"We make a living by what we get, but we make a life by what we give"

THE PHILANTHROPIST

Celebrating world-changing philanthropy at Cambridge

UNIVERSITY OF CAMBRIDGE

Our cover quote, often attributed to Winston Churchill, does not appear in his archives and its final attribution is still a matter of some debate. CUDO would be delighted to hear from any reader able to shed more light on the correct attribution.

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CATS BROUGHT THE CREAM

Students Hetta Howes, Britta Tarvis and Genevieve Gaunt are passionate about English at Newnham. Now, that tradition is secure, following a gift – the Valerie Eliot Fund for English – from the Old Possum's Practical Trust, funded in part by one of the world's best-loved musicals, *CATS*. "Knowing that English will remain strong at Newnham is an important part of why I'm here," says Howes, "and now future students will have that security as well."

To read more about English at Newnham, visit www.cam.ac.uk/giving

Photography: Nick Turpin

Sir Leszek Borysiewicz, Vice-Chancellor

Welcome

Professor Sir Leszek Borysiewicz and Professor Robert Lethbridge on why philanthropy lies at the heart of Collegiate Cambridge

Illustrations: Elisabeth Moch for YCN

Philanthropy is not a new feature in the life of Collegiate Cambridge. Indeed, much of what Cambridge is today exists only because of enlightened benefactors in the past. But 2011 did mark a very significant milestone in our philanthropic journey, and one that we are delighted to celebrate in this special publication.

The completion of the 800th Anniversary Fundraising Campaign, which began in 2001 and was completed after 10 years at the end of our last financial year in July 2011, is an outstanding achievement. The numbers themselves are impressive. Your gift contributed to a mammoth £650 million raised for the University and £550 million for the Colleges, giving a total of £1.2 billion. But impressive as these figures are, they do not tell the story of why philanthropy matters to the University, or to our philanthropists.

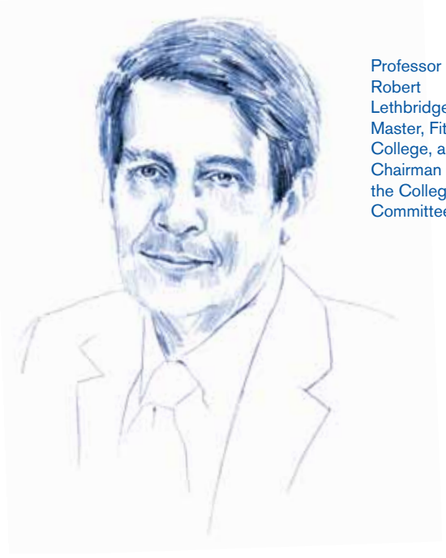
Your philanthropy enables the Colleges and the University to do things that wouldn't otherwise be possible: to break new ground in education and research, to take risks and to sustain excellence.

Second, your philanthropic investment protects the key freedoms of our great University: to choose the students and the academic staff who will benefit and contribute most; to design and deliver our teaching programmes; and to pursue scholarship and research in the directions we believe will best serve our goals of outstanding education and pioneering discovery. Too great a dependence on taxpayer-funded grants or student fees would compromise both these freedoms and Cambridge's long-term contribution to making a better world.

Finally, winning your support is, frankly, good for us. It stops us from becoming insular and self-regarding. It demands that we explain clearly what we are doing and why. It renews our confidence in our mission and reinforces our responsibility to nurture our fundamental values.

The best way to understand the impact of philanthropy is to see it at work. In this magazine, we have brought you stories and features that bring the benefits of philanthropy to life. This is not, therefore, a comprehensive report on the 800th Anniversary Campaign. Rather, it is a series of snapshots taken during the first part of a fundraising journey that must continue into the future if this great Collegiate University is to have the same transformational effect on the world that it has had in the past.

We are enormously grateful for your support. For every gift given, we could tell a story of the difference that generosity has made. We hope you will enjoy the small sample of stories that we have selected for this edition of *The Philanthropist*. You can read about some of the gifts in more detail on our website, *www.cam.ac.uk/giving*.



Professor Robert Lethbridge, Master, Fitzwilliam College, and Chairman of the Colleges' Committee

IN BRIEF

A snapshot of the impact philanthropists are making at Cambridge and in the wider world

Chan Scholar Chang Liu is completing a PhD in Chinese Linguistics at Murray Edwards College

“PHILANTHROPY IS HAVING A SIGNIFICANT IMPACT ON STUDENT ACCESS AND SUPPORT”

SUPPORTING THE NEXT GENERATION

How philanthropy is helping the students of today to develop the skills they need to become the leaders of tomorrow

Undergraduate Julia Penbury (Pembroke) says that her Man Group Cambridge Bursary has made all the difference to her academic career. “Not having to worry about some of the financial implications associated with studying has been critical,” she says. “Maths is a very intensive course, and not having to take part-time work to fund my tuition has allowed me to focus on my studies.”

Penbury’s bursary is one of up to 45 funded by Man Group plc, and part of the Cambridge Bursary Scheme, which ensures that a Cambridge education is available to those whose financial situation would otherwise prevent them from taking up their places.

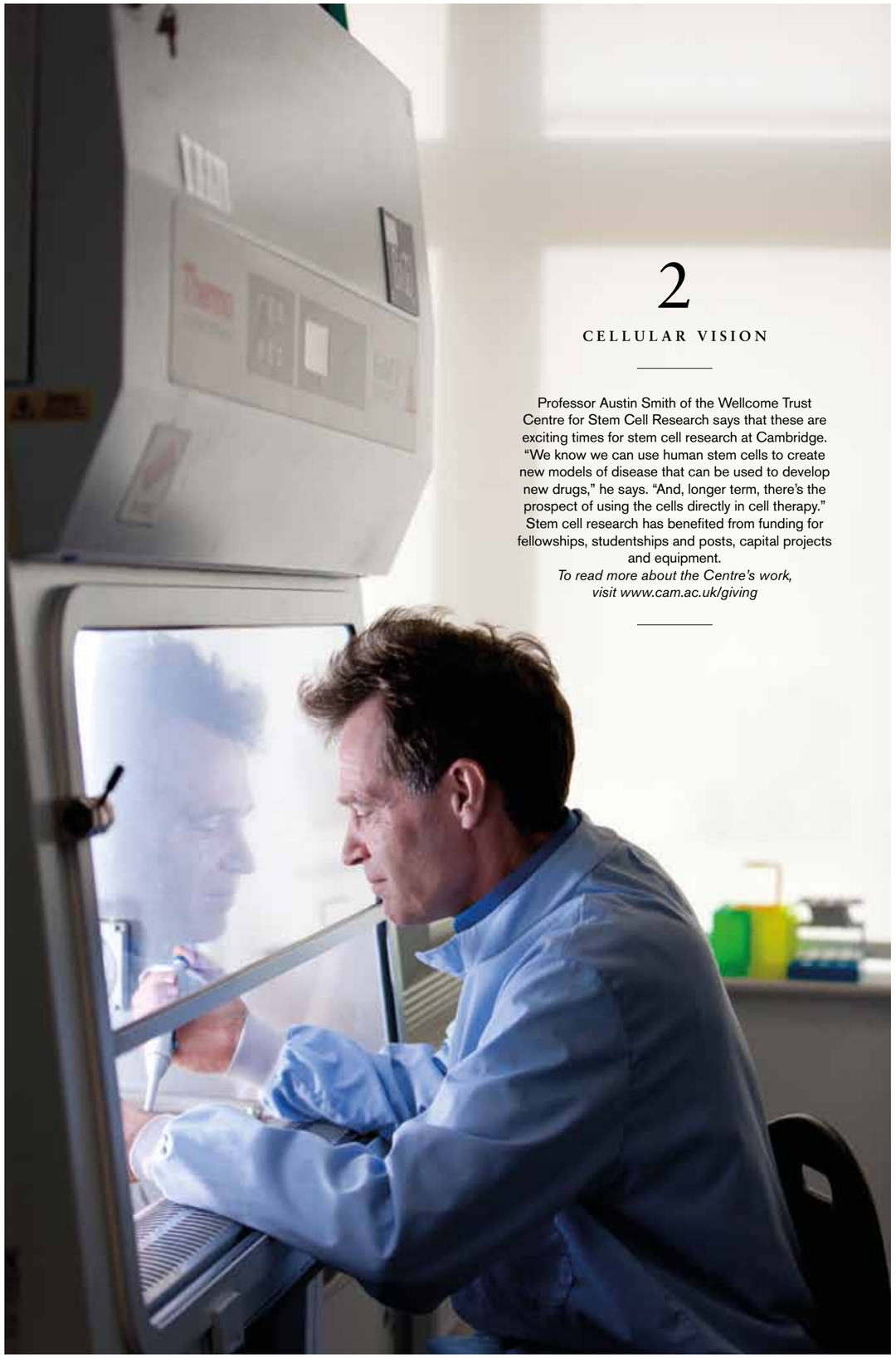
Undergraduates are not the only ones to benefit. At Jesus, the Gurnee Hart Scholarship is offered to a graduate studying an arts subject with a preference for history and historical studies. At Queens’, alumnus Dr Mohamed A El-Erian has established a fund for graduate students that offers research grants, bursaries, fee support, travel grants and hardship finance.

Elsewhere, the Jerry Lee Scholarships in Experimental Criminology, funded by the Jerry Lee Foundation, are helping outstanding graduates to develop ideas that will reduce the harm caused by crime. The Qualcomm European Research Studentships Fund in Technology enables students to undertake graduate study at the Department of Engineering, the Computer Laboratory and Cambridge Judge Business School.

International students can face particular challenges, both financial and practical, and many grants and bursaries exist to support them, often focused on students from a particular country. One such is the Grace and Thomas CH Chan Scholarship Fund, which provides generous support for doctoral study by students from the People’s Republic of China – making study at Cambridge a reality for a new generation of arts, humanities and social sciences graduates.

But while bursaries form the bedrock of student support, philanthropy to this area takes in every aspect of the Cambridge student experience. Undergraduate chemists have benefited from an extensive refurbishment of the Chemistry Central Teaching Complex, funded by The Wolfson Foundation. Some philanthropy benefits students before they even apply. A donation from two Fitzwilliam College alumni, Dick Tyler and Andrew Wilson, has enabled a full-time Schools Liaison Officer, Lauren Scarratt, to be appointed at the College. Her mission? To attract talented students from all backgrounds, through school visits, open days and other outreach activities.

And a gift from St Catharine’s alumnus Harvey McGrath has transformed the University’s outreach programmes for prospective undergraduates. His support has allowed the creation of several new initiatives, including an ‘applicants’ toolkit’, a website (*www.becambridge.com*), and improved summer schools for sixth-formers.



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CELLULAR VISION

Professor Austin Smith of the Wellcome Trust Centre for Stem Cell Research says that these are exciting times for stem cell research at Cambridge. "We know we can use human stem cells to create new models of disease that can be used to develop new drugs," he says. "And, longer term, there's the prospect of using the cells directly in cell therapy." Stem cell research has benefited from funding for fellowships, studentships and posts, capital projects and equipment.

To read more about the Centre's work, visit www.cam.ac.uk/giving

Photography: Nick Turpin

Poles apart

The Polar Museum at Cambridge's Scott Polar Research Institute has undergone a dramatic two-year transformation, following generous benefactions from the Heritage Lottery Fund, the Garfield Weston Foundation, the Foyle Foundation and many other donors.

The Institute was founded in 1920 as a memorial to Captain Robert Falcon Scott and his four companions, who perished on their return journey from the South Pole in 1912. Since then, the Institute has grown into a leading international research centre on the Arctic and the Antarctic.

Both the Museum and the wider Institute are concerned with current as well as historical topics – looking at issues that range from environmental change in the context of ice-sheet melting and sea-level rise to the governance of the Antarctic and the Arctic.

The Institute's Director, Professor Julian Dowdeswell, says: "We can exhibit much more of our polar collection to the public than ever before. We're now able to project not only the history of polar exploration, but also the contemporary significance of the Poles in a warming world."

Hidden treasures

Few universities can match the sheer diversity of research and teaching that is carried out at Cambridge. Here are just three 'hidden treasures' made possible by the generosity of philanthropists

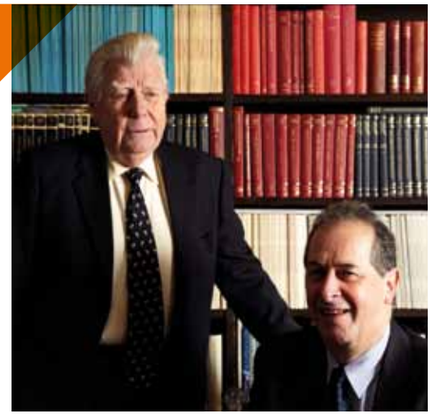
1 Ukrainian Studies has received a huge lift from a substantial donation by Dmitry Firtash. His generosity has allowed the permanent establishment of two academic posts: a Lectureship in Ukrainian Studies and a Lectureship in Ukrainian Language. Mr Firtash is also providing financial support for five Ukrainian students to pursue MPhil degrees in the arts and humanities.

2 The Centre for Research in the Arts, Social Sciences and Humanities (CRASSH) was established in 2001 as a hub for scholarly encounter and development. As well as running more than 300 events a year, 16 faculty research groups and longer-term interdisciplinary research projects, CRASSH's conference programme provides researchers with a means of interacting and developing cross-disciplinary initiatives; and its Visiting Fellowships bring academics from all around the world to Cambridge.

Since 2007, philanthropist Brian Buckley has helped CRASSH to achieve its goals with financial support for the conferences and Visiting Fellowships. His funding has also allowed one outstanding young academic to become a Buckley Fellow, to combine research with responsibility for the strategic direction of the Centre.

3 The Hamilton Kerr Institute – one of the world's leading centres for the conservation of easel paintings – has been better able to train the next generation of conservators thanks to philanthropists including the Garfield Weston Foundation and the J Paul Getty Trust.

Their donations have allowed interns from Britain and overseas to study at the Institute and gain the experience essential to pursuing a career in paintings conservation. The interns are often able to work on paintings belonging to the Fitzwilliam Museum and other University and College collections, and are vital to the Institute's academic life.



THE SUPERVISION THAT CHANGED MY LIFE

Historian Neil McKendrick and one of his former students, David Elstein, explain why the supervision is still at the heart of a Cambridge education

Words: Stephen Wilson | **Photography:** Nick Ballon

Neil McKendrick – former Master of Caius and legendary Director of Studies – is musing on his students' phenomenal Tripos success rate. "I always liked Jewish mothers, and they always liked me," he says. "I quickly realised that modelling myself on a Jewish mother – tough, encouraging, ambitious, and paying attention to the details – was a good way to get results!"

Over a 35-year career as Director of Studies for History at Caius, McKendrick gained a reputation for toughness – and for firsts. And in 2008, almost 40 years after conducting his first supervision, 95 former students and friends gave £1 million to endow a College Lectureship in History bearing his name.

It is a vital piece of philanthropy at the College – not least because, as things stand, the numbers do not stack up. An undergraduate education costs about £17,100, but student fees bring in just £9,000. Somehow, the University and Colleges must make up the difference.

Despite the difficulties, McKendrick believes that supervisions, in small groups with the experts, remain the defining characteristic of a Cambridge education. "Each week, you read, you write and then you get an immediate reaction," he says. "Over the term, you are constantly challenged. The idea that you can go to the leading people, often the best in the world, to get one-to-one teaching, is the key. And if you are any good, they will want you to do really well, too."

David Elstein – one of McKendrick's first students, and often described as the cleverest man in broadcasting – agrees. "Even as you read your essay, you were already thinking, 'Oh dear, this is a flat passage. That expression wasn't well chosen. I now realise that there is a much better quote sitting in my notes somewhere,'" he says. "You were improving even before you got any feedback – and then you got the feedback."

Elstein, who matriculated in 1961, remembers being supervised by many of the great historians of the time, but says that supervisions with McKendrick transformed his Cambridge career. "Neil was formidable, not least in his encouragement and focus," he says. "Even in shared supervisions, the level of attention was a remarkable spur to work hard and write well. He also assigned me for specialist supervisions to the likes of Harry Hinsley and Geoffrey Barraclough, which was pretty mind-blowing for someone my age.

"But really, Caius' astonishing track record in History – innumerable firsts, starred firsts almost every year for decades – speaks for itself. The fact that so many of his students so quickly subscribed to the lectureship in his name is an even more eloquent testimony."

Enduring legacy

The newly baptised Murray Edwards College has a history of promoting independent thinking among people from non-traditional backgrounds

In 1954, a Cambridge College for women was founded in borrowed buildings with one shilling and no permanent name. Lacking a benefactor, it was to be known as the 'New Hall' until a donor came forward to endow and name it. And this 'third foundation' for women after Girton and Newnham was sorely needed: at the time, Cambridge had the lowest proportion of female undergraduates of any British university.

Now, more than 50 years later, the founders' wishes have been fulfilled. After a donation – the largest gift in the College's history – from Cambridge-based entrepreneur Dr Ros Smith and her husband Steve Edwards, the College finally gained a name. In 2008, after consultation with alumnae, New Hall was renamed Murray Edwards College.

The new name recognises not just the Edwards' benefaction, but also the vision of the College's first President, the late Dame Rosemary Murray. During her tenure, the College became a driving force for women's education at the University, and Dame Rosemary herself became the first female Vice-Chancellor in Cambridge's history.

Ros Smith says: "The College is a very special place. Warm and welcoming, it is exceptionally good at opening doors to a rigorous education for those from a non-traditional background, nurturing independence of thought, and attracting interesting people.

"We worked with the former President, Anne Lonsdale, for some time. Inspired by her ideas, we intended to make a legacy to support the transformational education the College offers, and to safeguard excellence. We then realised that by allowing the College to benefit in our lifetimes, so much more could be achieved; and we would see for ourselves the difference that our gift will make."

This donation is already making a huge difference to the College. It has been able to launch several new initiatives, such as employing a full-time Schools Liaison Officer and reinstating Junior Research Fellowships. It also helped initiate the unique Gateway Programme, which supports students all the way from sixth-form through their time at Murray Edwards and into their chosen careers.

The couple hope that their gift will inspire further philanthropy to the University. Ros Smith says: "We have a moral responsibility to fund our universities so that they can compete with richly endowed ones in the United States on an equal footing."

CHANGING CANCER RESEARCH

Few of the University's endeavours have a higher profile than cancer research. Thanks to philanthropic support, Cambridge is at the forefront of the search for the disease's causes, and the race to develop new treatments and bring them to the clinic to benefit patients.

The Cancer Research UK Cambridge Research Institute is a unique collaboration between the University and Cancer Research UK. Located in the Li Ka Shing Centre on the Addenbrooke's Hospital Site, it serves as a base for more than 300 scientists in up to 30 research groups.

The Centre's name recognises the generosity of Sir Ka-shing Li, whose substantial donations were vital in ensuring that the new Institute came to Cambridge. A further gift from the Li Ka Shing Foundation endowed a new Professorship of Oncology. Its first holder, Professor Sir Bruce Ponder, is also Director of the Research Institute, and oversees all aspects of cancer research throughout the entire Cambridge Biomedical Campus.

The Cancer Research UK Cambridge Research Institute has already delivered a number of breakthroughs, including advances in genetic profiling for breast cancer and understanding why treatments for pancreatic cancer may fail. Researchers have also discovered why some women become resistant to the breast-cancer drug Tamoxifen, and have found a new breast-cancer 'oncogene' – a cancer-causing gene that can override the normal checks that control cell division.

Since being opened by the Queen in 2007, the Li Ka Shing Centre has become a beacon for cancer research in Cambridge, and in the UK as a whole. "The Cancer Research UK Cambridge Research Institute, based in the magnificent Li Ka Shing Centre, gives us an exciting opportunity to harness the scientific strengths of Cambridge to solve the practical problems of diagnosis, treatment and prevention of cancer," says Professor Sir Bruce Ponder. "We have recruited world-class scientists whose fundamental research into how cancers develop is starting to result in practical benefits for patients."

RISING FROM THE EAST

India's ever-greater role in the world economy is the focus of a new research hub at the Cambridge Judge Business School. Established with the help of start-up funds from the BP Foundation, the Centre for India and Global Business brings together expertise from across the Cambridge academic community and beyond.

Jaideep Prabhu, the first Jawaharlal Nehru Professor of Indian Business and Enterprise (a new post funded by the Government of India) and Director of the Centre, says: "India stands today at a threshold of greatness. Its young population, combined with its service economy, predisposes it to play an important role in the global knowledge economy of tomorrow.

"The Centre aims to generate cutting-edge thought leadership by bringing together business, academic and policy leaders from around the world to understand, promote and engage with Indian innovators."

Of particular interest to the Centre is research related to technological innovation, how globalisation is affecting emerging economies (and vice versa) and the relationship between the knowledge economy, entrepreneurship and economic development within those countries.

For more information, visit www.india.jbs.cam.ac.uk.

BUILDING BLOCKS

The elegant **Stephen Hawking Building** at **Gonville and Caius College** houses student and Fellows' accommodation, spaces for supervisions and a combination room. It was designed for low environmental impact, with energy-saving technology and an S-shaped layout to ensure that mature trees on the site – where Professor Hawking's villa once stood – could be preserved. Almost 2,000 members and friends of the College gave to the construction appeal, and different parts of the building have been named in recognition of individual donations.

Blundell Court at **Sidney Sussex College** has been enhanced by the creation of a new floor of student accommodation. Named the **Gledhill Skyline**, it was constructed through the generosity of Mrs Kyoko Gledhill, whose late husband David studied Economics at the College. As well as providing an eloquent and enduring memorial, it has gone a long way towards satisfying the College's objective of providing comfortable, secure and attractive rooms for more current and future students.

The **Howard Theatre** in **Downing College** is an arresting mix of old and new. It has been built in the neoclassical style of the surrounding College buildings, with Georgian flourishes such as an intricate *trompe l'œil* ceiling, but its technical stage facilities represent the best of the 21st century. The 160-seat theatre was funded by a benefaction from College alumnus and Wilkins Fellow Dr Alan Howard, whose career in medical research at the University spans 60 years.

HISTORY OF A FRIENDSHIP

David Walker and Bill Janeway, the 800th Anniversary Campaign co-chairmen, discuss a friendship built on philanthropy

Words: Becky Allen | **Photography:** Nick Ballon

"It was a large job," says David Walker of the chairmanship of the 800th Anniversary Campaign. "And it called for the two of us – we needed each other and the Campaign needed us both."

The "us" in this case is a reference to Walker's co-chairman, Bill Janeway. Over the years of the Campaign, Walker and Janeway have built a tremendously effective professional and personal friendship, something that they attribute to a shared sense of what needed to be done.

Although philanthropy at Cambridge has a long and illustrious history, the 800th Anniversary was the first time the University had launched a major campaign. From the outset, the co-chairmen believed Cambridge should be ambitious, and others found the duo's united front hard to resist. "There was a lot of caution about how ambitious we should be about setting the target for the Campaign," Walker explains. "But when we said, 'Let's go for £1 billion', it was game, set and match."

As well as agreeing on the target, the pair were in accord on the Collegiate nature of the Campaign. "Thinking through the case, the scale and the necessary conditions for success, we were aggressive on the notion that this had to be a campaign for all of Collegiate Cambridge," says Janeway.

The differences between them, however, were as important as the vision they shared. "We're complementary in every sense – in skill set, experience and history," David explains, alluding to the fact that Janeway comes from the United States, which has a strongly philanthropic culture.

"Bill brought something that most of us in the UK hadn't had: the American model of philanthropy. It's been embedded for generations. But the idea that an alumnus had a responsibility to discharge to the alma mater was an alien concept for many."

"I'd put it more strongly," Janeway adds. "I found an almost feudal notion of fundraising here – as if we were in a village in Midsomer and having a whip-round of the local baronet, squire and vicar to put a new roof on the village hall. Instead, we needed to take seriously the long-term commitment to building a base from the bottom up, College by College and alumnus by alumnus."

Over the past seven years, they have witnessed major changes in attitudes to philanthropy in the UK, partly as a result of the Campaign and partly due to significant changes in public funding of higher education.

"The timing of the Campaign turns out fortuitously and fortunately to have prepared the Cambridge community for the world in which we now find ourselves, where philanthropy isn't a 'nice to have', it's a 'must-have'. Having got ahead of this curve and started building a base, we are entering the future with a great deal of momentum and shared purpose," says Janeway.

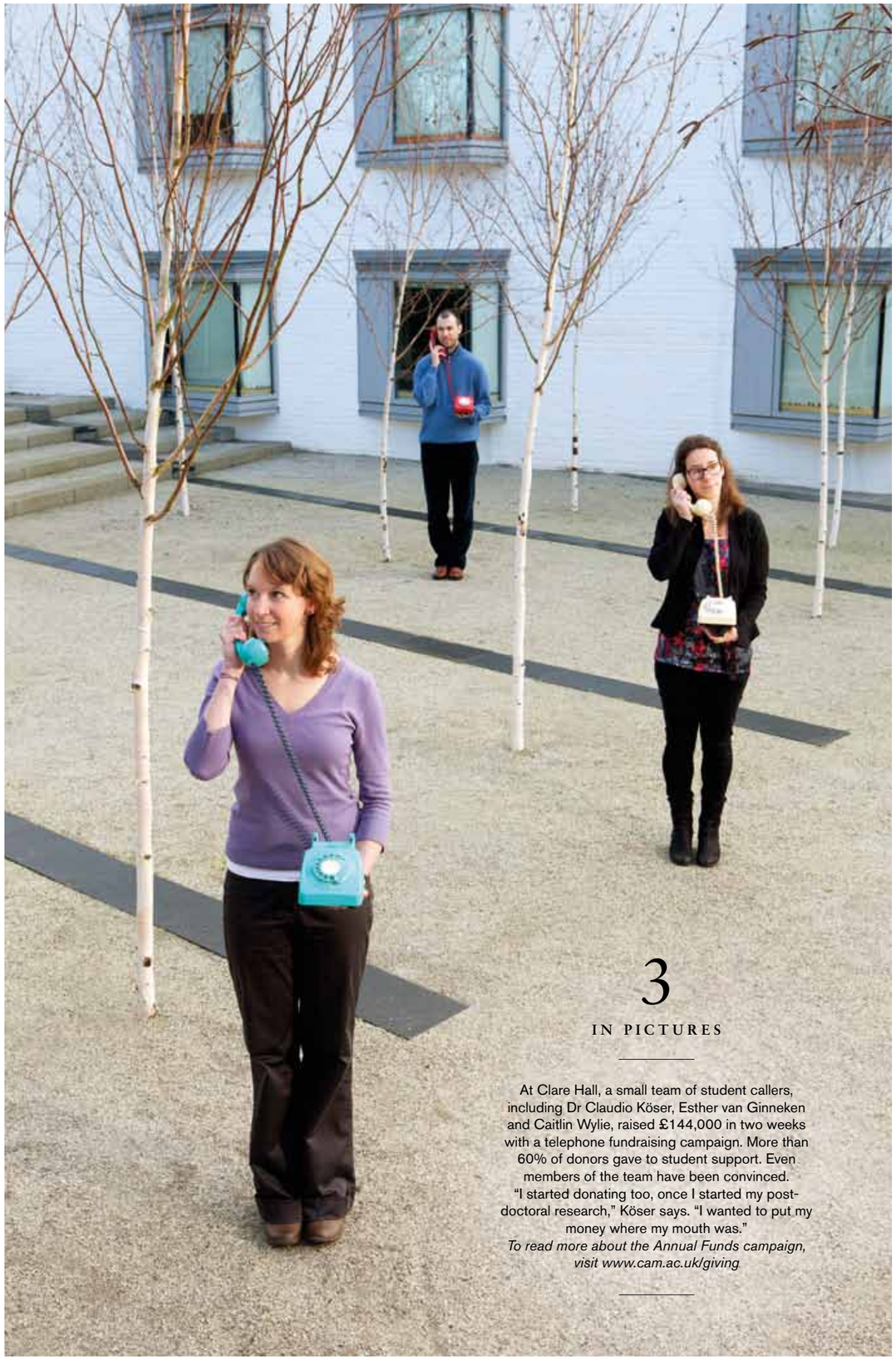
That change is exemplified not only by the £1.2 billion raised by the Campaign, but also by the facts that most Colleges now run telephone campaigns, and maintain and build relationships with their former students. In fact, 25% of alumni have made at least one gift to their College.

"This isn't just a project," Janeway concludes. "The Campaign initiated a way of life, a way of thinking about the fundamental responsibilities for achieving what we're all so committed to – which is maintaining Cambridge as one of the leading institutions of research and education in the world."

And the Campaign has enriched the lives of its chairmen too, helping to forge a new friendship, according to Walker. "We get on quite well. For all his faults, Bill's a very nice guy!"

Sir David Walker (Queens' 1958) read Maths and Economics and has risen to the top of the banking sector. In 2009, he carried out the Walker Review for HM Treasury. He is a trustee of the Sir David and Isobel Walker Trust, a major donor to stem cell research at Cambridge.

Dr Bill Janeway (Pembroke 1965), a Marshall Scholar, completed his PhD in Economics at Cambridge. He is a senior advisor at Warburg Pincus and a major donor to the Vice-Chancellor's Discretionary Fund, Pembroke College, Cambridge Judge Business School and the Faculty of Economics.



Photography: Nick Turpin

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IN PICTURES

At Clare Hall, a small team of student callers, including Dr Claudio Köser, Esther van Ginneken and Caitlin Wylie, raised £144,000 in two weeks with a telephone fundraising campaign. More than 60% of donors gave to student support. Even members of the team have been convinced. "I started donating too, once I started my post-doctoral research," Köser says. "I wanted to put my money where my mouth was."

To read more about the Annual Funds campaign, visit www.cam.ac.uk/giving

The pleasures of giving

Professor Simon Blackburn

Illustration: Elisabeth Moch for YCN

A little over a year before reaching the retirement age of 67, I found myself restored to the academic peerage. After 10 years of being mere *professor*, I returned to something rather grander: the Bertrand Russell Professor of Philosophy.

It is true that – as is the British way with such honorific titles – for the most part, the benefit was nominal rather than tangible. I got no more credit from local tradesmen, no additional cash in hand, no extra stripe or star on my mortar board – not even a reserved bicycle stand on the Sidgwick Avenue Site.

But there was one real benefit. For several years now, in a regular parade of crisis meetings, the writing (with added PowerPoint graphics) has been on the wall. Faculty chairmen have been frightened by rioting graphs showing falling budgets, rising deficits and the need to economise sharp and fast. Little towers representing disposable income are shown tumbling down. In an arts faculty, salaries account for well over 90% of expenditure, so jobs would have to go.

Everyone sympathises with, and talks of, protecting our core values, but cuts would have to happen. In a small department such as Philosophy, the loss of even one post is disproportionately serious. The loss or even the mothballing of one of the two Chairs would have been a huge blow, striking hard at our ability to continue to attract the best and the brightest students.

Our only defence against this happening was to find independent funding, enabling us to ring-fence the Bertrand Russell Chair and render it more or less immune to the withering winds blowing from Whitehall. Our success in fundraising saved us from a great load of worry about the future of the Faculty.

It may seem surprising to hard-nosed economists that those who are retired, or are about to retire, should fully share the worry. After all, my own economic well-being is unaffected as I pass from the hands of the University to that of its pension scheme.

But quaint as it may seem, many of us do care about the survival of the academic culture we have spent our lives tending and trying to pass on. We do not like imagining the fountains going dry. So the funding success worked on me as a kind of reverse vasectomy, enabling me to enjoy the prospect of having a successor – a happy event that duly took place last September, when Professor Huw Price took the Chair.

The title brought with it another tangible benefit. This was the pleasure of meeting those extraordinarily generous donors whose funding guaranteed the future of the Chair. It is uplifting to see generosity in action; it is like listening to great music, or responding to great architecture or painting. It reminds us of the better possibilities of human nature. It bucks the greed culture.

When the generosity is exercised so abundantly on behalf of a cause such as philosophical education in Cambridge – a cause that requires special sensitivity and understanding for anyone to embrace – well, it might not have brought a tear to Bertie's aquiline and aristocratic eye, but it came close to doing so to mine.

Fortunately, if there is a pleasure in an awareness of people being generous, there is an even greater pleasure in being so. We feel good picking up the wallet dropped in the street and returning it without hesitation to its owner. So if you want to feel good about yourself, go on, write that cheque today. Enjoy the warm glow of pride that is such a reward! Having both written such cheques and received them, I promise that the pleasures are about equal.

"To give away money is an easy matter. But to decide to whom to give it and how much and when, for what purpose and how, is neither in every man's power, nor an easy matter"

ARISTOTLE

Words: Lucy Jolin | **Illustrations:** Joel Holland

The history of philanthropy, both the word and the act, is not a straightforward one. Ask a modern philanthropist if they consider themselves to be of that breed, and the answer may well be "no". As John Osborn, a long-time supporter of Sidney Sussex, says, "It sounds so grand. It makes me think of ladies with cherries in their hats, doing good works."

Aeschylus was the first to use the term, describing Prometheus's gifts of fire and optimism to mankind as being from one who has *philanthropos tropos* – a humanity-loving character. Plato describes philanthropy as "a state of well-educated habits, stemming from love of humanity; a state of being productive, of benefit to humans". The Romans called it simply *humanitas*.

But by the time philanthropy re-emerges in the early Middle Ages, it looks like something much closer to patronage, as Peter Mandler, Professor of Modern Cultural History, explains. "Many early donors to Cambridge were looking to the care of their immortal souls, but they were also looking for places to put their servants and family members," he says. "Patronage is not just a gift with strings attached – 'you give me something and I'll give you something in return'. It's also [a personal relationship] where the donor considers the beneficiaries to be part of their network, their court, their team."

And so King's Hall, founded in 1317 and now part of Trinity, was intended by its founder, Edward II, to provide recruits for the civil service. Lady Margaret Beaufort, mother of Henry VII and one of the richest women of her day, founded Christ's and St John's Colleges with her confessor St John Fisher. Her deeply felt religious convictions did not prevent her from being, in addition, a skilled political operator. King Henry VIII endowed five professorships but also suppressed the study of canon law and forbade the study of scholastic philosophy.

Modern philanthropy – using the commonly accepted definition of "private initiatives for the public good" – gradually came into being from the 16th century onwards. Religion was still very much a factor in giving. But concerns over the state of one's immortal soul and one's standing with the king or queen gradually gave way to concerns over the state of one's fellow man, with less regard for his political allegiance.

By the early 19th century, a wave of investigations into so-called charities sparked an increased public interest into what those supposed to be doing good works actually did. Charities – Cambridge Colleges included – had to become more accountable and be seen to be doing good. Thus, the popular image of the philanthropist came about: a bearded businessman, serious in his frock-coat, earnestly dedicated to improving the lot of the poor, with his grave-faced wife, equally devoted to charity, standing behind him. "In general, the men tended to have the huge sums of money," says Professor Mandler, "and the women did the organising."

Modern philanthropists find it hard to shake off this stereotype, even though the new style of donor – often

"Money is a great treasure that only increases as you give it away"

LORD FRANCIS BACON

dynamic, entrepreneurial people who are making highly personal gifts – would be unrecognisable to their Victorian counterparts. Nick Corfield, the Silicon Valley pioneer and a major donor to the Cambridge Centre for Mathematical Sciences, exemplifies this kind of philanthropist when he describes why he gives. "I have an idea about something – usually something strategic. I want to get it done," he says. "Part of the baggage that goes with being a mathematician," he adds wryly.

Giving 2.0

This kind of philanthropy has its roots in the world of business – a "giving 2.0", as Paul Tracey of the Cambridge Judge Business School describes it. "There are two aspects to this idea," he says. "One is that some people who give money want a degree of control over how it is spent. This isn't just because it's their money and so they feel a sense of entitlement. It's also because, often, the people who are giving the money are very successful and capable, and sometimes have specialist skills. They believe that by being involved further down the line, they can add value and ensure that the gift is spent effectively."

For some academics, such an active approach raises fears of encroachment on academic freedom. But Professor Dame Alison Richard, who launched the 800th Campaign when she was Vice-Chancellor, takes a different view. "A great benefit of philanthropy – sometimes overlooked or even feared as an inappropriate encroachment – is that many donors contribute generously with ideas as well as funds. Such donors challenge us to explore new pathways or think differently," she says.

"This is invariably interesting and often inspirational, even if occasionally an idea will turn out to be unworkable, or plain bad – and it is always possible, though rarely necessary, to say 'no, thank you'. I look back with great pleasure on the experience of building relationships with donors, listening to their ideas, pushing back with our own, and forging opportunities for gifts that were exciting for the donors as well as responsive to institutional priorities."

It's certainly not all about spending vast sums, however. John Osborn started out by "dipping a toe in the water", he says. "I set up some bursaries at my old school. Then I knocked on the door of my old College. I started modestly, funding some bursaries for undergraduates from poorer backgrounds. I have a very strong interest in things medieval. So the next step was to support a postgrad doing a PhD in this field.

"That's where the Osborn Research Studentship came in. Then the next logical move was to fund a fully endowed College Fellowship in Medieval History. And, latterly, I have funded a fully endowed Directorship of Music at Sidney Sussex – music being another passion of mine. So the giving has escalated!"

Perhaps a working definition of philanthropy should include the motivations of the giver. There's certainly an element of self-interest, says investment manager David Harding, whose David Harding Foundation funds the Winton Programme for the Physics of Sustainability in Cambridge's renowned Cavendish Laboratory. "But human motivations are rarely monocausal. If someone said, 'I'm only doing it for worldly glory', that would be mean," he says. "I hope the Programme will push the world a tiny bit in the right direction. It's long-term, pure research, which is a fundamental type of science.

"I'd be thrilled if someone came up with a high-temperature superconductor that meant all the world's energy could be generated by solar power in the Sahara desert and then piped, with no loss of power, to Europe. That would tick my boxes in terms of making the world a better place. I don't feel any shame in acting in a way that is partly self-interested. Because it's also in the interests of the community of which I am a part."

There's a fundamental need, it would seem, to give something back, to pay it forward. "I had a free education, an excellent education, at King Edward's School in Birmingham, and from there went on to Cambridge," says Osborn. "My father was ill during my childhood and while I was growing up. My mother had to go out and work, so there was no money. My logic was to put something back into those areas of my education."

Dr Alan Howard, donor of the funds that built Howard Court and the Howard Theatre at Downing College, is clear about his motivations. "I've always been very proud of the College and felt it was wonderful," he says. "It has given me fantastic support. There were two things in life I wanted to do. One was to do research and the other was to benefit Downing, where I have been since 1948. You don't do it for the glory. Yes, a lot of people now know the name Howard – but I very much doubt that they'll know who I am in a few generations' time."

In good faith

Lord Weidenfeld of Chelsea – who created the Humanitas Visiting Professorships at Oxford and Cambridge – says that interfaith activities are part of his "philanthropic urge" and points out that they are also behind many projects aimed at fostering understanding and dialogue among nations. Professor Mandler, who has worked with the Rothschild Foundation, says religion continues to be an important motivation for many.

"In the case of the Jews, it has often been about helping your co-religionists," he says. "There's an injunction in Jewish culture to *Tzedakah*, or charity. It's part of your religious responsibility. But it's also true of many other religions, as is the sense that you are trying to make some kind of restitution or provision for your immortal memory. So modern motives, even sometimes apparently secular ones, are not all that different from the motives that used to drive people when religion was more central to everyone's life."

With a vast range of causes to choose from, how does the modern philanthropist choose his or her projects? Here is something that has not changed – they tend to reflect the donor's personal passions or careers.

A generation of children learned BASIC programming on the BBC Microcomputer System produced by Acorn, the company co-founded by Hermann Hauser. Although Hauser says with a laugh that philanthropy "comes with age", it's easy to see a direct pathway between his early career as an entrepreneur and his later philanthropic projects. For Hauser, the drive to improve society starts with successful entrepreneurship. "Little Johnny can identify with being a teacher, or a doctor, or a pilot," he says. "But we need entrepreneurs to be role models too. In western society, the only way to improve quality of life is through innovation."

Hence The Hauser-Raspe Foundation, which concentrates on projects promoting education and entrepreneurship. Its latest project, the newly opened Hauser Forum in Cambridge, aims to stimulate innovative collaboration among clusters of academics, start-ups and established businesses.

Hauser says: "We talked about how we could bring the business community and the University community together. That's why the Forum has, as its centrepiece, the cafeteria, and why there's a commercial building right in the middle of an academic campus – the hope is that business and academia would meet informally at the cafeteria and come up with some clever ideas."

Whether you call it philanthropy, generosity, charity, social entrepreneurship or simply, as Osborn suggests, "a useful way of giving away your dosh", there is little doubt about its impact. From the Hauser Forum to the Cambridge Centre for Mathematical Sciences, from the shared international understanding fostered by Lord Weidenfeld's Humanitas Lectures to the stage of the Howard Theatre, from the development of choral music at Sidney Sussex to the technical complexity of the Winton Programme, the work of donors is driving forward creativity in the arts and sciences, encouraging education and nurturing new generations of ideas.

"It's not just the Government's job to do something," says Nick Corfield. "We should be saying to ourselves, 'If I think something is good, I should be willing to put some of my own money into it'. We can make things happen more often than the Government can. A century ago, private individuals just went ahead and did things. They made them possible. If I can foster a generation getting back to that point of view, that would be fantastic.

"People who had no idea who I was invested in me. I'm willing to pass that forward. People who will have no idea of who I am, or was, will benefit from my actions. And so it goes on."

All the world's a stage

Hugh Bonneville, star of *Downton Abbey*, says that philanthropists have transformed the experience of stepping on to the ADC stage

Words: Anne Wollenberg | **Photography:** Johanna Ward

> “JUST THINK OF THE GENERATIONS OF ACTORS AND DIRECTORS WHO CUT THEIR TEETH AT CAMBRIDGE”

No freezing-cold queues, no frenzied crush at the bar and no shortage of dressing-room loos – things have changed a lot since Hugh Bonneville last stepped on to the stage of the Amateur Dramatic Club (ADC) Theatre.

“Back then, the egress was simply the stairs, so you had to queue in the cold,” he says. “There's such a great space here now, and backstage is completely different, with proper dressing rooms. It's a much more convivial atmosphere.”

The ADC Theatre Appeal was launched in 2002. Since then, individual philanthropists, charitable foundations and trusts, the University and the Colleges have been instrumental in raising the £2.2 million required for the theatre's redevelopment – including new rehearsal spaces, better access for disabled people and a new stage floor. “And all the seats have been replaced!” adds a delighted Bonneville.

It's a huge contrast, he says, with the days when fellow Corpus Christi student Nick Ward, now a playwright and director, staged weekly performances in the Corpus Playroom “with a couple of actors and a light bulb”.

The Playroom has also benefited from a recent refurbishment. “It was virtually condemned before, although it looked better than when I was here,” Bonneville says. “Nick used to have to clear his way through rubbish, and it was damp and horrible. I hear productions in the past two terms have been really fantastic, and I'm delighted to see it back on its feet.”

As much a patron as a performer – “I've lost count of the number of plays I've seen at the ADC” – Bonneville was “flabbergasted” when AJ Quinn (now a TV director and head of recorded drama at drama school LAMDA) cast him as Romeo in his first term at Cambridge, to literary agent Jo Unwin's Juliet. Also among the cast were *The Guardian*'s film critic Peter Bradshaw, comedy actress and writer Joanna Scanlan, and Dominic Dromgoole, now artistic director at Shakespeare's Globe.

“I personally think it's great that Cambridge doesn't have a drama course,” says Bonneville, who was an enthusiastic member of the European Theatre Group and the Fletcher Players. “I hung out with the architect Andrew Williamson, who did set design. Dominic read Classics, and there were medics in various shows – I loved that the fact that our day jobs, so to speak, were so varied.”

Acting might not have become Bonneville's day job had it not been for his time at Cambridge. While today he's busy filming series three of *Downton Abbey* (he's particularly excited about Shirley MacLaine joining the cast) and new episodes of *Twenty Twelve*, his sights were originally set on the Bar. “I thought I was going to do a law conversion course,” he says. “It's a great relief that that didn't happen – I would have been a useless barrister.”

Not only did Cambridge cement Bonneville's ambitions to pursue an acting career, it also provided solid practical experience. He went on to drama school, but, he reveals, “they said we weren't ready to go in front of an audience, so I only lasted a term and a bit. I was used to doing two or three plays a term and going to Edinburgh.”

In contrast, he remembers Cambridge as “a foaming crucible of ideas”. He adds: “Because drama wasn't part of a curriculum, the canvas was blank and that was always very exciting. To be able to enrich the spirit in some way – be you a fine sportsman, an artist, a musician, a rower or an actor – is what Cambridge does best. Anything that encourages us in our threescore years and 10 to explore our imagination to the best of our abilities.

“Places like Cambridge are invaluable for that,” he says, gazing around the auditorium. “Just think of the generations of actors and directors who cut their teeth here.”

Hugh Bonneville (Corpus Christi 1982) stars in ITV's Downton Abbey *and the BBC comedy* Twenty Twelve. *He read Theology at Cambridge.*

Photography: Nick Turpin

4

A NEW LEXICON

Studying Ancient Greek is about to become a great deal more practical. As a result of the generosity of many philanthropists, researchers in the Faculty of Classics are working on a new Greek lexicon. It's special because it will be based on cutting-edge linguistic principles and "a completely new reading of the texts", explains Professor Richard Hunter. "There's a genuine appetite for learning Latin and Ancient Greek," he says. "Whether in book form or online, this lexicon increases students' chances of making progress."

To read more about the new Greek lexicon, visit www.cam.ac.uk/giving

On reflection
Professor Paul Cartledge is the AG Leventis Professor of Greek Culture

Illustration: Elisabeth Moch for YCN

The ancient Greeks had a word for it: *historia*, an enquiry that is analytical, critical. It turns up in the *Preface of the Histories* (plural of *historia*) of Herodotus, who was the world's pioneer of this genre of scholarship: history, to which I myself subscribe.

More precisely, I am a historian of ancient Greek culture and of that rich and diverse culture's continuing impact on our own. One of my ancient mentors, the historian Thucydides – who came after and sought to outdo Herodotus – believed his work of research would be useful. He expected that his readers would find lessons in his narrative that could be generalised to other comparable situations that he thought were bound to recur in more or less similar forms and contexts.

Not all of us share Thucydides' confidence that we can learn from history. As one wag put it, "What we learn from history is that we do not learn from history." But, whether useful or not in a narrowly pragmatic sense, research of both the ancient and the modern kinds in the fields of what we now call the arts and the humanities has a higher – or deeper – meaning and goal. And that is the greater, sympathetic – and, dare I say, charitable – understanding of people, times, civilisations and cultures other than (and sometimes radically alien to) our own.

The role of philanthropy in this aim cannot be overstated. The Chair I hold, the AG Leventis Foundation Chair, is the first to be fully endowed in Classics in Cambridge since the Second World War. A stunningly generous gift, and yet just one among the Foundation's multiplicity of worldwide benevolent donations. These range from the Fitzwilliam and my own College, Clare, to Odessa (originally Olbia) in Ukraine on the northern shore of the Euxine (or Pontus, as the ancient Greeks called it – that is, the Black Sea today).

Here, between 1999 and 2005, the Foundation renovated an 1825 merchant's dwelling, turning it into the Archaeological Museum, a treasure house of ancient Greek art dating from the seventh century BC (which is when Greeks from the Aegean first penetrated and permanently settled the Black Sea area) to the Graeco-Roman period. And to the Museum the Foundation added a vital research tool, a scientific archaeological lab.

Why have I gone on at such length? Because in all these ways and directions the Foundation is fulfilling Herodotus's original self-proclaimed aim: research. The AG Leventis Scholarship at Clare supports cutting-edge research. The spanking new Greek and Roman Gallery and Cypriot Gallery of the Fitzwilliam both physically embody the results of research – art-historical, archaeological, cultural-historical – and by their very presence stimulate further research. The renovated Archaeological Museum in Odessa supports scientific research into the composition and provenance of artefacts.

Again, Herodotus is our ultimate ancestor. Not the least of my own current research-led projects is an entirely new translation of all of Herodotus, which I am doing for Penguin Books with my good friend and Cambridge alumnus Tom Holland (who is an example to us all of how to make history speak to the widest possible audiences).

Our Vice-Chancellor entirely endorses these research aims and goals. Indeed, for him, a university without a flourishing research (and teaching) culture in the arts, humanities and social sciences is simply not a university in the full and proper sense. Such research deserves and requires philanthropic support. What we are involved in studying and trying to understand are *anthropoi*, human beings. To support this research materially demands a certain amount of love, putting the 'phil' into phil-anthropy.

The AG Leventis Professor of Greek Culture is the first Chair to be endowed within the Faculty of Classics since the Second World War. It is endowed in perpetuity by the AG Leventis Foundation.

BODY BUILDING

Words: Lucy Jolin | **Illustrations:** Samuel Green

Think engineering is all about bridges and buildings? Think again. Because at Cambridge, engineering is also about blood, muscle and bone – and groundbreaking clinical solutions that originate in the world of engineering.

One of the main challenges of any collaboration is wholly practical: how do you get doctors and engineers together? How do you identify areas that might benefit from cross-pollination? Of course, Cambridge has always been a place for sharing ideas (a collegiate environment is still hard to beat as a forum for exchange), but the endowment of The Evelyn Trust Lectureship in Engineering for Clinical Practice has formalised the process.

The post supports the Engineering for Clinical Practice initiative, bringing together engineers and clinicians with the aim of improving clinical tools by the application of engineering research, techniques and innovation to the field of clinical medicine. And as Dr Graham Treece, the current Evelyn Trust Lecturer, explains, philanthropy has been key.

"Collaborations between engineering and medicine can be very fruitful, but such translational research only really happens if there are good lines of communication between researchers in both arenas – something that requires some kind of formal coordination and that would have been far harder without the philanthropy that funded the Lectureship."

Treece discovered an interest in medical matters when he returned to Cambridge to do a PhD. "After graduating, I worked for a couple of local companies for four or five years," he says. "When I came back to the University, my wife was doing medical training and I was wondering what I should do my PhD in. I spotted some work people were doing related to medical stuff, and started getting involved."

He says his role today is primarily about helping good ideas to find a home. "It's about facilitating stuff that's already happening. You've got a bunch of people in engineering, all of whom are very busy and very interested in what they do. You've got another bunch of clinicians who are even busier. People come to me and say, 'We think our idea might have some relevance to clinical medicine. Do you know anyone who might be interested?'

"But it happens differently for different people. There have been people in the department working on these sorts of things for many years, but generally on their own; or perhaps they know someone who's a medic. In the past three to five years, there has been a concerted effort in the engineering department to bring people together."

So what kind of medical problems can benefit from the influence of engineers? Treece is working with Dr Ken Poole, Honorary Consultant in Rheumatology and Metabolic Bone Disease at the Department of Medicine, on measuring bone thickness – a critical tool given the 80,000 hip fractures in the UK every year. For elderly people, a hip fracture can be just the beginning of a costly and traumatic series of health problems. Finding out who is most at risk of a hip fracture would mean that preventative measures such as bone-strengthening drugs and exercise could be put in place, potentially saving lives and money.

"These collaborations are fantastic," says Dr Poole, who comes from a long line of medical practitioners – his great-great-great grandfather was one of the first-ever GPs. "They enable us to take data that we've collected from patients to world-class experts like Graham and his colleagues, who can analyse it using cutting-edge technology.

"Engineering for clinical practice is ideally suited to problems of morphology and structure, and analysis of images. Imaging is fundamental to understanding human disease. Whenever we want to understand the body or a disease through structure, that is where the link comes in. So many of our questions have been answered because of this cross-pollination of ideas with imaging experts."

Poole wanted to find out why some people suffer these fractures and others do not. To do this, he needed a way of measuring the thickness of the outer shell of the hip bone. "But it becomes eggshell-thin with ageing in certain locations," he says. "And to measure something that is as thin as a chicken's eggshell – less than half a millimetre wide – requires technology."

Treece, with colleague Dr Andrew Gee, came at the problem from an engineer's perspective. "The thickness of this outer shell was quite significant," says Treece. "Imagine two Coke cans, one made of very thick aluminium and one of very thin aluminium. It makes sense that the very thin one is going to crush more easily.

"But the problem is that this is very difficult to measure. Half a millimetre is thinner than the resolution of a clinical CT scanner. So that's where the engineering challenge came in. How could you get an accurate measurement of this thing – and also, where would you measure it? The hip is a complicated structure."

Their solution involved data from a CT scan and a mathematical model of the scanning process. This allowed the team to measure the hip thickness at thousands of locations around the bone's surface. These measurements produce a computer-generated colour map of thickness. It is also possible to

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ON THE BUSES

When the members of Cambridge University Women's Lacrosse Club won themselves a place in the British Universities and Colleges Sport semi-finals in Manchester, they were disappointed. Why? Club funds could not stretch to a minibus to get them there. Luckily, philanthropist Tom Plant stepped in with a gift of £1,000 – enough for bus hire for the semis and the final. "We use the same local firm for all our matches," says captain Angharad West, "and our driver has started coming to matches to cheer us on!"

To read more about the Women's Lacrosse Club, visit www.cam.ac.uk/giving

Photography: Nick Turpin

produce maps that predict how bone thickness might change over time.

By analysing a large cohort of these maps, the team can look for patterns in thickness areas, and by morphing them on to maps of bones of normal thickness, they can see how the bones of people who suffer fracture differ from those of people who don't. "This was a problem that was really foxing people in our field," says Dr Poole. "Graham and Andrew solved it in about six weeks."

Structural change

If engineering is about measuring and mapping, it is also about structures. The RESCUEicp study is investigating an operation performed on the most fundamental structure of all: the brain.

"When someone is about to die because of brain injury, the final port of call is cutting off a substantial amount of their skull, which can relieve the pressure because the brain has somewhere to go," says Dr Michael Sutcliffe, Reader in Mechanics of Materials at the Department of Engineering. "The question is: does the operation work? Are there ways of changing the operation to make it more effective, and maybe reduce brain damage?"

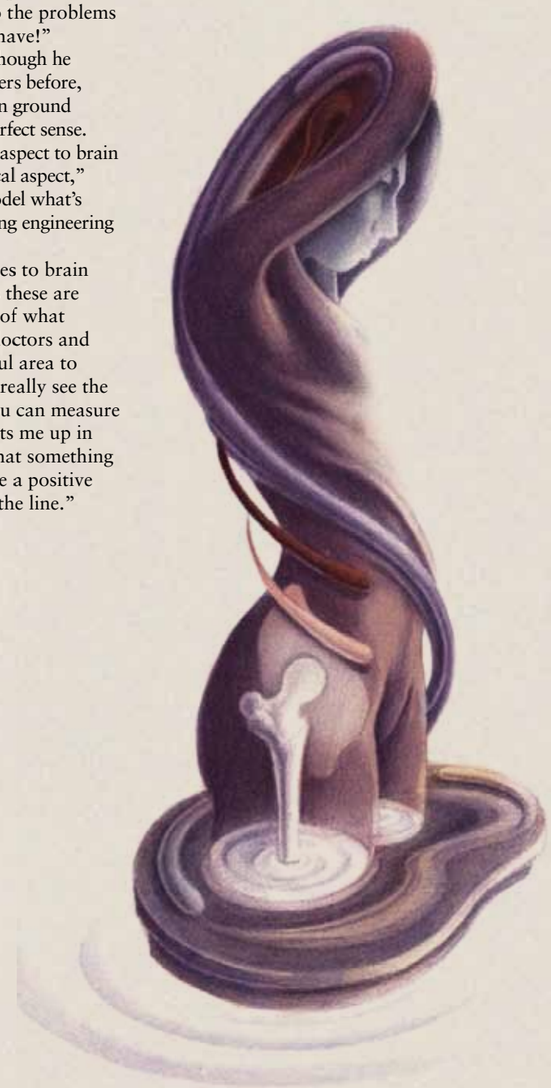
The RESCUEicp study will examine the effectiveness of an operation – decompressive craniectomy – in treating brain swelling caused by head injury. As part of the study, Sutcliffe is joining forces with Peter Hutchinson, Honorary Consultant Neurosurgeon at the Department of Clinical Neurosciences, and PhD student Tim Fletcher. They are examining data from scans and X-rays, with a view to modelling what happens to the brain during these operations.

"It's exciting, the way the campus is growing and developing centres of excellence," says Sutcliffe. "In the future, there will be lots of chances to join up the dots. I like this portfolio of relatively small projects, working with doctors to help solve their problems. After all, there's no end to the problems that doctors are going to have!"

Hutchinson says that although he hadn't worked with engineers before, there was so much common ground that collaboration made perfect sense. "There's a real mechanical aspect to brain swelling, as well as a medical aspect," he says. "Engineers can model what's happening in the brain, using engineering stress-strain type terms."

So, from bridges to bones to brain surgery, initiatives such as these are stretching the boundaries of what can be achieved by both doctors and engineers. "It's a wonderful area to support, because you can really see the benefit," says Treece. "You can measure it, you can see it. What gets me up in the morning is knowing that something I'm involved in might have a positive impact a few years down the line."

> "THIS WAS A PROBLEM THAT WAS REALLY FOXING MEDICS IN OUR FIELD. GRAHAM AND ANDREW SOLVED IT IN ABOUT SIX WEEKS"



The Evelyn Trust Lectureship in Engineering for Clinical Practice is funded by The Evelyn Trust and by an anonymous donor. The role fosters collaboration between the University's Department of Engineering and the School of Clinical Medicine, bringing problem-solving skills to bear on clinical needs. The Lectureship helps provide the focus and framework to enable Cambridge engineers and clinicians to work together and engage in the fundamental research that will lead to significant improvements in patient care.

What I know

Andrea Brand is the Herchel Smith Professor of Molecular Biology

Words: Anne Wollenberg
Photography: Nick Ballon

STEM CELLS ARE HUGELY INTERESTING BECAUSE THEY CAN REPRODUCE THEMSELVES. We're interested in how the brain develops, and we're working on the stem cells that give rise to all of the neurons and other cell types in the brain and nervous system. Things are moving quickly, but there's still a long way to go.

WHEN I WENT TO ROCK CONCERTS, THERE WAS ALWAYS SOMEONE AT THE BACK WITH A BOARD OF SWITCHES, controlling the lights and sounds. You can think of the genome as a huge board of switches, where some genes are turned on and some are off. We want to know the combination of switches for any particular cell type. Which genes need to be on and off to produce a particular outcome? Our goal is to figure out that genetic regulatory network.

WE STILL NEED TO KNOW ALL THE BASICS, THEN WE NEED TO UNDERSTAND HOW TO APPLY THAT KNOWLEDGE so that we can treat people. As the Japanese stem cell researcher Shinya Yamanaka showed, you can take skin cells, put them in a dish and turn them into stem cells. By adding certain factors, you can then turn them into neurons. This means you can take skin cells from patients with neurodegenerative diseases such as Alzheimer's, study the neurons in a dish and begin to understand what's causing the disease.

EVERYONE SHOULD HAVE THE OPPORTUNITY TO DO WHATEVER THEY FIND EXCITING. My mother grew up at a time when women weren't even expected to finish school, let alone go to university. She became a secretary, but she always wanted to be a doctor. Becoming a medical receptionist was the closest she got to medicine. I don't want little girls to say that women are nurses and men are doctors, like my daughter did when she was five.

HERCHEL SMITH ENABLED ME TO CONCENTRATE ON MY RESEARCH. His philanthropy has been enormously significant. As well as providing me with a prestigious permanent position, it has funded two post-doctoral fellows and a graduate student in my laboratory alone, and has had a huge impact on our work.

WE HOPE TO UNDERSTAND THE NEURONS IN THE BRAIN. What is particular about them, why do they have these particular properties and what proteins do they need to express to do their jobs? Eventually, it should be possible to do this for larger circuits and networks in the brain, and maybe one day the entire brain, so that we know what is special about each cell and how it changes as it performs its different functions.

AT CAMBRIDGE, PEOPLE ARE CRITICAL IN A SUPPORTIVE WAY. It's terrific being a scientist here. We get fantastic students and wonderful post-doctoral fellows. The intellectual environment is absolutely outstanding and there's a huge amount of collaboration among different groups within the University. There's a certain intellectual rigour, which I think is something very special about Cambridge.

SEVENTY-FIVE PER CENT OF THE GENES ASSOCIATED WITH HUMAN DISEASES HAVE A COUNTERPART in *Drosophila*, the fruit fly. We'd like to take the tools we've developed working with *Drosophila* and use them to study vertebrates such as mice and human cells.

I'VE ALWAYS BEEN FASCINATED BY DNA AND GENES. Aged 16, I read *The Double Helix* by James Watson, which conveys a real feeling of the excitement of scientific research and discovery. It talks about X-ray crystallographer Rosalind Franklin, who gathered the data that allowed the structure of DNA to be solved. I was fascinated. I briefly thought I wanted to be an X-ray crystallographer, but I realised my strengths lay more in biological science. Receiving the Rosalind Franklin Award from the Royal Society in 2006 was very special.

I USED TO BE QUITE SERIOUS ABOUT CONTEMPORARY DANCE. I had some wonderful opportunities. I took workshops in the United States with the Mark Morris Dance Group and at the Martha Graham Studio. I've been reasonably busy since having my daughter, who's 11, but I go to London to see dance performances and I did a workshop with the Merce Cunningham Dance Company a year ago.

PEOPLE TALK ABOUT TRANSPLANTING STEM CELLS INTO THE BRAIN TO TRY TO REGENERATE THE DAMAGED PARTS OF A STROKE PATIENT'S BRAIN, but I think a more perfect solution would be to reactivate existing stem cells. They're already in the right part of the brain, so they've been programmed to produce the correct neurons, and it would be ideal if we could give them a poke and say: "Could you make these neurons again?"

THERE ARE LITTLE EUREKA MOMENTS AND BIG EUREKA MOMENTS. Every day in the lab, somebody shows me some really exciting data that help us slot another piece into the puzzle. Sometimes we have an idea of how we think something works, then we discover something new and have to rebuild the model. It would be boring if everything worked out as expected.

On his death in December 2001, Dr Herchel Smith, distinguished organic chemist, Cambridge alumnus and major philanthropist, bequeathed £57 million to the University and Colleges, which represented, at that time, the largest individual bequest to a UK university. The endowment provides enhanced support for the four professorships he established during his lifetime, as well as five new professorships and the Herchel Smith Post-doctoral Fellowship and PhD Studentship programmes.

DIGITAL DEMOCRACY

At the Centre of Governance and Human Rights, researchers are investigating how the digital world is affecting democracy and human rights in sub-Saharan Africa

Words: William Ham Bevan | **Illustrations:** Andrew Holder

> IN AFRICA, COMBINING TEXT MESSAGING WITH RADIO EFFECTS A TWO-WAY EXCHANGE THAT HAS THE POTENTIAL TO INCREASE CIVIC ENGAGEMENT

Which technological innovation of the 20th century is likely to have the greatest effect on improving democracy and human rights in developing countries? The answer could well be in your pocket. Mobile phones outnumber fixed-line telephones by a multiple of at least five throughout sub-Saharan Africa; and where few have access to the internet, the simple, robust technology of text messaging offers a vital communications tool.

Finding out how such technology fosters citizen-led governance is the concern of a pilot project at the Centre of Governance and Human Rights. Established in 2009 within the Department of Politics and International Studies (POLIS), it is a research hub for all issues of importance to global justice and human well-being. It brings together expertise from across the University – not just in international studies and politics, but also in law, computing, anthropology, geography, international development and history.

On the Centre's core aims, its director, Dr Sharath Srinivasan, says: "We're focused on governance and human rights issues throughout the world, but particularly the global south, and with a special interest in Africa. We're looking to combine research expertise with engagement with policymakers and practitioners – generating knowledge and pursuing specific research projects that resonate with our focus themes."

Dr Srinivasan combines his stewardship of the Centre with the University's first David and Elaine Potter Lectureship in Governance and Human Rights. Its name marks the generous benefaction to the University in 2008 that allowed the Centre to be established. The remit of The David and Elaine Potter Foundation is to promote human rights and encourage the growth and maintenance of a robust civil society, particularly in less developed countries. The Lectureship, with its focus on Africa, proved a good fit.

Thanks to the Foundation's patronage, the Centre has gained an international profile in a very short time, and is already engaged in work that is having an effect far beyond the confines of the University. Dr Srinivasan says: "For example, right now we're working with the UN Special Rapporteur on Extrajudicial, Arbitrary and Summary Executions on a report on the right to life for journalists. This is especially timely, given recent events in Syria. The research that the Centre has done has shaped a report that [the Special Rapporteur] will be presenting to the United Nations in a couple of months.

"Around that, we're hosting an expert workshop on the theme. This will draw in officials from governments and non-governmental organisations to discuss the research and the finalisation of the draft. We'll also hold a public event that will focus on impunity and the issue of redressing human rights violations against journalists.

"This is just one example of many where we try to be outward facing, with a focus on burning issues that have continual relevance, and usefully contribute to knowledge and debate on these matters."

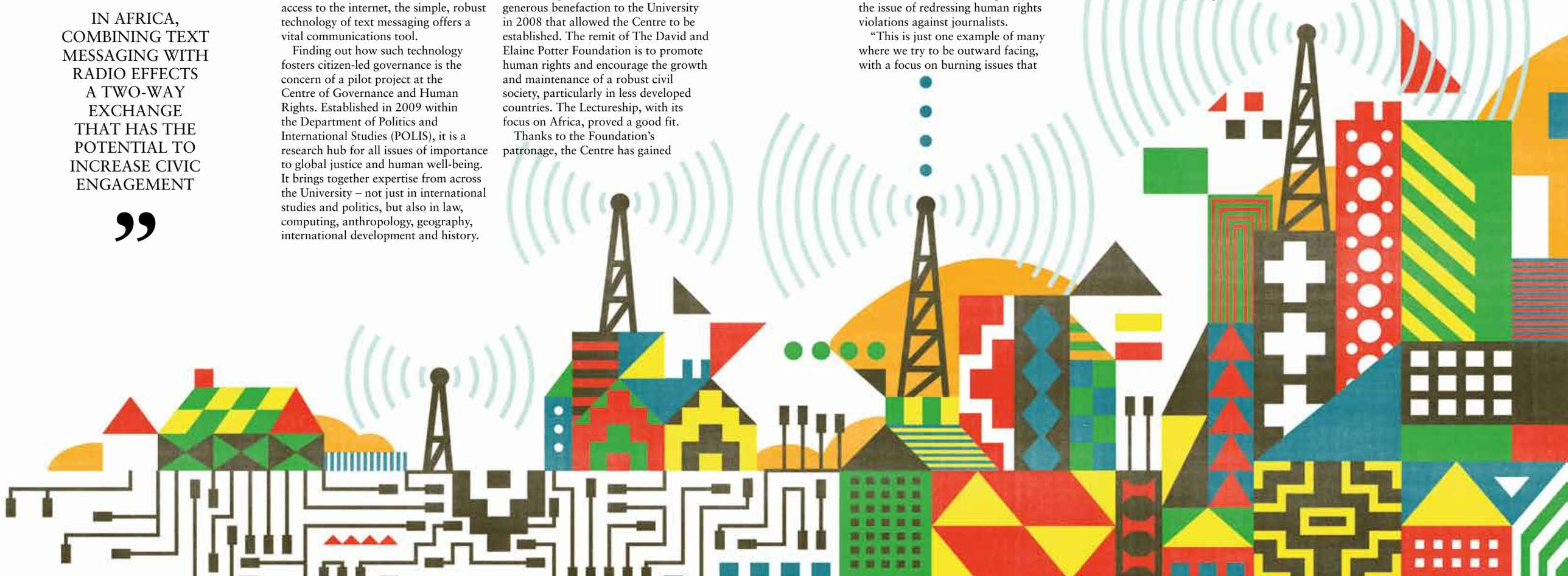
The Centre's pilot research project on 'New communications technologies and citizen-led governance in Africa' promises to have yet greater impact. At its heart is a collaboration with a UK community-interest corporation called FrontlineSMS, which has developed a free software tool to turn any computer and modem into an SMS text-messaging hub, without the need for an internet connection.

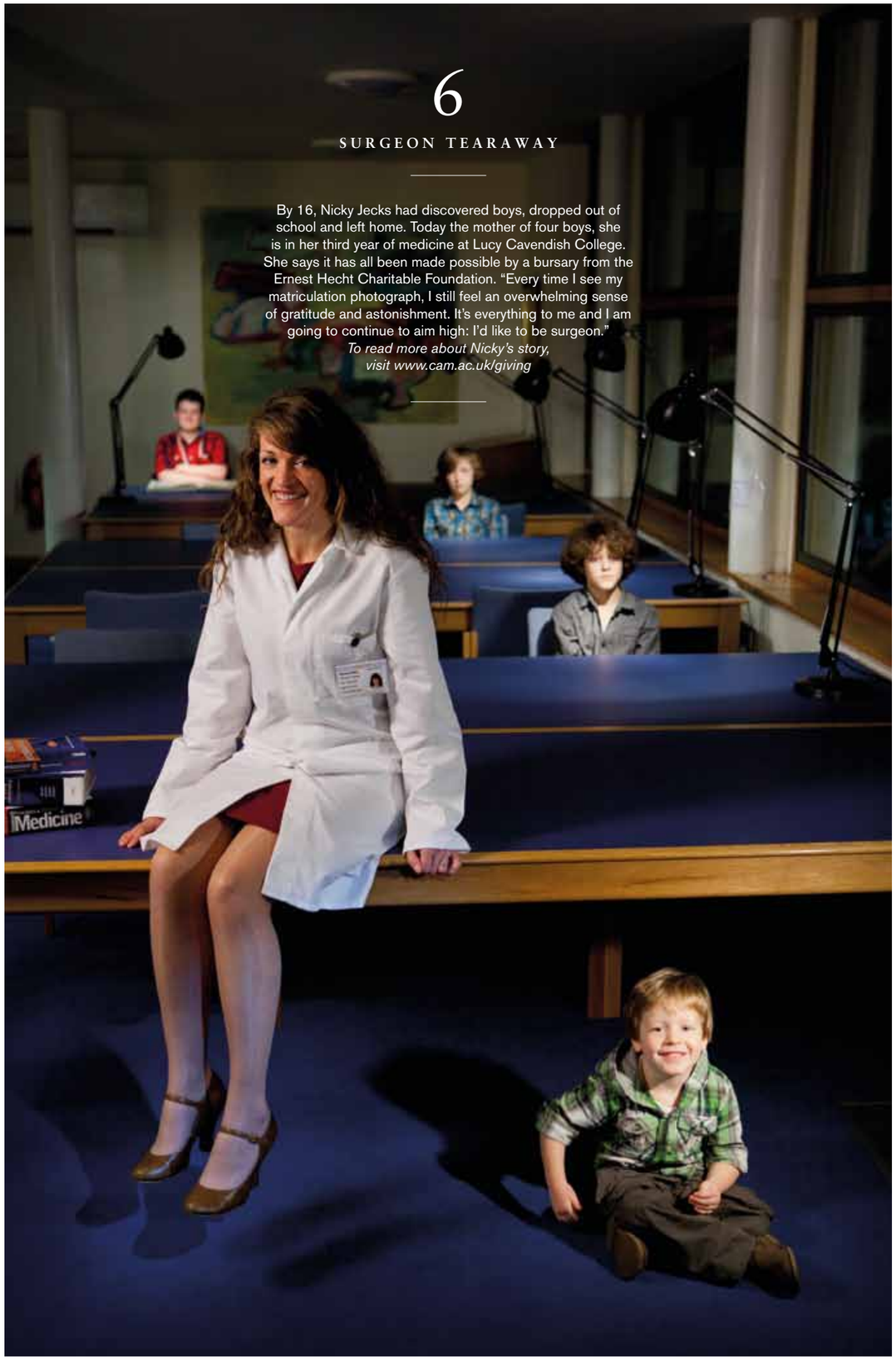
A major strand of the project is concerned with the ways in which text messaging can combine with radio – the dominant form of broadcasting in much of Africa – to effect a two-way exchange of information between stations and their listeners, and increase civic engagement in the issues of the day. "We've worked with FrontlineSMS in a very applied manner, helping them develop a new tool that's geared to radio stations," says Dr Srinivasan. "And we're going into a number of local radio stations in Kenya, Uganda and Zambia to understand at close range how they can develop more interactive programming with their audiences, and the value citizens place on this.

"The second stage of the project – Africa's Voices – is something much more ambitious and very exciting. We're engaging stations to come up with topics of interest that are common to the whole continent and that can be put as questions to their audiences.

"We do that on a monthly basis, and the data comes back to us; we then analyse it, look for interesting trends and cross-continent comparisons, and offer it back to the stations. We're aiming by the middle of this year to have on board at least 20 stations in 10 sub-Saharan African countries, and we're well on the way to that."

The project was made possible by a substantial grant from Lord Cairns, which was matched by the University's Isaac Newton Trust. Lord Cairns says: "It came about through The Cambridge Foundation. I had indicated for some time that having spent many happy





Photography: Nick Turpin

6

SURGEON TEARAWAY

By 16, Nicky Jecks had discovered boys, dropped out of school and left home. Today the mother of four boys, she is in her third year of medicine at Lucy Cavendish College. She says it has all been made possible by a bursary from the Ernest Hecht Charitable Foundation. "Every time I see my matriculation photograph, I still feel an overwhelming sense of gratitude and astonishment. It's everything to me and I am going to continue to aim high: I'd like to be surgeon."

To read more about Nicky's story, visit www.cam.ac.uk/giving

years at Cambridge, and perhaps learned the odd thing or two, I would be happy to help a programme if it happened to coincide with things I was interested in, and in which I thought more good work needed to be done.

"I have a strong and lifelong interest in what's going on in Africa and broader issues of governance and economic development. The programme that the Centre was looking at seemed to me to be an interesting one. I indicated that I would be keen to see what they could make out of it, because it seemed to have considerable value."

Dr Srinivasan believes that such projects simply cannot be launched without philanthropic support. He explains: "While we can apply for research funding – as we do – it is often private foundation money that allows a centre such as ours to do the pilot studies that prove the potential of a direction of research.

"The increasing demands on research councils mean they expect you already to have produced the basics, to show that it's worth giving further funding to you. Private philanthropy is like seed funding for start-up ventures: it allows exciting, innovative research to be kickstarted. It also means the 'proof of concept' stage can be pursued with the academic freedom that's necessary."

This is not to suggest that the need for philanthropy ends as soon as an initiative such as the Centre of Governance and Human Rights is up and running. "After two-and-a-half years, the Centre has proved its worth as an exciting site of research at the University, and we have really established ourselves within and beyond Cambridge," says Dr Srinivasan. "So now we're at the stage of trying to establish ourselves as a going concern. Securing core funding that allows us to function effectively, and pursue the medium-term projects that we have in mind, has now become a priority."

"Interesting times"

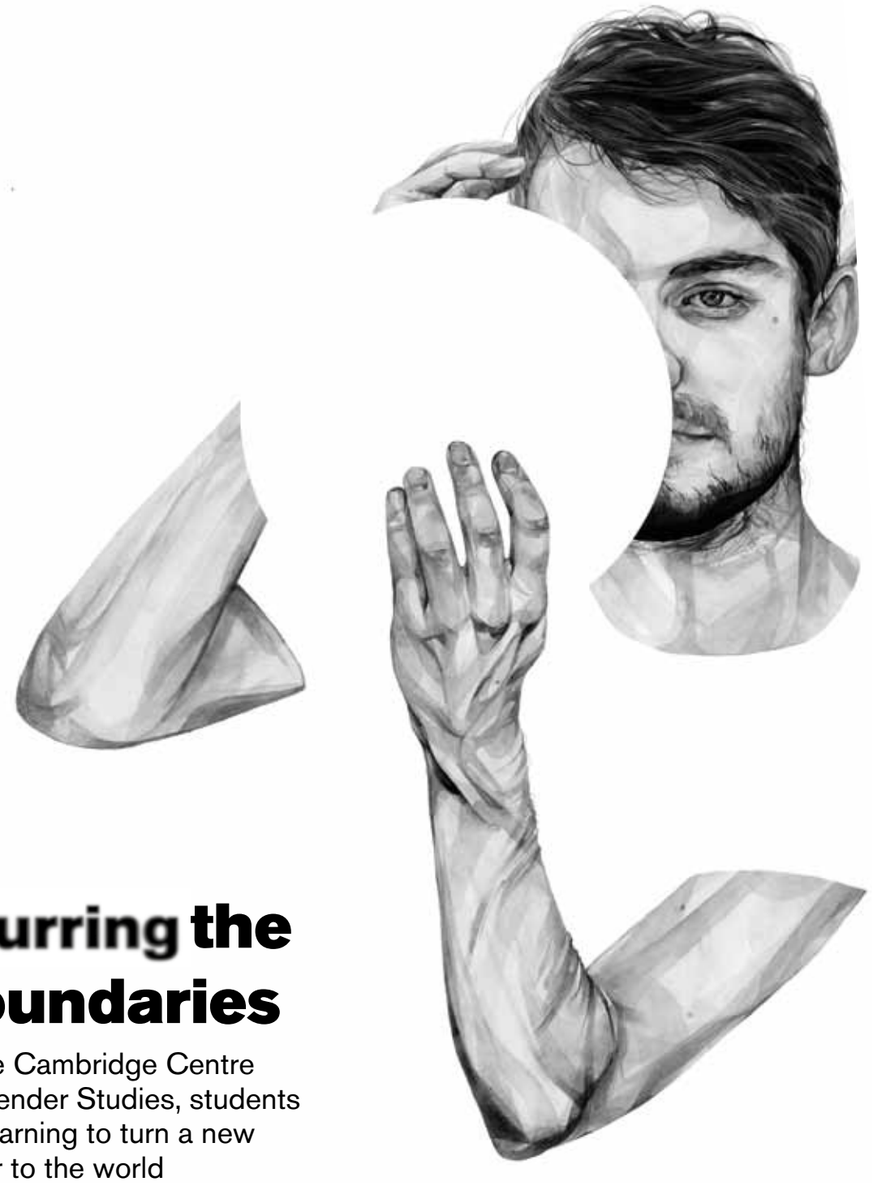
With globalisation and the penetration of new technologies bringing huge change in developing societies, and the distinctions between domestic and international politics becoming increasingly blurred, ambitious research in the field of governance and human rights is more important than ever. Dr Srinivasan says: "We live in very interesting times. On the one hand, we have the Arab Spring and the hope and optimism that lies there, but on the other are the persistent challenges facing democratisation and the promotion and protection of human rights.

"We as academics can step back and see some of the complexities more clearly, and through seeing them, enrich the way policymakers and practitioners understand their work. We can contribute by having a critical but constructive idea of what the challenges are, and not assuming that the solutions are easy – which is sometimes the mistake of policymakers, because of the timescales involved and the need to prove relevance.

"The opportunity to support research in this area is unique, because it can play a key role in navigating this fast-changing world that we live in. It's only through rigorous academic enquiry that important aspirations such as improving democracy and securing human rights can be best pursued. And it may sound a bit lofty to say so, but I think we're already seeing that academic work is making an important contribution."

David Potter, of The David and Elaine Potter Foundation, explains why the Centre of Governance and Human Rights was a worthy recipient of philanthropic support

"The Potter Foundation is strategic in its nature and supports development around the world. In the 12 years of thinking our way through the purposes, values and focus of our Foundation, our view was confirmed that good governance is one of the keys to a successful society and protects the rights of its citizens. We believe that development, economic and social, cannot proceed without the infrastructure provided by good governance. Thus when Alison Richard, the previous Vice-Chancellor, approached us, we were delighted to support the creation of the Centre of Governance and Human Rights. Their own words fit perfectly with our intent: to 'draw together experts, practitioners and policymakers to think critically and innovatively about pressing governance and human rights issues throughout the world'."



Blurring the boundaries

At the Cambridge Centre for Gender Studies, students are learning to turn a new mirror to the world

Words: Stephen Wilson | **Illustrations:** Kate Copeland for YCN

> “HANDS SHOOT UP AROUND THE ROOM AS THE GROUP STARTS TO DISSECT THE ARGUMENTS”

Tucked away in a seminar room at the University of Cambridge Centre for Gender Studies, a class of graduate students is being asked to take a deep breath and think the unthinkable.

“Does gender really need a legal category?” asks Dr Jens Scherpe, Senior Lecturer in Law and a family law expert. “Why ‘mother’? Why not ‘birth parent’? Why does marriage need to be between a man and a woman? Does that mean that if you are intersex, you do not have the right to marry?”

Explosive questions are par for the course at the Centre’s weekly text seminars. Over the next two hours, Scherpe will be questioned and challenged as students start to come to terms with the implications of the text under examination: *Christine Goodwin v the United Kingdom* (a case that ultimately led to the enactment of the Gender Recognition Act 2004, giving key rights to transsexuals).

But what is a lawyer doing in a gender studies seminar? Dr Jude Browne, Frankopan Director of Gender Studies, explains that a multidisciplinary approach is at the Centre’s heart and is what makes it unique. During the MPhil, the students will meet experts such as Scherpe from more than 23 other University departments spanning the sciences, social sciences, humanities and arts.

“We knew we wanted to do something very different. The purpose of the Centre is to explore all possible methodologies, all possible theoretical explorations of gender,” she says. “When you do that, what you find is that almost all subjects – whether it’s medicine, law, linguistics, genetics, history, geography, economics, philosophy – have something core to say about gender.”

To ensure that this multidisciplinary approach was properly embedded at the Centre, Browne designed the text-seminar format as part of the new MPhil programme, in which leading academics such as Simon Baron-Cohen (Experimental Psychology), Robert Foley (Human Evolution), Robin Osborne (Classics), Duncan Bell (International Relations) and Clare Chambers (Philosophy) use a text that has been set in advance as a jumping-off point to discuss how gender plays out in their discipline. “I didn’t really have to persuade anyone,” says Browne. “It’s something everyone really enjoys doing – and that’s why it works.”

The Centre is a perfect example of an initiative that could not have got off the ground without the support of key philanthropists, including Ms Jessica and Dr Peter Frankopan, Professor Carl Djerassi and Sir David and Lady Primrose Bell.

“The internal support from the University was absolutely there, but we needed infrastructure too,” explains Browne. “And that’s where the donors’ help was so crucial. The Centre’s objectives are some of the most exciting intellectual projects you can imagine, and we have been very fortunate that all our donors were so intellectually engaged.

“Sir David Bell, former chairman of the *Financial Times*, was absolutely critical in leading the Centre’s development committee in thinking about bringing together people who would be interested in gender. Professor Carl Djerassi – inventor of the contraceptive pill, turned playwright – is a polymath. The idea that you should explore gender from a whole range of methodological and theoretical perspectives made complete sense to him. It was the same for the Frankopans, whose interest in gender has

Photography: Nick Turpin

7

HEAVENS ABOVE

"History remembers the thinkers, the people who have an impact on the way we perceive the world," says George Efstathiou, 1909 Professor of Astrophysics and Director of the Kavli Institute for Cosmology. A gift from The Kavli Foundation has brought experimentalists and theoreticians under one roof in a new institute – and one day, their collaborations may well indeed make them cosmologists future generations remember.

To read more about the Kavli Institute, visit www.cam.ac.uk/giving

always been a central feature of their scholarly and philanthropic projects."

As well as offering an MPhil and PhD programme in Multi-disciplinary Gender Studies, the Centre runs various high-profile public events, such as the recent series on gender and the biomedical advances of the 21st century with *The Guardian*. It holds international symposia, hosts a range of research projects and each year appoints the highly prestigious Diane Middlebrook and Carl Djerassi Visiting Professor.

Back in the seminar room, Scherpe is advancing his argument that gender could be considered redundant as a legal category. He asks students to consider the implications of intersexuality, transsexuality and the importance in law of being either male or female – and remaining in that gender throughout your life. Should jurisdictions introduce a third 'gender x', as is done in Australian passports? Should authorities refrain from entering a gender on a birth certificate, as is done in some cases in Belgium? And what are the implications for a child born to someone without a gender, or who is legally of the 'wrong' gender?

"What about protected categories?" asks one of the course's American students, referring to the way in which positive discrimination is exercised in the United States. "How can you still ensure that groups who have been discriminated against are protected if you don't recognise gender?" Hands shoot up around the room as the group start forensically dissecting the arguments. What about the importance of gender to society? What about discrimination law that protects women or gay, lesbian and transsexual people?

MPhil student Zach Nikonovich-Kahn says that it is this kind of discussion that makes the Centre so special. "We get an understanding of gender from different angles and that's particularly helpful, because if you're like me – a history graduate – you may not have been exposed to the philosophical or biological perspective before."

However, for Jude Browne, the text seminar also serves a rather more old-fashioned purpose: scholarship. "I think close primary-text reading is something we must protect as scholars in the age of Wikipedia and Google. It's vital to continue to read original texts and not rely on the internet or secondary texts that merely summarise others' arguments – too much richness of interpretation is lost that way."

Challenging received wisdom

That attention to scholarship and intellectual rigour is perhaps one of the other reasons why the Centre manages to attract the highest standard of Cambridge thinkers, year after year. "The discussion is always of a high calibre," Browne explains. "And, of course, the more seminars the student attends, the more equipped they become to challenge the expert, and the questions become increasingly complex.

"That's great for the students, but it's also very enjoyable and stimulating for the academics. Suddenly you are met with a set of articulate students who have a totally different set of tools from those of your own discipline.

"There's another advantage. By doing a text reading – sometimes a book, an article, experiment notes or a piece of case law – the student can begin to explore why gender is important in that particular discipline. If they are inspired, they can go and read some more of the extensive reading lists we prepare – and, of course, we have introduced them to a world-class expert. So, if that's the subject area they really want to follow up, they can."

Over two hours, and under the guidance of Scherpe, the class has used *Christine Goodwin v the United Kingdom* to examine gender as a legal category, the conflict between national and international jurisdictions and the way gender is used within family and criminal law. They have probed, pondered and puzzled and brought their understanding of gender theory from other disciplines to bear. But, perhaps most importantly, they have gained a new perspective and a new set of tools with which to think about the world.

A LIFE IN BOOKS

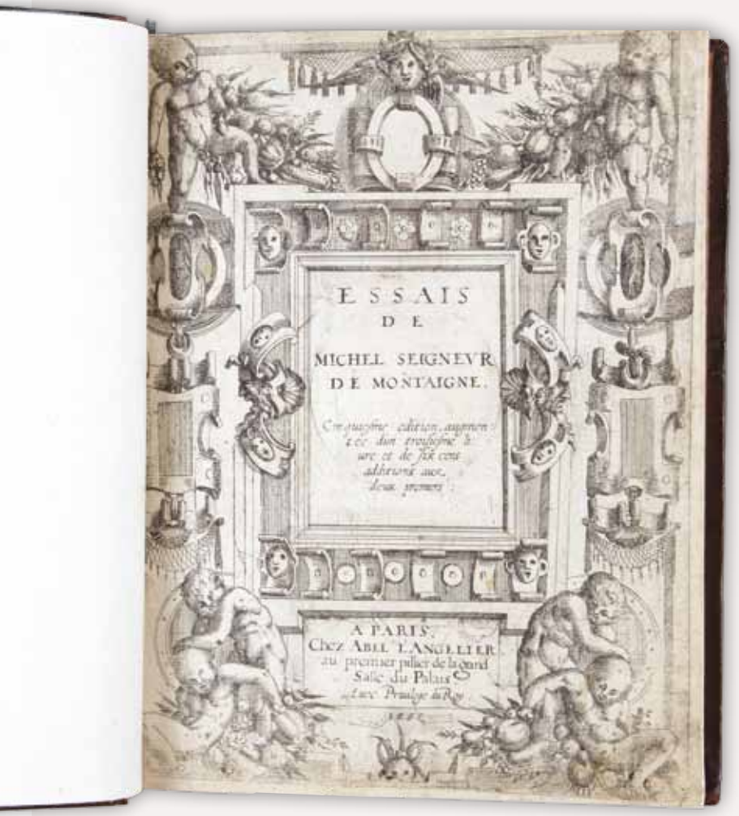
Michel de Montaigne's library offers a glimpse of a writer whose work has fascinated readers for more than 400 years

In 2008, the University Library received one of its most remarkable gifts: the Montaigne Library. Assembled by the scholar and financier Gilbert de Botton, and given to Cambridge by his family, it stands as one of the world's finest collections of books connected with the 16th-century French writer Michel de Montaigne.

When asked why the family chose Cambridge, Janet Wolfson de Botton said: "We found in the University Library a home for Gilbert's collection that ensures that it continues to be used as a library should be – for study, for pleasure, and for reflection."

Treasures include early editions of Montaigne's works, including the *Essais* (which cover an extraordinary range of subjects from friendship, philosophy and the fear of death to conversation, cannibals and the custom of wearing clothes) and 10 books from his personal library. The collection provides an opportunity to celebrate a writer whose work has, for more than 400 years, fascinated its readers with glimpses of a complex, subtle, shifting self.

Here, Philip Ford, Professor of French and a Montaigne expert, selects his favourite books from the collection.



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Lucretius, *De Rerum Natura* (1563)
Montaigne had a library of about 1,000 works, which were sold off after his death. Just over 100 volumes have now been located, and this is certainly the most interesting. Lucretius was influential in Montaigne's writings, and this volume has extensive annotations in its front and back endpages.

Michel de Montaigne, *Essais* (1588)
This is the first edition that contained all three books of the *Essais*, and the last to appear during Montaigne's lifetime. It's a nice, clean printing, with a very ornate title page, and this example has a number of annotations by an unidentified contemporary of Montaigne in brown ink. (1)

Michel de Montaigne, *Essais* (1595)
The 1595 edition was taken to press by Marie de Gournay, Montaigne's adoptive daughter and literary executor. This copy was presented by Matthew Prior to the Duke of Shrewsbury and includes a handwritten sonnet dedicating the book to him. It's the only known manuscript copy of that poem.

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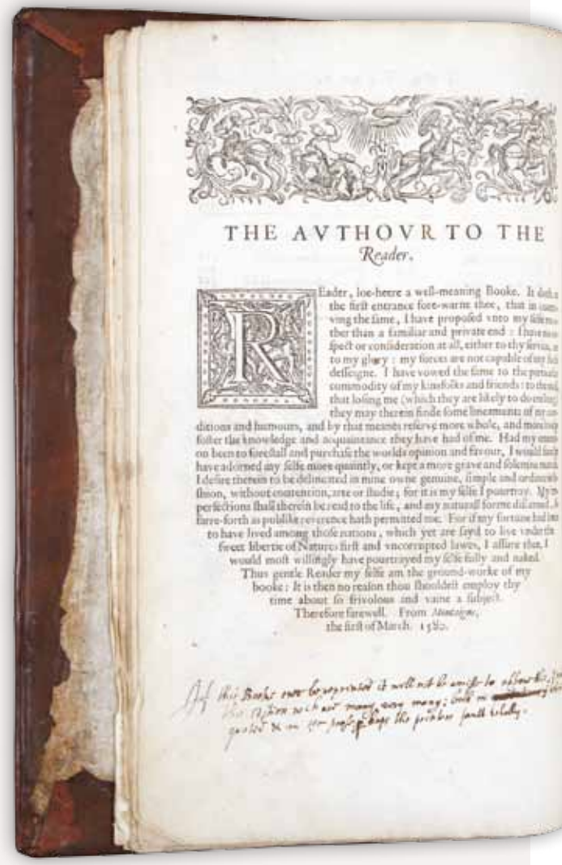

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Photography: Nick Ballon

Michel de Montaigne, *Essais* (1635)
The last edition overseen by Marie de Gournay was printed in 1635 and was sponsored by Cardinal Richelieu. The copy in the de Botton collection has a handsome red Morocco leather binding and was owned by Louis II de Bourbon, known as the Grand Condé, who was one of the leading noblemen in 17th-century France. (3)

***Schola Aquitanica* (1583)**
These are the statutes of the school Montaigne attended in Bordeaux. He started school as a fluent Latin speaker – which was a problem, as the curriculum was almost entirely dedicated to teaching Latin. We do not have many copies of the statutes of humanist colleges in France, so this is a good insight into how teaching was organised in the 16th century. (6)

Étienne de La Boétie, *Vers François* (1572)
This contains a number of French sonnets, which Montaigne later included in the *Essais* as a homage to Étienne de La Boétie. The two had an extremely close friendship, and when La Boétie died at a young age, Montaigne withdrew from the world – only returning to public life after the publication of the *Essais* in 1580. (2,7)

Terence, *Comœdiæ* (1541)
This is one of 10 texts in the University Library that were owned by Montaigne himself. Terence was among his favourite writers and would also have been important to him in his schooldays. Terence provides good examples of colloquial, everyday Latin, which the boys needed to know – they were expected to speak it all day, even outside lessons. (5)

John Florio, *Essayes by Michael, Lord of Montaigne* (1613)
Montaigne was taken up by many English writers and humanists in the 17th century, and this work was the first complete translation of the *Essais* in any language. This second edition is a handsome book, with a good engraving of John Florio in it, and its interest is increased by the fact that it had an illustrious owner, Isaak Walton. (4)

HORIZON SCANNING

East Anglia: flat, wet and decidedly un-tropical. It is not the obvious place from which to design new approaches for protecting the future of Sierra Leone's Gola Forest or to locate a global conservation centre – and yet Cambridge is home to one of the world's largest clusters of people and institutions working to understand and conserve global biodiversity.

Those organisations include major players from the RSPB to the World Conservation Monitoring Centre. At the heart of the Cambridge Conservation Initiative (CCI) are University researchers from diverse disciplines. They are working together to address the big issues – from how to achieve food security while conserving the raw materials provided by biodiversity to reducing carbon emissions and alleviating poverty through forest conservation.

So why Cambridge? CCI's Executive Director Dr Mike Rands explains what sets it apart. "Cambridge has a rich diversity of people concerned with the relationship between nature and society," he says. "In the University, that includes natural scientists studying the biology of plants and animals, and people studying people – the social scientists looking at economics, politics, sociology and anthropology, and how the human race relates to other living things.

"When you combine that with the fact that we have more than 50 organisations here – some big, some small, some local, some global – concerned with conservation, that's a phenomenally interesting and unusual environment. It's very rare and it gives us access to incredible experience, ideas, research and teaching."

Another driver helping to create CCI is the pressing need it meets: an increasing human population coupled with steep declines in species, habitats and resources. "We're going to suffer, and so is the planet, unless we do something about it," says Rands. "We have a global challenge on our hands, with nature, biodiversity and the natural world under immense pressure."

A good example of how CCI applies the resources of multiple players is conservation horizon scanning – a tool more commonly used in government and industry. Since being introduced by Bill Sutherland, the Miriam Rothschild Professor of Conservation Biology, horizon scanning has become a key fixture in Cambridge's conservation calendar. It has thrown up an eclectic mix of issues – from synthetic meat and artificial life to geoengineering and microplastics – that might, in future, threaten global biodiversity.

The point, says Sutherland, is for the conservation community to be better prepared in future for developments that will have an impact on biodiversity. Sutherland uses the example of the emergence of biofuels, which took many people within the field by surprise. "It happened on our watch and we didn't really see it coming," he admits. "Afterwards, it became clear there were serious problems associated with them – the cost of crops, the carbon-change benefits and the conservation consequences. There is evidence that growing biofuels resulted in quite a bit of deforestation."

Looking for inspiration from outside conservation and academia, he decided horizon scanning might help. He says: "The people who've done it well include the military, which is very good at asking what new technologies there are that they could take advantage of. Medicine does quite a bit of it, too, to find new technologies and identify those that are out of date."

During the past four rounds of horizon scanning at CCI, the team – made up of experts from different organisations – has identified issues including the impact of new materials and technologies such as graphene, nanosilver and nuclear batteries; natural events such as Arctic tundra fires and high-latitude volcanism; and agricultural change such as large-scale international land acquisition.

Some issues on the list may seem more science fiction than science fact, but the aim of the exercise is to identify what's new, rather than make a pre-emptive decision about what may be important. And experience thus far suggests the process works.

"We can't promise to identify everything," Sutherland says. "But the evidence shows that many of the things we predicted would rise up the agenda have done so. When we talked about artificial meat, no one had heard of it. Now, newspapers are reporting that the first artificial burger might be produced in a year's time."

Flagging up the issues to inform the research agenda is the aim of the exercise, and even if some of the topics identified in past rounds of horizon scanning remain dormant for some time, few will go away for ever. "There are things that have gone quiet, like microplastics," he explains, "but they are accumulating. Plastics don't disappear, they just get smaller and smaller, so our seas are filling up with little bits of plastic."

The pooling of experience and expertise provides the right conditions for a rich and diverse new ecosystem of conservation researchers and practitioners to flourish. And Cambridge – given its extraordinary concentration of conservation organisations – is an ideal environment for the initiative. But as Pam Davis, Head of Fundraising at Cambridge, says, the vision of philanthropists has been essential.

"CCI is a terrific example of the way in which philanthropists and academics working together can try out something new and innovative. As a programme gathers momentum, we find that more people want to join in," she says.

"When I joined the University several years ago, the seeds of the current programme were in place but the scope and vision of what we now have didn't

> “ENVIRONMENTAL CHALLENGES CALL FOR INNOVATIVE AND INTELLIGENT SOLUTIONS. CAMBRIDGE PROVIDES THIS CREATIVITY”

exist. CCI has been built, piece by piece, by creative academic colleagues, supported by donors who are willing to make long-term investment decisions for a cause that they believe in passionately.”

Those philanthropists include the MAVA Foundation and the Arcadia Fund, which together will help to finance the redevelopment of a city-centre building to house 500 experts from 10 conservation organisations and six University departments.

As Mike Rands explains, “Donors have started giving us money for a conservation campus – a physical manifestation of our vision for innovative conservation collaboration. You could argue that, in an age of fantastic electronic communications, you don’t need to physically bring people together. But in practice, there is lots of evidence showing that to break down barriers and build trust, there’s no substitute for bringing people together under one roof.”

The building is also a way of raising the profile of conservation and fostering interdisciplinary research, bringing academics from many areas together with practitioners to address seemingly intractable problems.

“Bringing these kinds of people together is where the novelty and innovation come from,” Rands says. “In the past, conservationists have tended to talk only to one another. The same is true of businesspeople and economists. The way natural scientists and social scientists conduct research is fundamentally different, so when you first put them together, they may find it alien. As they start talking about a common concern, they realise they have different perspectives that, if added together, can generate interesting new ways of thinking, new ideas and new solutions to some of these problems.

“Perhaps it will be a historian or a professor of physics who comes up with something those of us who work in this field have never thought about. Cambridge gives us that opportunity, and that’s one of the reasons CCI is so exciting.”

And Rands hopes that establishing a global hub for conservation in Cambridge will make it easier to engage with visiting political and business leaders. “Cambridge attracts many leaders – people who were educated here or come as visitors. If we have a conservation centre at the heart of the University, in the centre of the city, these people will come into contact with these ideas even if they had no previous interest in conservation,” he explains.

Conservation challenges

The new campus and Sutherland’s horizon-scanning work are only two of CCI’s current priorities. The others – learning and leadership, and research for policy and practice – are also already under way. In 2006, a donation from Cambridge alumni Jamie and Jane Wilson allowed the creation of the Moran Professorship of Conservation and Development to focus on the social causes of environmental threats.

As Jamie Wilson explains, the gift was partly motivated by an awareness of what was already happening. “Cambridge was the ideal place to bring together the social and natural sciences to look at conservation,” he says. “It had a critical mass of expertise across all the relevant disciplines, and the University was already in the vanguard of both conservation science and the social sciences. Environmental challenges call for innovative and intelligent solutions. Cambridge provides this creativity and excellence.”

In 2009, CCI launched its Masters in Conservation Leadership thanks to funding from the MAVA Foundation. Rands says: “It’s like an MBA in conservation – learning the business as you work as a leader in this field, whether that’s in non-governmental organisations, business or government.”

As an interdisciplinary initiative, CCI poses challenges to public funding – which is another reason why philanthropy is so critical. Rands believes donors interested in conservation understand the need to think more strategically about solving global problems.

“Far-sighted donors are concerned about the way the planet is changing,” he explains. “They see it as a fundamental global challenge that requires new ways of looking at things, and bringing together people from very different backgrounds to do so, which is what Cambridge is doing.

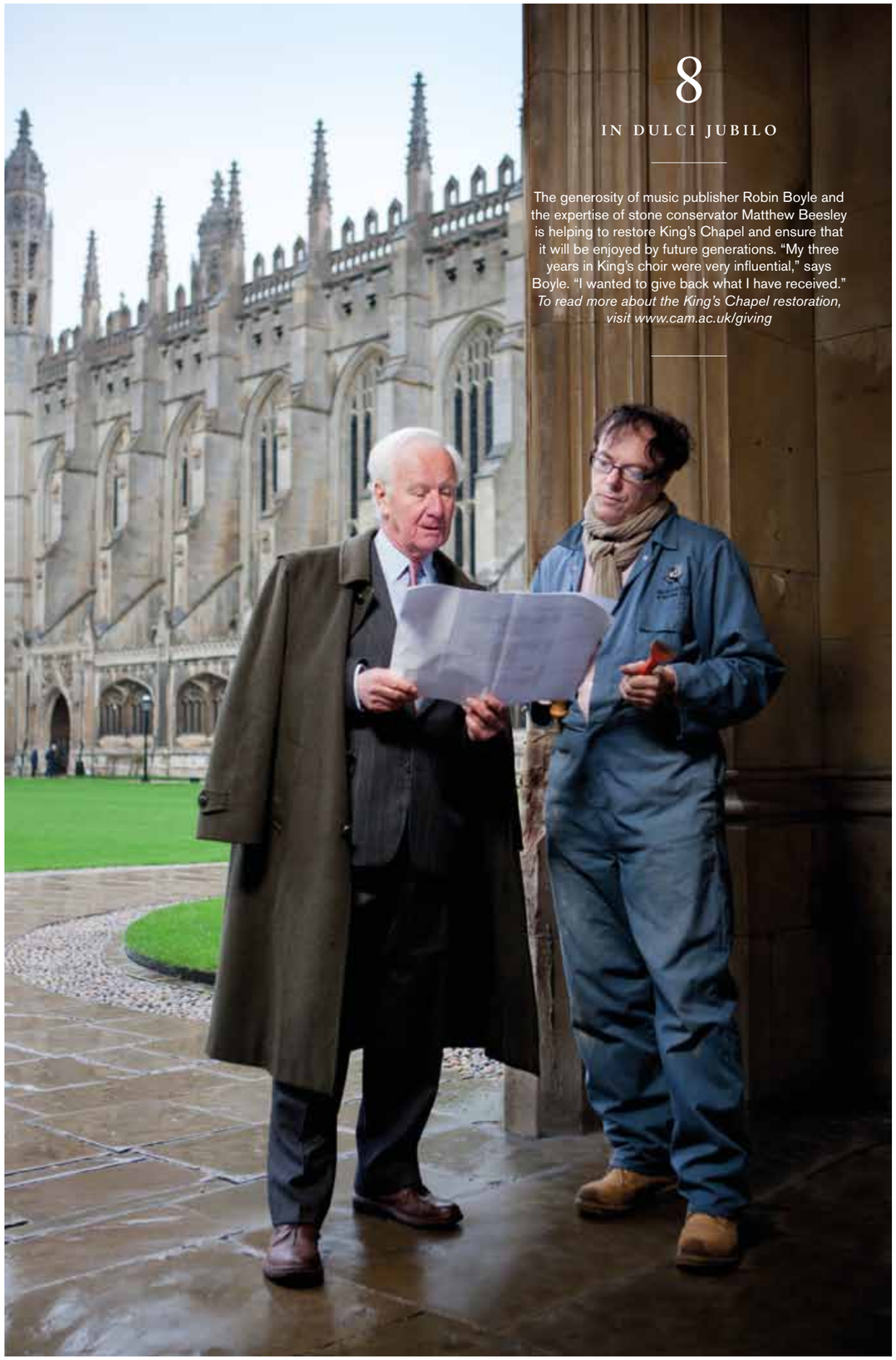
“If you’re a foundation that supports conservation practice, you might contribute funds to saving rainforest X or species Y. But we’re not doing that – we’re providing information to shape and inform those activities. Hopefully, they’ll see the value of investing in CCI because what will come out of this will potentially save many more forests or species.”

It’s an approach that the MAVA Foundation certainly supports. MAVA’s president, André Hoffmann, says: “The big challenge facing humanity today is overconsumption. But we are playing at the margins. We need new ways of dealing with it – CCI is a beginning for us to get involved in this more holistic approach.”

Attracted to Cambridge because of its concentration of NGOs – including several that his father, MAVA founder Luc Hoffmann, has close links to – and his longstanding involvement with Professor Tim Clutton-Brock’s Large Animal Research Group, Hoffmann shares CCI’s commitment to doing things differently.

He says: “We have moved in the conservation arena away from doing just biodiversity – saving species and protecting areas. The global challenges we face mean changing humanity’s attitudes. This needs new science. Supporting a building is a departure for us: a conscious desire to help big, transformative projects, rather than more piecemeal ones.”

Words: Becky Allen | **Photography:** Getty Images



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IN DULCI JUBILO

The generosity of music publisher Robin Boyle and the expertise of stone conservator Matthew Beesley is helping to restore King's Chapel and ensure that it will be enjoyed by future generations. "My three years in King's choir were very influential," says Boyle. "I wanted to give back what I have received."
To read more about the King's Chapel restoration, visit www.cam.ac.uk/giving

Photography: Nick Turpin

Catalyst for change

Dr Matthew Gaunt is a Reader in Chemical Synthesis and leads the Gaunt research group

Illustration: Elisabeth Moch for YCN

It's not always easy to explain what I do – but a good place to start is with the idea of synthesis: the ability to make molecules in a controlled fashion.

This work is part of an effort that is on the edge of expanding into a new general field of synthetic chemistry. It could ultimately lead to the development of processes that allow us to compete with the efficiency of nature's synthesis machinery and build any molecule we want. That could mean the conversion of simple organic molecules into drugs, plastics or potential new fuels in a single step.

This stuff is important in its own right, and its potential in the worlds of chemistry, medicine and materials science is huge. But when I started working on carbon-hydrogen bond activation in 2003, I was a non-tenured Royal Society University Research Fellow. It is always challenging to start a research group with no supporting funds. While I was lucky to have departmental support, during those initial years I had to raise all the funding myself.

Since then, a University lectureship – and, most significantly, the award of a Philip and Patricia Brown Next Generation Fellowship – has transformed the potential for my team to develop and grow. As well as providing the cornerstone of our funding over the past five years, the Fellowship has allowed us to explore new areas of research that were not funded through other mechanisms. It has permitted us to support excellent students for the fourth year of their PhD and to purchase essential pieces of equipment. Perhaps most importantly, it has underpinned our general research effort.

That effort is seeing spectacular results. At the moment, we are working on metal-catalysed carbon-hydrogen bond functionalisation and on developing new processes with cheap copper catalysts. Both provide ways of changing the properties of the bonds between carbon and hydrogen and, therefore, of changing the way the resulting molecules work.

My team has been able to carry out reactions that chemists once thought were improbable, based on the conventional rules. And as we delve further into working out the mechanism of these processes, we are constantly discovering new chemistry that is going to make further impact in the field.

Another large programme focuses on developing a general process to convert planar aromatic compounds (nothing to do with their olfactory properties, but instead to do with their stability) into the shapes present in many drugs and natural products – something that will have many applications in medicinal chemistry.

Perhaps most important for me, however, is not what we are doing right now, but what we will be doing in the future. In the past 12 months, we have made discoveries that have opened up new areas of research, two of which have major implications for synthesis. These have come about because we had the flexibility of funding to take a bit of a long shot on an idea I wasn't sure would work.

Looking further ahead, the next challenge will be translating our chemistry into practical applications. A fundamental question is this: can we use our chemical understanding to manipulate carbon-hydrogen bonds in the structure of a protein or DNA, a new medicine or a polymer?

If we can, then we will have developed a new tool for chemical biologists to study biological processes and a way of totally changing the properties of molecules. This could have wide-reaching consequences, from instant access to new medicines to creating fuel from non-fossil fuel materials.

These are just a few examples of how Next Generation Fellowships – which fund an individual academic but inevitably benefit a whole team – make a difference to science itself and to the modern world.

PHILANTHROPY IN NUMBERS

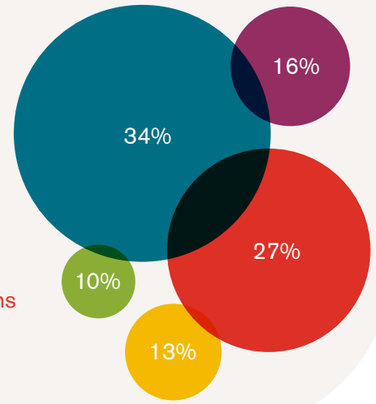
Facts and figures from the 800th Anniversary Campaign

1

MORE THAN 30 PROFESSORSHIPS HAVE BEEN SUPPORTED BY DONATIONS DURING THE CAMPAIGN

2

FUNDS RAISED BY SOURCE OF DONATION



Alumni
Trusts and foundations
Legacies
Other individuals
Corporations

3

35%

THE VALUE OF THE UNIVERSITY'S TRUST FUND PERMANENT CAPITAL IS 35% HIGHER THAN WOULD OTHERWISE BE THE CASE, AS A RESULT OF DONATIONS RECEIVED DURING THE CAMPAIGN

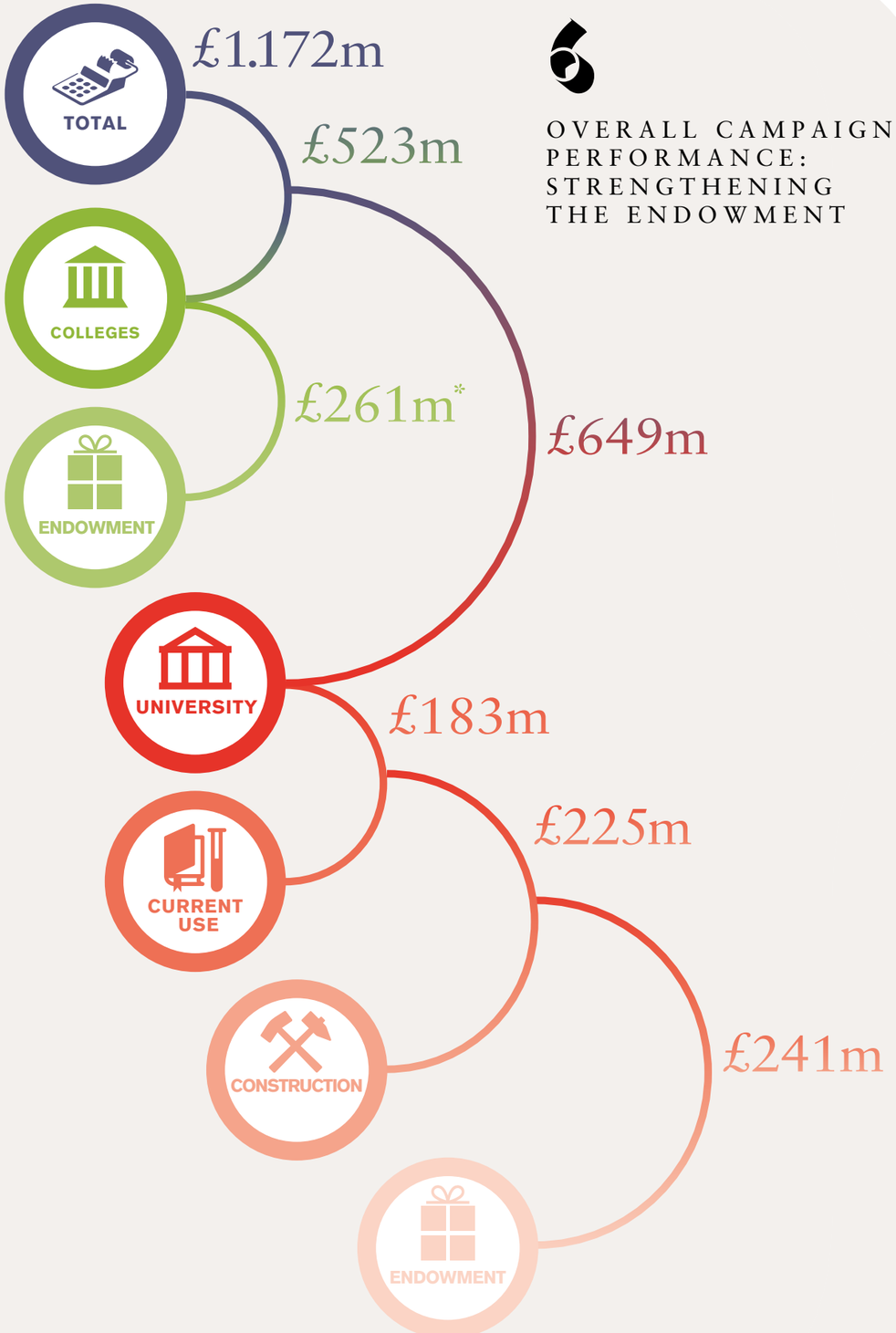
4

25%

PERCENTAGE OF ALUMNI WHO HAVE GIVEN AT SOME POINT DURING THE CAMPAIGN

5

DONATIONS CONTRIBUTED ABOUT 1/3 OF THE COST OF THE UNIVERSITY MAJOR BUILDING PROJECTS DURING THE CAMPAIGN



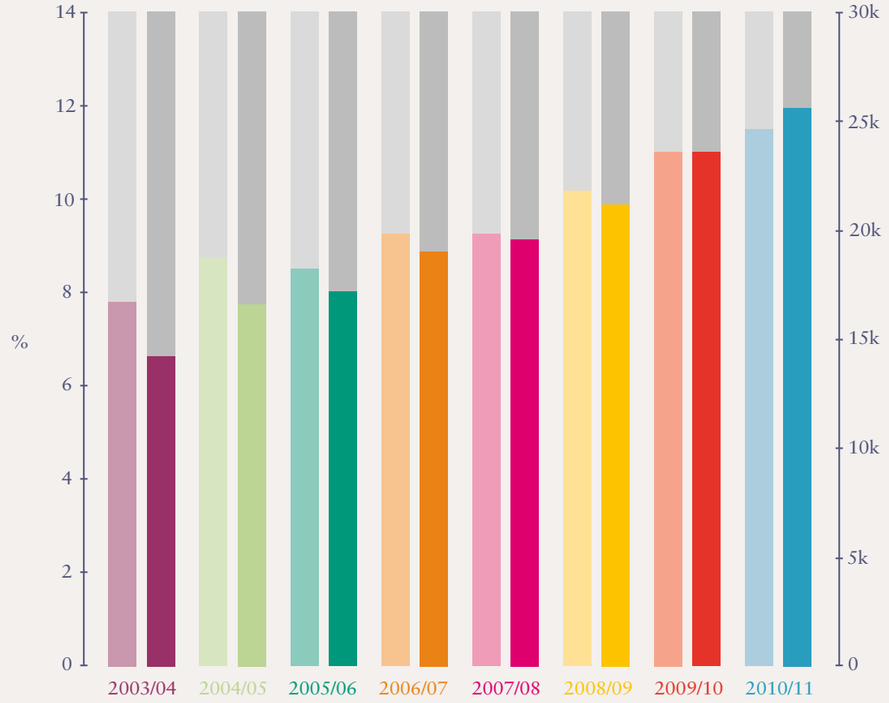
6

OVERALL CAMPAIGN PERFORMANCE: STRENGTHENING THE ENDOWMENT

*Approximately 50% to endowment

7

COLLEGES' ALUMNI PARTICIPATION RATE



£1.2 BILLION TOTAL MONEY RAISED

Last word
Peter Agar, Director of Development and Alumni Relations, 2002–12

Illustration: Elisabeth Moch for YCN

Collegiate Cambridge is a community of great diversity. A lone scholar re-examining an ancient manuscript in the University Library may appear to be far removed from scientists dressed like astronauts in the clean room of the Nanoscience Centre. The undergraduate spending an evening rehearsing for a new play at the ADC may seem very different from the PhD student feverishly trying to complete her thesis at the end of a gruelling three years in the laboratory. But each of them, in different ways, is pursuing a common goal. They are sustaining the human imagination – their own and that of others – in new ways.

The genius of Collegiate Cambridge over the centuries has been to develop an environment in which individuals use their unique human ability to imagine possibilities beyond the boundaries of their existing knowledge and understanding. Cambridge encourages exploration at every level: new friends, new pastimes, new causes, as well as the unrelenting intellectual challenge of the Tripos and research programmes.

Of course, most students do not become Nobel Prize winners or their generation's definitive Hamlet. But Cambridge does encourage every individual student and academic to explore the boundaries of their capabilities. It provides a gymnasium for the imaginative mind in whichever discipline or extracurricular activity is being pursued.

This forcing ground comes, in part, from the undergraduate supervision system in which students' ideas, rather than merely their skills, are put to the test. It comes from a genius of scale: the benefits of a diverse world-class institution made available through a series of smaller College communities. And it comes from standing in the footsteps of those who have been here before us.

This is why the act of making a philanthropic gift to Cambridge is – at its heart – an investment in the human imagination. As our benefactors, you make an investment in Cambridge's future whose benefits, while very real, cannot easily be measured or predicted with accuracy. All of the case studies of philanthropic investment highlighted in *The Philanthropist* demonstrate the imaginative leap that philanthropists make when deciding to make a gift. To invest in promise, rather than simply to meet an immediate need, requires belief in the recipient as well as a generous heart.

From the first recorded gift to the University in 1290 to the success of the 800th Anniversary Campaign, Cambridge has been privileged and blessed to have received such philanthropic commitment. We intend, in both the University and the Colleges, to continue to earn that support in the future.

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