examples of jugaad innovations come from the developing world. For instance, in their Indian R&D lab, General Electric developed a robust and portable ECG machine made from easily available, off-the-shelf components: telephone keypads and a printer originally designed for bus tickets. Practitioners on the ground are creating their own solutions: Dr Devi Shetty, a sort of “Henry Ford for heart surgery”, has applied the principles of scientific management – division of labour, economies of scale – to carry out highly affordable heart operations in resource-poor settings. Microfinance institutions make use of what is already there – people in villages (often women) who pool their resources and act as a joint liability group – to fill the gap left by banks that find it too expensive to reach communities beyond cities and towns.

Professor Prabhu points out that this concept isn’t unique to India. In the US, it’s DIY culture. The Brazilians call it gambiarra or jeitinho, while Africans know it as kanju. It’s not new, either: necessity has always been the mother of invention. But set against today’s backdrop of rapid technological innovation, emerging markets and resource depletion, jugaad suddenly becomes very relevant.

The Raspberry Pi, Professor Prabhu points out, is a superb example of a jugaad innovation. Developed by a team of Cambridge computer scientists, the £30 Pi is a highly affordable solution for budding engineers looking to gain hands-on experience by tinkering with computers and coding for them. The sharing economy typified by companies such as Airbnb is another example of frugal innovation in the west. “In the west, people are positively empowered to do more with less,” he says. “These pro-sumers – people who are more actively involved in the economic process – are driving things such as the sharing economy, where we can directly trade spare assets with each other on a digital platform.” Makerspaces are another example: places where “makers” can try out equipment, learn skills like coding, and swap ideas, experiences and expertise.

The possibilities are endless. In emerging markets, he points out, people have no choice but to innovate in this way. “In India and China, hundreds of millions of people aspire to the lifestyles of people in the west. Their governments and economies have to deliver, but they can’t deliver in a resource-heavy way. Their solutions cannot be expensive and they cannot be resource-depleting, because that would destroy the planet.”

But in the west, many people are choosing to innovate frugally. Growth must happen to maintain the west’s economic system, but it can’t be done on the back of resource depletion, Professor Prabhu says. People know this. They want to make the world a better place, and leave it a better place, too.

“The economy has to grow in a frugal, resource-preserving way,” he says, “So there’s that pressure – the push factor, if you like. But there’s also a pull factor. People are now empowered. Increasingly, they don’t want to work for large companies. They want to make a difference themselves. And they have access to all these tools – smartphones, makerspaces, cheap computers, the internet, social media: the barriers to innovation have fallen across the board.”

“I truly believe that we need this way of thinking in both the developing and the developed world, and I think we’re headed to a place where the two will meet in interesting, creative ways.” The future’s bright: the future’s frugal. ☮
A donation to Cambridge improves the lives of all of us. Not just you, the UK or even the developed world, but all seven billion people on the planet.


Another step taken on the journey to define what it is to be human.
What does the Cambridge Professor of Innovation carry in his pocket? It sounds like a question worthy of an admissions interview. And if it were, it’s unlikely that even the most lateral-thinking of candidates would guess what Professor Tim Minshall keeps with him as a reminder of his mission: a small thermostatic switch, exactly like the one found in almost every electric kettle.

It’s a nod to the philanthropist who donated £2.5m to fund Professor Minshall’s chair. Dr John C Taylor is one of Britain’s most successful and prolific inventors, with more than 400 patents. He made his name by creating the small bimetallic thermostat that ensures electric kettles switch off when the water reaches boiling point – though he’s arguably best known to Cambridge students as the creator of the Chronophage clock that gobbles up time outside Corpus Christi.

Professor Minshall, who took up his post in September 2017, says: “When anyone asks me what innovation is about, we can talk about Tesla and Uber and machine-learning and going to the moon. But I can say ‘It’s also this’ and produce this device. It shows that innovation means spotting an opportunity, understanding what technology could be used to address it, developing the solution that uses the minimum necessary resources, and getting it to market where it can improve people’s lives.”

The creation of the Dr John C Taylor Professorship of Innovation is a clear example of why philanthropy is of such crucial importance to Cambridge, and to every modern university. Without the donation, it simply wouldn’t have happened. The story is repeated throughout the University’s Schools, Faculties, Departments and Colleges.

Philanthropy has enabled Cambridge to address the most critical issues of our time. It has supported ground-breaking research into treating Alzheimer’s and Parkinson’s, addressing global biodiversity loss and gaining a deeper understanding of the economic challenges of African nations. Without it, new centres such as the Cambridge Stem Cell Institute and the Centre of Governance and Human Rights would not have been founded.

Benefactors have funded academic posts to attract the brightest minds to Cambridge, and countless scholarships and bursaries to help the most financially disadvantaged undergraduates meet the cost of their studies. Above all, philanthropy acts as a guarantor of independence and intellectual freedom. It makes academics less vulnerable to reversals in government policy or changing trends in research-council funding, allowing them to concentrate on ambitious long-term goals.

It’s certainly not all about seven-figure bequests from individuals or charitable foundations; small, monthly direct debits from alumni add up to a vital enabling force. “We very strongly believe that any gift, however small, is extremely important and each one is received with huge gratitude,” says Professor Chris Dobson, Professor of Chemical and Structural Biology and Master of St John’s. “Long-term philanthropic success for an institution such as Cambridge involves a large proportion of our alumni being aware of our needs and enthusiastic to support us in achieving our ambitions.”

Cambridge is driving this success with a major campaign. Launched in 2015, the Dear World... Yours, Cambridge campaign aims to raise £2bn for the University and Colleges from alumni, friends and supporters. To date, more than 47,000 donors have responded to the call. The campaign’s co-chair, Sir Harvey McGrath (St Catharine’s 1971), is clear about the impact this is already having. He says: “As a result of this support, we are able to attract, inspire and support the brightest in the world, irrespective of their background or financial capacity. We must continue to do so, to ensure that students who would not otherwise be able to come to Cambridge have the financial support they need, now and in years to come.”

WORDS WILLIAM HAM BEVAN
In December 2017, the tally was propelled through the £1bn mark by an £85m donation to the Cavendish Laboratory from the estate of Ray Dolby – the pioneer of acoustic technology.

"Reaching £1bn is an outstanding achievement," says Vice-Chancellor Professor Stephen Toope. "It reflects the extraordinary commitment of so many alumni and donors to the Collegiate University. Cambridge has had a huge impact on the world for more than 800 years, and our role in society at a time of increasing global complexity and anxiety is more important than ever."

Stem-cell research and immunotherapeutics are two areas to have benefited greatly from philanthropy. On its completion later in 2018, the new Capella Building will bring scientists together in a purpose-built lab on the Cambridge Biomedical Campus. Patrick Maxwell, Regius Professor of Physics and Head of School of Clinical Medicine, says: "Historically, we have been brilliant at getting money to fund the actual expense of doing the experiments. But there is very limited government funding for anything like new buildings or key long-term posts."

"In this instance, people working on stem-cell research, regenerative medicine and immunotherapy have been scattered around the University, because they have roots in lots of academic disciplines that were organised that way 20 to 30 years ago. The new building will bring people together from different departments in a facility with state-of-the-art equipment."

"It's one of the drivers for our brilliant biologists that they want to see their discoveries taken through to patients, and to make that happen they needed to be up here on the hospital site, integrated with clinical scientists. Without the new building, there was no space for them to do that. And we couldn't have done it without philanthropy."

Professor Dobson has been deeply involved with fundraising at both University and College level. A notable success on the research side has been the financing of the Centre for Misfolding Diseases – a specialist unit within the Department of Chemistry pursuing research into disorders such as Alzheimer’s and Parkinson’s. The Centre will be based in a new Chemistry of Health building that has been made possible through support from donors, including £20m from the Elan Corporation and £5m from Emmanuel alumnus R Derek Finlay, after whose wife, Una, the Centre’s new laboratories will be named.

Philanthropy – from big donations to small gifts from many people – underpins intellectual freedom. We are free to investigate and question, whatever the vested interest. An institution that draws funding from many sources cannot be controlled.
College campaigns have been equally successful. “Our current campaign at St John’s aims to raise £100m, and we’re now about halfway towards that target,” says Professor Dobson. “What’s particularly exciting is that this campaign is strongly focused on enhancing support for our academic activities – not least the help we can give to students from low-income backgrounds, for example.”

Recipients of philanthropic support via their College include Hannah Lawson (St John’s 2017), a first-year undergraduate in Human, Social and Political Sciences. She is one of two candidates in her year to receive a Salim and Umeeda Nathoo Bursary, which provides £5,000 a year for the duration of her degree. The bursaries are intended to help outstanding students meet the cost of living and learning in Cambridge.

“I applied for the bursary the summer before I came up to Cambridge and was interviewed by Mr Nathoo along with the Senior Tutor and the Scholarship Administrator at St John’s,” says Lawson. “I worked to earn money for university and had some savings, but the bursary means that my time in Cambridge can now be devoted to studying and pursuing work experience.”

University-wide schemes are equally significant in helping all undergraduates make the most of a Cambridge education. Now in her second year, Mollie Georgiou (Queens’ 2016) was awarded a Reuben Scholarship when she was accepted to read Psychological and Behavioural Sciences. The scheme, founded by brothers David and Simon Reuben, provides bursaries for talented students from disadvantaged backgrounds.

She says: “I was the first person from my school to go to Oxford or Cambridge, but I didn’t know about the scholarship before I applied. I receive the money from the scholarship on a termly basis, and it provides reassurance that I can take part in all the things that other students can. I can do my weekly shop and pay for events without worrying about financial pressures. I was also able to buy a laptop, which makes it a lot easier to access the resources I need. “The networking side of the Reuben Scholarship is important – we help and support each other. When you come to Cambridge from a state school, you don’t necessarily have a ready-made network. We keep in contact via email, and I’ve been invited to the Reubens’ house in London to meet other scholars from Oxford and UCL as well as Cambridge.”

Evidence-based public policy. Creating a more equal society. Understanding quantum materials and exploring new ways of delivering energy. Philanthropic gifts enable students and researchers to take the long view, free from changing government priorities.
Highlights of 2018
from Cambridge

Order these titles with your 20% Alumni discount* at www.cambridge.org/CAM

*Terms and conditions apply
Georgiou strongly believes that scholarships such as hers attract a more diverse set of applicants to Cambridge. “It’s not just about the income,” she says. “It’s knowing that there are people who believe in you enough to support your journey through higher education. They’re also an acknowledgement of the wider issues that can prevent candidates from trying for Cambridge: ‘How could I thrive in an environment like that, when I haven’t had that sort of academic experience before?’ Scholarships encourage academic confidence and help people believe in themselves.” The Vice-Chancellor, Professor Stephen Toope agrees. “Scholarships and bursaries are critical to Cambridge’s ability to attract the very best students regardless of means,” he says. “We need to do much more going forward, and philanthropic support is key to this endeavour.”

Many schemes exist to support researchers at the start of their academic career. The Gates Cambridge Trust, established by the Bill and Melinda Gates Foundation, confers scholarships on “intellectually outstanding postgraduate students with a capacity for leadership and a commitment to improving the lives of others”. They include Ukrainian poet Iryna Shuvalova (St John’s 2016), whose award has allowed her to pursue a PhD in Slavonic Studies. Her work examines the role of poetry in war, and how it has helped people in eastern Ukraine to cope with the trauma caused by the ongoing conflict. She says: “Cambridge has one of the best Ukrainian Studies programmes in the world, but as I couldn’t self-fund, I had to explore how I would finance my research. The Gates Cambridge Scholarship was the best option for me because I have a daughter: it’s the only one that offers support for dependants. “In my research, I’m bringing together traditional songs and contemporary oral poetry, looking at how the earlier material becomes re-actualised and reinterpreted in the current conflict. The independence that scholarships provide is immensely valuable, and especially when we tackle sensitive political issues.”

Ultimately, there is a strong consensus in Cambridge that philanthropy is no longer an optional extra, if ever it was: it’s now a vital factor in enabling the University to maintain academic independence and pursue its mission at a time of unprecedented financial pressure. “I’ve been in Cambridge for over 15 years,” says Professor Dobson, “and in that time the attitude to fundraising has changed beyond all recognition. Everyone is convinced that it’s a vital part of our ability to remain a world-leading university. “Our alumni are tremendously enthusiastic supporters of our objectives, and I believe they feel increasingly strongly connected to the University and its Colleges. In turn, we are keen to encourage them to see for themselves the effects of their donations and to meet the students and academics whose activities they are supporting. In the end, their gifts are the bedrock of our future success as a major centre of teaching and research, and we could not be more appreciative of their generosity and encouragement.”

**KEY FACTS AND FIGURES**

- **£2 billion**: campaign goal
- **£1.13 billion**: amount raised by the University and Colleges since the start of the campaign
- **47,000**: number of contributors to the campaign to date
- **49 per cent**: percentage of total raised to date given by alumni
- **267**: number of new graduate studentships funded by philanthropy

---

We need your support. That’s not just about money – it could be encouraging a potential applicant, attending an event or talking about what Cambridge did for you. Contact your College or visit cam.ac.uk/YoursCambridge
ONE HEART STOPPING

MOMENT
Heart and lung diseases are the leading causes of premature death worldwide. What can be done? Work at the new Heart and Lung Research Institute hopes to supply some answers.

WORDS BECKY ALLEN
IMAGES SUSUMU NISHINAGA
Sean Doyle’s heart problems began out of the blue. One moment he was on his way to Huddersfield parkrun; the next moment he collapsed. Doyle had a blocked artery and suffered his first heart attack.

By an extraordinary stroke of luck, his GP and a nurse were both running that May morning in 2013, and performed CPR until the paramedics arrived. Doyle – who had a second heart attack on the way to hospital – was put into an induced coma and had a stent fitted.

A week later he was back at home and, after cardiac rehab, pulling on his running shoes again. Although his marathon days are over, Doyle is back to parkruns and the occasional 10k. “My trainers tend to last about 600 miles,” he says. “I’m now on the fourth pair since my heart attack.”

Prompt action saved Doyle’s life, but many others are not so lucky. What will herald a step-change in tackling the global epidemic of heart and lung disease is the arrival of the Royal Papworth Hospital on the Cambridge Biomedical Campus. By combining the UK’s largest specialist cardiothoracic hospital with the University’s top-ranked medical research, and providing innovative educational facilities and a 10-bed clinical trials unit, the Heart and Lung Research Institute (HLRI) will attract the best clinicians, researchers and industry partners who together will deliver better ways to prevent and treat heart and lung disease.

Martin Bennett, British Heart Foundation Professor of Cardiovascular Sciences, works on heart attacks. Most coronary heart disease deaths are caused by a heart attack, and in the UK in the 1960s, more than 70 per cent were fatal. Today, more than seven out 10 people survive – a proportion Bennett aims to improve.

Plaques in coronary artery walls are build-ups of material covered by a fibrous cap. Over time, the arteries narrow and restrict blood supply causing angina and, if the plaques rupture, a heart attack. Not all plaques, however, are likely to burst. “Size matters, but structure is most important,” says Bennett. “Some are big but fibrous and very stable. Others are small with a thin cap, and these are very dangerous.”

To prevent heart attacks, cardiologists such as Bennett need a way of distinguishing the two, something current techniques cannot do. Angiograms produce only a silhouette, showing that arteries are narrowing. A newer technique – intravascular ultrasound – is better, but still only predicts 20 per cent.

“Having reached the limit of detection with imaging, we decided we needed to look at the other side of the equation, and that’s why the University is such a great place to work,” he explains. “We have engineers who test materials for buildings and bridges, and can work out the stresses and strains materials are under.”

By scanning plaques using ultrasound, Bennett and researchers in the departments of Radiology and Engineering can calculate which areas of the artery are under most stress. Trials so far show that the new technique can predict 50 to 75 per cent of events, and he hopes that in five years’ time it could change the way cardiologists manage patients. “It’s the sort of project that depends on cardiologists, engineers, mathematicians and computer scientists. Cambridge is great because we have all these experts.”
It’s a perfect example of how the new HLRI can change heart and lung research, leading to better outcomes for patients in future, says Nick Morrell, BHF Professor of Cardiopulmonary Medicine. “The HLRI will be a physical and intellectual hub for accelerating research and drug discovery, a hothouse for grand challenges in heart and lung disease,” he says. “The clinical resources of the Royal Papworth plus major buy-in from AstraZeneca and GSK, as well as smaller biotech firms, make this a phenomenal opportunity.”

Professor Morrell has spent much of his professional career hunting for a cure for pulmonary arterial hypertension (PAH). A chronic and debilitating disease that affects blood vessels in the lungs, PAH causes tiredness, breathlessness and eventually heart failure. Continuous intravenous drugs can alleviate symptoms and buy people a little extra time. Morrell spends part of his time at the Royal Papworth Hospital, a clinical centre of excellence for the disease, which treats and monitors around 700 patients with PAH. But most of his working life is devoted to understanding its genetics and biology.

PAH affects around 6,500 people in the UK and devastates lives. “It’s rare but horrible,” Morrell says. “It tends to come out of the blue in otherwise fit, healthy people in their 30s, 40s and 50s, predominantly women and often precipitated by childbirth, so diagnosis is associated with a lot of personal tragedy.”

The first gene connected with PAH was discovered almost two decades ago. Mutations in the gene, BMPR2, explain around 25% of PAH and cause cells lining blood vessels in the lung to malfunction. Deficiency in BMPR2 means the cells proliferate, become inflamed and die easily, and understanding the process is key to discovering new therapeutic targets.

“This endothelial dysfunction seems to trigger these profound changes in the lung arteries,” explains Morrell. “The simple hypothesis we’ve been working on for years is that if you can restore BMPR2 function, can we reverse the effect?” Morrell believes he can, and has set up a spin-out, Morphogen-IX, to develop and test new ways of treating PAH.

“We have a 50-patient trial planned to test whether the treatment lives up to its promise, and we’ll have the results in two to three years,” he says. “It works completely differently from the existing drugs, and the whole rationale behind it is based on human genetic studies. Because it’s such a complicated pathway, the human genetics has given us this razor-like focus.”

Across the Cambridge Biomedical Campus in the NHS Blood and Transplant Building is Professor Willem Ouwehand’s lab, which is pioneering the genome science that has enabled Morrell to discover other genes associated with PAH.

Using technology that slashes the cost of whole genome sequencing, invented in Cambridge by Professor Shankar Balasubramanian in the Department of Chemistry, Ouwehand is examining large cohorts of patients – and revolutionising the understanding and diagnosis of rare diseases.

“In four years, we’ve sequenced the entire genome of 13,000 people with rare diseases. Bringing together so many of these patients has never been done before, and significantly increases the chances of discovering the genes underlying these conditions,” he says. “Having
Dating for Oxbridge and the Ivy League

"...on my third BM date, I met someone with whom I clicked almost immediately. We've been seeing each other ever since... thank you for playing your part in bringing us together!"

BluesMatch.com
Established in 2001 • Over 6,000 current members

BLUE DOLPHIN HOUSE

Ever wanted to have an authentic Greek experience? Located in a peaceful area on the Cycladic island of Tinos, just 30 min away from Mykonos by ferry, the Blue Dolphin House has a direct view of the beautiful Mediterranean sea, 300m away from a family-friendly beach. Picturesque villages and sublime cuisine are but some of the amazing things you can experience. Tinos is perfect for that ideal family vacation you had in mind, or a much-deserved break from your chaotic life. If you had plans for a romantic getaway, then look no further, Tinos is for you!

www.bluedolphinhousetinos.gr • Thalia Sotiriadis(Robinson)
bluedolphinhousetinos@gmail.com • 0030 6974411280

LUXURY HIGHLAND HOUSE

Overlooking Loch Shieldaig, An Cos has open log fires, steam room and sleeps 10. Lots of outdoor activities including kayaking, tennis, fishing and 5 minutes walk to the village pub. Available weekly or for short winter breaks – perfect for families and small groups.

www.AnCosShieldaig.co.uk • 020 7096 1893

VILLA IN TUSCANY

Set in the Pisan hills, a delightful and unspoilt part of Tuscany, Villa Adelina, Channi, is an idyllic place for a holiday or to celebrate a special occasion in style. Enjoy Tuscan hospitality in local bars and restaurants, take in magnificent views from hillside walks, or sample wines from local vineyards.

A great centre to explore the art of Tuscany. Pisa, Volterra and San Gimignano are a short drive away and Florence, Lucca and Siena can be reached in 1-2 hours. Or stay cool in our large swimming pool. The Villa accommodates parties up to 12 and from 2016, our newly restored house in the grounds will accommodate a further six.

www.adelina.org.uk • Contact Peter Stefanini (Trinity)
peterstefanini47@gmail.com • 01904 705262

The Cambridge Knee Clinic

Specialist care for knee disorders in all ages.

Arthroscopic surgery.
Ligament reconstruction.
Joint replacement and realignment.
The Clinic is run by Mr Jai Chimvavi,
Consultant Orthopaedic Surgeon.
Operations are performed by him at both private hospitals in Cambridge.

www.CambridgeKneeClinic.com
01223 253763

Our House in Tuscany

Perched on a vine and olive clad hillside near Lucca. Less than an hour from Pisa and Florence. Peace, walks, breathtaking views and food/wine. Enjoy being in a real Italian hamlet. To let when we’re not there. Sleeps 4/5. £590 a week. Or ask us about local friends’ houses which may be available. Similar to ours, or larger or smaller. Some with pool.

Tel 020 8965 4494 or 0039 3583 835820
Mike Wilson (Christ Church, Oxford) and Jessica Corsi (St John’s, Cambridge)
Email: to-mike@hotmail.co.uk
Web: www.tuscanycastello.com

To advertise on this page please call Sharon Davies at
LANDMARK PUBLISHING SERVICES
on 020 7520 9474 or email sharon@lps.co.uk

COMPLIMENTARY MEMBERSHIPS

Carpe Diem, well known as the foremost introduction agency amongst academics, are offering several complimentary memberships to male graduates (50+) on behalf of their female graduates.

Please contact Sarah Howes 020 8313 0918 or email sarah@carpediemintros.com
www.carpediemintros.com
Because platelets are integrally linked to heart attack and stroke, Ouwehand’s lab is looking for genes involved in platelet production and function. “We’ve built the biggest collection of patients with platelets that don’t look normal and don’t work correctly. We have sequenced the whole genome of nearly 2,000 of these people with rare platelet diseases,” he says. “They come from across the globe – Austria, Belgium, Germany, France, the Netherlands and the US, as well as the UK – and because Cambridge is a trusted partner, we can have global reach and give global leadership.”

While Morrell and Ouwehand focus on the rare, Professor Edwin Chilvers, in the Department of Medicine, treats and studies some of the most common diseases in the world. “Heart and lung disease kills more people than any other group of diseases, but it’s one of the most underfunded parts of medicine,” he says. Professor Chilvers treats lung disease where inflammation is the major driver, including asthma (the commonest disease of Europeans) and smoking-induced chronic obstructive pulmonary disease (COPD), pneumonia (the leading cause of hospitalisation and death) and even multiple forms of fibrotic lung.

His research focuses on COPD (which affects 1.2 million people in the UK) and the role of neutrophils, a type of white blood cell that is essential to a healthy immune system. Neutrophils work by finding and eating bacteria, and preventing infections from taking hold. However, this can also result in unintentional injury to healthy tissues and result in chronic inflammation. Once infection is under control, this limb of the immune system should switch off, but in COPD, neutrophils remain activated, dysfunctional and refuse to die.

“Healthy lungs have clear and open breathing tubes that taper beautifully down towards the end alveoli, but in COPD neutrophils damage the airways, causing them to become narrower and often blocked with mucus, making them very prone to infection,” Chilvers explains.

To discover what traps these cells into a cycle of perpetual activation, he has been studying the chemical messaging systems inside the cells in order to design a drug that might put these cells back on to the correct path. It sounds simple but, until recently, neutrophils have kept their secrets well hidden.

“It’s very difficult to isolate and study neutrophils, especially those that have already moved from the blood into tissue, so we’re largely working away from the action. The other challenge is these cells are very easily disturbed, so working with them tends to tickle them up,” Chilvers says. Five years ago, he developed a new way of isolating and labelling neutrophils. “It’s made a big difference, allowing us to follow these cells around the body for the first time.”

As a result of the new technique, Chilvers and the pharmaceutical companies he collaborates with have new drugs in clinical trials that they hope will transform the lives of those living with COPD. “If we can give drugs that strip out neutrophilic inflammation, that would give a good chance of stopping the damage and resolving the inflammation,” he says. “People with COPD are on an inexorable decline in lung function. If we could stop that decline, it would be a fantastic achievement.”
"Speak French, Spanish or Italian as they are really spoken"

Now you can improve or maintain your French, Italian or Spanish with the bi-monthly audio magazines Bien-dire, Tutto Italiano and Punto y Coma for intermediate to advanced learners of French, Italian, or Spanish, or Bien-dire Initial, for beginner to intermediate learners of French.*

Bien-dire, Bien-dire Initial, Tutto Italiano and Punto y Coma are published six times a year from France, Spain and Italy and include a glossy magazine packed full of lively, topical and original articles and in-depth interviews in French, Spanish, or Italian to give you the inside track on French, Spanish, or Italian culture. Key words and phrases are glossed into English on the facing page. The articles, in turn, are narrated on the accompanying 80-minute audio CD to enable you to improve your listening comprehension and understand French, Spanish, or Italian as it’s really spoken. In addition, every feature is graded for difficulty so that you can assess your progress with each issue.

If you now want to be able to speak like a native, a subscription to Bien-dire, Bien-dire Initial, Tutto Italiano, or Punto y Coma will inspire, motivate and help you to achieve fluency.

*Bien-dire Initial is published on alternate months to Bien-dire to enable you, should you wish, to subscribe to both French magazines at the same time (12 issues a year, six of each).

Key Benefits and Exclusive Offer

- Speak French, Spanish or Italian with confidence by learning the language as it’s really spoken
- Improve your vocabulary and listening comprehension
- Improve your knowledge of French, Hispanic or Italian culture
- Lively, relevant and up-to-date, authentic content
- Take advantage of on-going, portable and flexible learning

SPECIAL OFFER
£34.99 Saving!

Subscribe Today to either Bien-dire, Bien-dire Initial, Punto y Coma, or Tutto italiano for a year for just £89 (normal price £99) and you will receive a FREE electronic dictionary bookmark worth £24.99 - a combined saving of £24.99!

Order TODAY By calling:
0800 141 2210

Outside the UK call:
+44 117 927 2236

Or, order by visiting our website:
www.languages-direct.com/CAM118

Or, complete the coupon below:

---

01. Please send me a year’s subscription (6 bi-monthly magazines and 6 accompanying audio CDs for £89) to Bien-dire Initial French Audio Magazine + a FREE French-English electronic dictionary! Level: Beginner - Intermediate

02. Please send me a year’s subscription (6 bi-monthly magazines and 6 accompanying audio CDs for £89) to Bien-dire French Audio Magazine + a FREE French-English electronic dictionary! Level: Intermediate - Advanced

03. Please send me a year’s subscription (6 bi-monthly magazines and 6 accompanying audio CDs for £89) to Tutto Italiano Spanish Audio Magazine + a FREE Spanish-English electronic dictionary! Level: Intermediate - Advanced

04. Please send me a year’s subscription (6 bi-monthly magazines and 6 accompanying audio CDs for £89) to Tutto Italiano Italian Audio Magazine + a FREE Italian-English electronic dictionary! Level: Intermediate - Advanced

---

Cheque: Cheque enclosed for £89 per subscription payable to Languages Direct Ltd.

or Card: Please charge my credit card for the sum of £89 only per subscription □ Mastercard □ Visa □ Amex

Card number: ___________________________ Card CVV Code: ___________________________

Expiry date: ___________________________

First name: ___________________________ Last name: ___________________________

Address: ___________________________ Postcode: ___________________________

Country: ___________________________

Telephone: ___________________________ Email: ___________________________

Please send your completed order form together with payment to:

Languages Direct Ltd,
FREEPOST RSKB-KSKR-LYJU, Bristol, BS1 6UX

Delivery: Your first issue should be with you within 10 days of receiving your order.

Outside the UK send to:
Languages Direct, Spike Island, 123 Cumberland Road,
Bristol, BS1 6UX, United Kingdom

60 day money-back guarantee

If for any reason Bien-dire, Bien-dire Initial, Punto y Coma or Tutto italiano is not for you, just let us know within 60 days, and we'll refund your subscription in FULL, and you can keep your first issue. If at any time later you decide to cancel, we'll refund you the cost of any unmailed issues.

To see our full range of excellent language learning materials visit: www.languages-direct.com

Media Ref: CAM118
I ploughed through a lot of Dostoyevsky in the hot strip mill.

Dr Spike Bucklow is Reader in Material Culture at the Hamilton Kerr Institute.

---

4. THE SECRET OF SHAKESPEARE: HIS GREATEST PLAYS SEEN IN THE LIGHT OF SACRED ART

MARTIN LINGS

In my late 20s, I lived round the corner from the Barbican when it was the temporary home of the RSC. I saw lots of Shakespeare, and my appreciation of the plays was absolutely transformed by the discovery of this modest little book. My eyes were opened to the magical reality of Shakespeare's world. Lings' book led me to others, including CS Lewis's Studies in Medieval and Renaissance Literature. These books suggested to me, as a chemist, that artists' materials could be examined in the light of contemporary world views (the four elements, alchemy, astrology etc) to throw light on pre-modern visual culture, in the same way that Lings and Lewis threw light on pre-modern literature.

5. COLOUR AND CULTURE: PRACTICE AND MEANING FROM ANTIQUITY TO ABSTRACTION

JOHN GAGE

I was very lucky to have the late, great, John Gage as my PhD supervisor at Cambridge. He almost single-handedly established colour as an academic subject, so it is rather strange that my thesis was a pretty monochrome affair. However, I see my subsequent work as the expansion of two or three footnotes in his Colour and Culture. Following in his footsteps (and those of Michael Baxandall) has been extremely rewarding. I feel very privileged to have such close access to great medieval and Old Master paintings at the Hamilton Kerr Institute. This allows me to consider cultural ideas with reference to scientific analysis; to have my head in the clouds while keeping my feet firmly on the ground, bridging, in some small way, CP Snow's Two Cultures.

Spike Bucklow’s The Anatomy of Riches: Sir Robert Paston’s Treasure will be published by Reaktion later this year.
I’m just there to chat, play games and referee their wrestling matches!

The ‘Cambridge bubble’ is a comfortable place. But stepping outside the bubble can be hugely rewarding, Cambridge Student Community Action’s (SCA) volunteers explain.

Volunteering has enabled third-year medic Kieran Kejiou (Churchill) to discover skills he never thought he had. He became a Big Sib – a volunteer befriender for vulnerable children. Every week, he hangs out with his ‘siblings’, two children aged 11 and eight who recently lost their mother.

"I’m just being there with the kids, chatting, playing games and refereeing their wrestling matches,” he says. “They seem to enjoy it! It’s fun and it’s taught me that, actually, I don’t hate kids, which is a nice revelation to have. They’re great. I had ruled out paediatrics as a possible future career, because I thought I hated kids. Now I’m very confused! So the experience has really opened doors for me.”

Other students have found that volunteering with SCA has helped to reinforce and clarify ideas they’ve had about their future career. Finalist Megan Cheyney (St Catharine’s, Psychological and Behavioural Sciences) is a project leader at Bounce, a Saturday afternoon club for vulnerable and disadvantaged children. Each session, they decide on a theme to explore through crafts, games and activities – anything from Chinese New Year to Under the Sea.

"Show and Tell is my favourite part,” Cheyney says. “All the children are allowed to bring in something from home, or anything
Sometimes we get kids we’ve never met before, and they will have a specific need that you need to meet on the spot.

Cheyney, who has received an offer for a place on the Civil Service Fast Stream after graduation, says that Bounce has helped her develop some skills vital to a successful career, such as organisation, planning and flexibility. “Sometimes we get kids we’ve never met before, and they will have a specific need that you need to meet on the spot,” she says. “You have to know how to adapt activities to fit in with that need.”

Fourth-year medic Shoko Hirosue (Lucy Cavendish) has always been interested in teaching. As a volunteer for SCA’s Homework Help project, she was matched with a student who needed assistance with GCSE maths. “I really enjoy contributing to the community,” she says. “And teaching is important in your medical career, as well: junior doctors need teaching. We’re also encouraged to do volunteer work before we start our careers. When I become more senior, I want to be a good teacher. So this skill is very applicable to my future career.”

Hirosue says SCA’s flexibility has made a huge difference. Currently doing hospital placements during the week, she sees her student at the weekend. “The family understand that sometimes I can’t make it on one weekend, and, if that happens, I can fit a session into the next,” she says. “I’ve found SCA very supportive – if you have any problems, they’re always willing to listen.”

Calling volunteer work “rewarding”, is, admits Cheyney, “a massive cliché! But it’s true. It’s unbelievably worthwhile. I’ve worked with some of the children at Bounce for three years now, and seeing their confidence improve has been wonderful. It’s a great feeling to do something for someone other than yourself.”

SCA are always looking for new volunteers. To find out more, visit cambridgesca.org.uk.

It is the most sumptuous piece of heart-aching music, and I fully intend to have it sung at my funeral.

Alexander Armstrong (Trinity 1989)
ARTISTS’ CAMBRIDGE


These works are available as high quality limited edition prints, (350/500 copies), each signed and numbered by the artist. They are priced at £99 each including delivery to the UK. Overseas delivery please add £15 additional postage. The image size is approximately 12" x 18", posted in heavy duty cardboard tubes and can be ordered by using the order form below, by telephoning 01474 535922 with Credit/Debit card details or order online by visiting www.contemporarywatercolours.co.uk

Contemporary Watercolours, 57 Windmill Street, Gravesend, Kent DA12 1BB
Emails info@cuc.uk.net

Send to: CONTEMPORARY WATERCOLOURS,
57 Windmill Street, Gravesend, Kent, DA12 1BB or Telephone +44 (0)1474 535922

- Churchill - Front
- Clare - Old Court
- Corpus Christi - New Court
- Downing - Kenny Gate
- Emmanuel - Front Court
- Gonville & Caius - Tree Court
- Jesus - First Court
- Magdalene - River Court
- Murray Edwards - Fountain Court
- Newnham - Old Court
- Pembroke - Old Court
- Peterhouse - Trumpington Street
- Queens' - Old Main Gate
- Selwyn - Old Court
- Sidney Sussex - Chapel Court
- St John's - Front Gate
- St John's - Great Gate
- Trinity Hall - Trinity Lane
- Trinity - Great Gate
- Trinity Hall - Trinity Lane

NAME ...............................................................................................................
ADDRESS ........................................................................................................
POST CODE ................................................................ TELEPHONE .................... EMAIL ........................................................................................................

- Cheques, payable to Contemporary Watercolours Amount £ ....................
- Visa/Mastercard/Debit Card Number ....................................................
- Expiry Date ......... Amount £ .................. Issue No (if applicable) .................. Valid from ..............
- CSC (Last three digits of the security number on reverse of card) ...............

SIGNATURE ................................................................................................. DATE ................................
Breaking the silence on sexual misconduct

Sarah d’Ambrumenil is Head of the Office of Student Conduct, Complaints and Appeals.

Research undertaken by the University, the Students’ Union, and the National Union of Students confirms that sexual misconduct is just as prevalent within our community as it is at any other university or microcosm of society.

Equally concerning is that victims often say they do not want to raise a formal complaint, reflecting the difficulties they face in disclosing what has happened to them, or in seeing the benefits to them of reliving their experiences through a formal reporting procedure. Students come here from all over the world to be influenced by their professors and peers. Consequently, it can be difficult to challenge others’ behaviour or even recognise that it might be inappropriate. But it is not good enough for the University to have support services and reporting options if students do not have the confidence to use them.

The University has been working with students, staff, victims and specialist organisations for the past few years to try to improve things. This work has culminated in the campaign Breaking the Silence – Cambridge speaks out against sexual misconduct, launched in October 2017. Spearheaded by the Vice-Chancellor, it raises awareness of the University’s zero-tolerance approach to sexual misconduct, as well as the support and next steps for victims. In the past 10 months the University has received around 140 reports of sexual misconduct taking place between students through its anonymous reporting mechanism, with half of those reports relating to a sexual act or sexual intercourse taking place without consent. This is not information that is easy to accept, though it is perhaps not unexpected – national studies suggest that 68 per cent of students in the UK are sexually harassed while at university.

It is those ‘next steps’ that my office is involved in: the Office of Student Conduct, Complaints and Appeals. We handle student complaints about the University and University staff, as well as complaints of harassment or sexual misconduct about other students. This is just one component of the resources in place to support victims and prevent sexual misconduct. Students also have access to a University Sexual Assault and Harassment Adviser and can attend bystander training and consent workshops; and student-facing staff receive briefings on how to support student disclosures.

Early indications suggest that the campaign is already having an impact: an increase in the number of cases being reported to our Office, and, via anonymous reporting, a decrease from 52 per cent to 25 per cent in the number of students who believe the University would not take any action if they reported sexual misconduct. However, the University, alone, cannot influence students’ confidence when it comes to seeking support and reporting sexual misconduct. Students’ behaviour is partly a reflection of society and the wider culture in which we live.

This is why it was so powerful to witness alumni coming out to support the campaign. The support from Colleges, staff and alumni has been overwhelming, with our campaign films being watched more than 85,000 times. By raising awareness – sharing a video, retweeting posts or ‘liking’ comments relating to Breaking the Silence – you are strengthening the message that when a victim comes forward to report, they do so with the backing of the Cambridge community. Your actions help to prevent sexual misconduct, by showing potential perpetrators that the Cambridge community will not tolerate this kind of behaviour.

I hope that in time your support in this area will become unnecessary, but, for now: thank you. You are helping to break the silence.

For further information and to see the video, visit breakingthesilence.cam.ac.uk.

By sharing, retweeting or ‘liking’ these posts you strengthen the message that when a victim comes forward, they do so with the backing of the Cambridge community.

ILLUSTRATION: KATE COPELAND

EXTRACURRICULAR UNIVERSITY MATTERS
EXTRACURRICULAR CROSSWORD

CAM 83 PRIZE CROSSWORD

Blues
by Schadenfreude

ACROSS
1 Religious woman in an excited state outside court knocked back a drink (6, 2 words)
6 He rescues judge held in laird’s yard by Republican (6)
11 Repeat “check” in gambling game (4)
13 Noisy game bird caught by the French lizards (7)
14 Did raw volunteers fly across lake? (6)
15 A kind American to expose earl (6)
16 Drama in some trouble (5)
17 Travelling on another terrible day (7, 3 words)
20 Comparatively thin artist, about eighty (5)
22 Bloke ignoring female pass (4)
23 Swimmer facing trouble on South Island (8)
25 Not more than a thousand stopping for second time (6, 2 words)
28 Inbred sow trapped left foot (6)
31 Magistrate’s office chair back repaired without compliance (8)
33 Curtail cold kiss (4)
34 Faith lives with recurrent pain (5)
37 I found in large dictionary “exultation of mythical ring” (7)
39 Newspaper covering bird foot disease (5)
40 A written composition about Zulu medical decoction (6)
41 Plant tree in shelter (6)
42 Brisk speed on foot (7)
43 Victorian gave me and Kay backing (4)
44 Silly director worried about retiring (6, 2 words)
45 Poles keeping anonymous greeting promotional tour (6)

DOWN
1 Baronet and associate look up and indeed resist (8, 3 words)
2 Acting knight protected by our king’s companion (5)
3 Pass over doctor with zero capital (7)
4 Page lied awfully about a brilliant septet (6)
5 Bishop led astray by academy member fit for the madhouse (4)
7 Peter Ustinov’s initial eccentricity stimulated an inspiring deity (7)
8 Casual errand boy’s game (8)
9 Exotic isle’s pear trees (9)
10 Did fish in Scotland fool local editor? (4)
12 Blue, close to sour cheese (4)
18 King of France touring US city (4)
19 Chap beginning to experience palsy developed a state of body rigidity (9)
21 Magnificent magistrate turned up with lire for money (5)
24 Prompting device I fixed keeping a robot working (8, 2 words)
26 Before one mother would skate (4)
27 Shilling gratuity to finish a soldier’s day (7)
29 Monk nursing tailless sick dolphin (7)
30 Parasites? Religious cross carried by each (6)
32 Nurse welcoming the start of exciting life (6)
35 Maiden queen and goddess join forces (4)
36 Dusty shore line followed by old uncle and Penny (5)
37 Firm engaging extremely loose feminist sociologist (4)
38 British medieval knight protecting learner more likely to snap (4)

All entries to be received by 11 May 2018. Please send completed crosswords:
- by post to CAM 83 Prize Crossword, University of Cambridge, 1 Quayside, Bridge Street, Cambridge, CB5 8AB
- online at alumni.cam.ac.uk/crossword
- by email to cameditor@alumni.cam.ac.uk

The first correct entry drawn will receive £50 to spend on CUP publications.
Solutions and winners will be printed in CAM 84 and posted online at alumni.cam.ac.uk/magazine on 25 May 2018.

Vacant cells are filled by CAMBRIDGE UNIVERSITY PRESS (CUP) in the shape of a cup (mixed drink).

Winner: Jamie Carpenter (Trinity 1995)
Runners-up: Elizabeth Warren (née O’Donnell, Sidney Sussex 1980), Bill Ball (St John’s 1983)
B&B IN CAMBRIDGE COLLEGES

More fun than a hotel, more quirky than a B&B. 23 wonderful colleges from the ancient to the futuristic. Cooked breakfasts, self-catering, free WiFi and great facilities.

FROM JUST £47 A NIGHT!
Welcome to your Club

For nearly 200 years alumni have chosen to take up membership of a spacious and elegant private club in the heart of the West End. The Oxford and Cambridge Club in Pall Mall is the perfect place to meet for a drink, entertain friends and colleagues in magnificent surroundings, play squash, take a break, host a party or just find a quiet corner to prepare for a meeting. A thriving social scene, sports facilities, a lively calendar of events including talks, tastings, dinners and balls, an exceptionally well-stocked library, extensive wine cellars and more than 40 bedrooms mean our members use their club for recreation, relaxation and business - and now you can too.

For more details please visit www.oxfordandcambridgeclub.co.uk or call 020 7321 5103