



THE Darwinian



Professor Sir David MacKay FRS:

A Darwin Tribute



**The Old
Granary**



**Entry under arms
but over a badge,
Darwin and Rayne**



**Leo Howe
retires**

A Message from Mary Fowler

Master

A few months ago, hiking in the Alps on a wonderful clear sunny day, we came to a lovely spot with an ominous name: the End of the World. And yes, for those who are familiar with that oddest example of Cambridge humour, the *Hitchhiker's Guide to the Galaxy*, we did indeed visit the *Restaurant Ende der Welt*. As the Hitchhiker's Guide tells us, at the restaurant you can meet and dine with a fascinating cross-section of people. That's a bit like Darwin College – people come from everywhere and go on to contribute in a multitude of ways. This past year I have had the pleasure of meeting many alumni here in the UK and much further afield - Singapore, Kuala Lumpur, Sydney, Melbourne, Canberra, Brussels, New York, Washington and Toronto - and I hope to have the opportunity to meet and learn from many more of you in the coming year.

This spring in the Senate House the honorary degree of Doctor of Law was conferred on the UN Secretary-General, Ban Ki-moon in recognition of his humanitarian work, support for women's rights and achievements in pursuit of global peace and security. Imagine my delight when in his speech he mentioned the achievements of our alumni. And we have so much yet to come from Darwinians! The UK may be leaving the European Union, but Darwin remains the same: open and welcoming, a brilliant community that is serving the world.

We have had a year of great joys and tragic sadness: high achievements but also the passing of dear friends and colleagues. Many Darwinians will have known David MacKay, so familiar at lunch with his

smile, enthusiasm and infectious ability to do-the-math on any stray piece of paper whenever a bright new idea surfaced. "The brightest mind in Cambridge" was a comment often heard. His book *Sustainable Energy Without the Hot Air* is free online: there's no excuse not to read it! His knighthood in the New Year's Honours, 2016 was a delight to the entire community: our modest friend and colleague became Professor Sir David Mackay FRS, Regius Professor of Engineering. But then, heartbreakingly, we lost David on 14th April. To his wife Ramesh and young children Torrin and Eriska, our deepest sympathy: a bright star which lit our lives has passed. In his memory, the first David Mackay Research Fellowship will be awarded in 2017/18, and we are raising funds to make this a permanent memorial.

The College has also been saddened by the passing of another great man - Patrick Sissons. His obituary is on page 18.

In addition to David's knighthood, several Fellows received significant honours in this last year.

- King Carl XVI Gustaf of Sweden appointed Professor Larry Sherman a Commander of the Swedish Royal Order of the Polar Star as a Commander (KNO) in recognition of his services to Swedish criminology theory.
- Dr Emily Shuckburgh, deputy head of the Polar Oceans Team at the British Antarctic Survey, was awarded an OBE for services to Science and Public Communication of Science in the New Year's Honours list.



The Master with alumni in Canada

- Dr Tanya Hutter, Henslow Research Fellow, has been awarded a prestigious L'Oréal-UNESCO Fellowship for her work in developing a real-time online sensor to measure molecular changes in the brains of acute head injury patients.
- Professor Russell Cowburn was awarded the Royal Society's Clifford Paterson Medal and Lecture for his remarkable academic, technical and commercial achievements in nano-magnetics.
- Dr Richard Henderson was awarded the Royal Society's Copley Medal for his fundamental and revolutionary contributions to the development of electron microscopy of biological materials, enabling their atomic structures to be deduced.
- Professor Chris Bishop is the new Director of Microsoft Research Cambridge.
- The University of Sydney conferred an honorary Doctor of Science in Economics on Professor Willy Brown.

Many readers will remember Dr Leo Howe who has been Darwin's Dean since 1994. Leo, who retired this summer, has led the Deanery through two decades in which student numbers steadily rose as did the regulatory, pastoral and administrative obligations of colleges. Leo's experience and calm advice is greatly missed. The new Dean is Dr Duncan Needham, Director of the Centre for Financial History in the University, and a Fellow of Darwin since 2013. We are delighted that Duncan has taken on the role of Dean ensuring that we provide support and assistance for all our students through their time here in Cambridge.

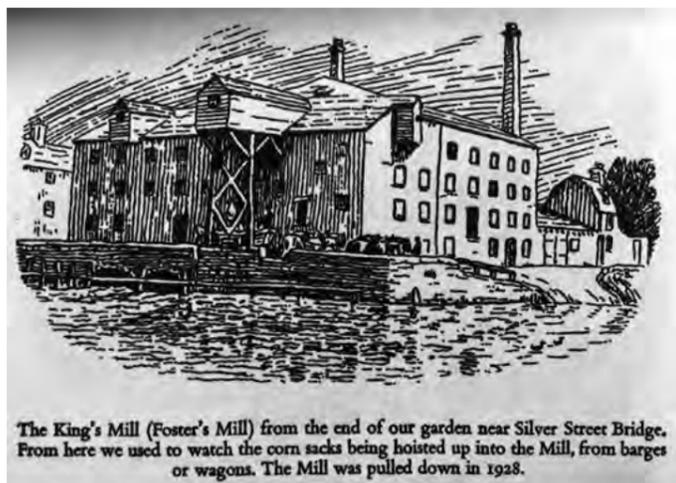
The 2016 Darwin Lectures were on Games, covering everything from politics (Baroness Warsi) to crime and punishment (Nicky Padfield), to philosophy (A.C. Grayling), to war (Frank Ledwidge), to games for the brain (Barbara Sahakian), to games animals play (Nick Davies), to economics (Nobel prize-winner Thomas Schelling). Yet again, the lectures were packed. I'm writing this at the time of the Rio Olympics, which brings to mind Sir Dave Brailsford's lecture. As performance director of British Cycling, he was behind 8 gold medals, and at Team Sky, he has a lockhold on the Tour de France. Want the secret of his success? Listen to his lecture! <https://sms.cam.ac.uk/collection/2155471>. The 2017 lectures will be on *Extremes*, with stellar speakers. Please do come should you be in Cambridge on a Friday afternoon in the Lent Term, or watch them online later.

The Bradfield Court plans continue to progress and we are pleased that planning permission has recently been granted. Thank you to everyone who contributed so magnificently and also to those of you who plan to donate in the future. When we have more substantive news you will be the first to know.

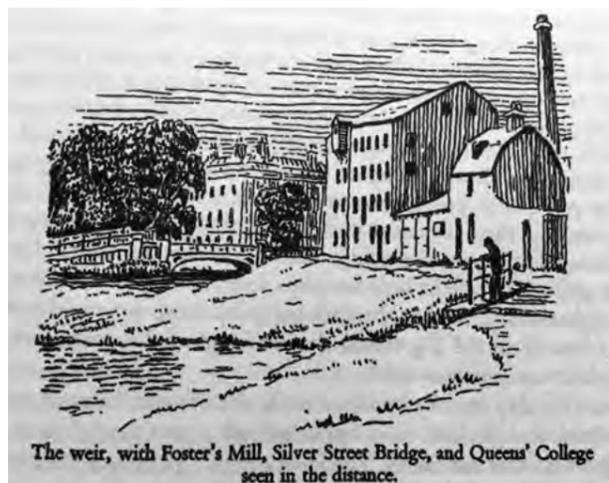
And finally, the large willow tree on the Small Island had serious surgery after very strong winds caused major damage and highlighted significant problems. Fortunately the tree-surgeon's diagnosis is that it will recover. The gardens are as lovely as ever; the newly-introduced Friday night summer BBQs are very popular; Darwin thrives, one of the best places on the planet to be a graduate student.

The Old Granary

the history and future of a much-loved Cambridge building



The King's Mill (Foster's Mill) from the end of our garden near Silver Street Bridge. From here we used to watch the corn sacks being hoisted up into the Mill, from barges or wagons. The Mill was pulled down in 1928.



The weir, with Foster's Mill, Silver Street Bridge, and Queens' College seen in the distance.

Illustrations from 'Period Piece' by Gwen Raverat, with thanks to www.raverat.com

If we travelled back in time to late 18th Century Silver Street, the area which is now Darwin College would be almost unrecognisable to the vista we enjoy today. In fact, the only constant is the river.

Small Bridges was the medieval name for Silver Street and approached the town across several bridges spanning two or more arms of the course of the river. This was the route by which grain was brought to nearby mills, one of which stood by the Mill Pond.

In the mid-late 1700's the Anderson family leased a number of mills across Cambridge (including the ones by the Mill Pond). They also built a stone granary to store grain and flour that stood opposite the watermills by the Small Bridges. In 1785 the building was used by the Beales family to store local grain. Many of the mills have disappeared but the Granary, now known as The Old Granary has had a colourful history.

The Old Granary is a grade II listed building. This means that it is of special architectural or historic interest is considered to be of national importance and worth protecting. It certainly was and is a stunning building with its character changing to reflect its various owners over the centuries.

On 25th March 1885 George Darwin (Plumian Professor of Astronomy and Experimental Philosophy and son of Charles) and his wife Maud bought The Granary and accompanying Newnham Grange. They almost immediately demolished part of the Granary to make room for a new tennis court and kitchen wing, and in 1885 converted the remainder into 'an unusual and charming living-house, named *The Old Granary*' (Margaret Keynes – 'A House by the River').

1885 was an eventful year for the Darwins, not only did they move into the Newnham Grange but they also had their first child Gwen. It is through Gwen's wood cuttings and her book 'Period Piece' that we have a very evocative history of The Old Granary, Newnham Grange and Cambridge during her lifetime. Some of her woodcuts and drawings illustrate this piece.

Gwen was very artistically talented from a young age, and was an active if little known member of the Bloomsbury Group which included Virginia Woolf and Rupert Brooke. It is thanks to Brooke that she met her husband the French painter Jacques Raverat; their love inspired Virginia Woolf in her novel 'The Voyage Out'. After she married, Gwen moved away from Cambridge, but came back later in life. She died in the Old Granary in 1957.

By 1899 George Darwin had rented out the Old Granary to the son of the poet Arthur Clough who in turn sub-let it to the philosopher Bertrand Russell who lived there when he was in Cambridge lecturing.

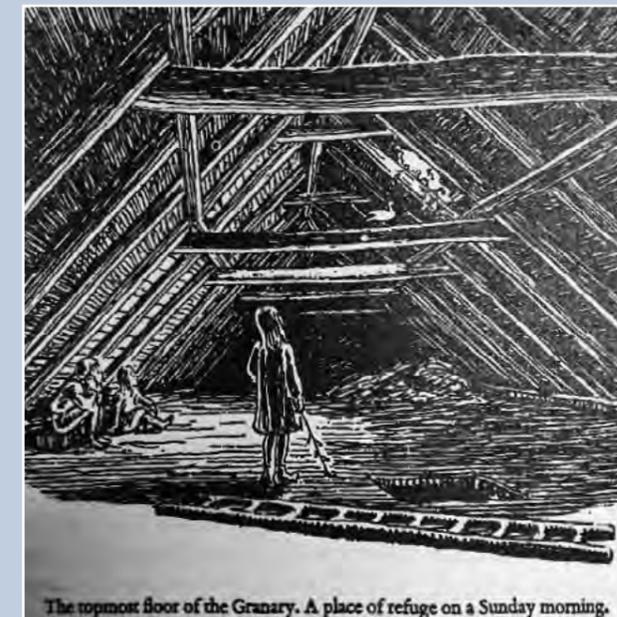
The Old Granary is now one of the most distinctive and characterful buildings in our portfolio and has housed generations of students for 50 years. In that time the interior has been changed just twice – once to convert the building from a private home to student accommodation and on a second occasion to increase the number of bedrooms. While the fabric has been kept in order over the years, buildings of this nature periodically require a comprehensive maintenance overhaul – a thorough programme of conservation, renewal of services, and some sensitive updating – all to make it fit for the next 50 years.

As part of the John Bradfield project we plan to refurbish the bedrooms to include some en-suite bathrooms and to make some changes to the access to the building to improve the fire safety. The scheme will ensure that the Old Granary continues to evoke its rich historical past, both inside and out, but with some unobtrusive modernising for the benefit of the resident students. We hope that future students will enjoy living in the building as much as the previous occupants: Darwin students, the Darwin family, Gwen Raverat, Bertrand Russell and other notable tenants. Let's give this building a future as wonderful as its past.

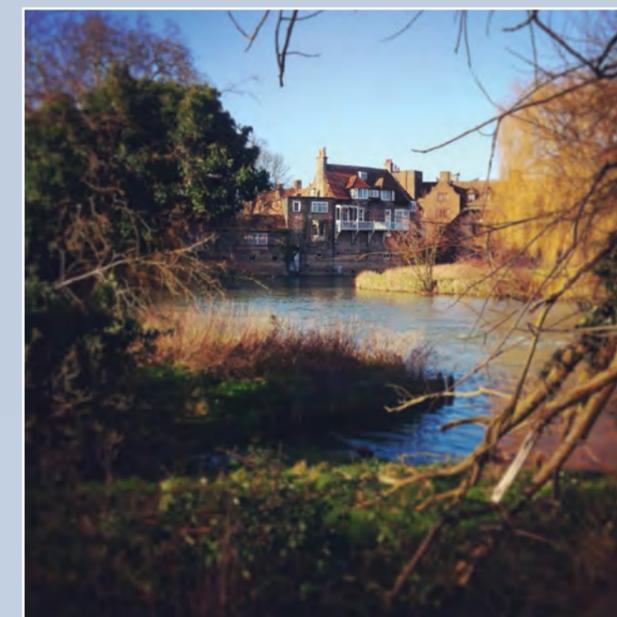
If you would like to donate to this exciting endeavour we are fundraising for it under the John Bradfield Court banner. Please use the donation form in the centre of this newsletter.

The Bradfield Project involves refurbishing the Old Granary - a listed building containing graduate student rooms - and creating a new structure in the grounds to provide a social and meeting space for the College. A free-standing pavilion has been proposed which will define a new court linking back to the riverfront and College gardens.

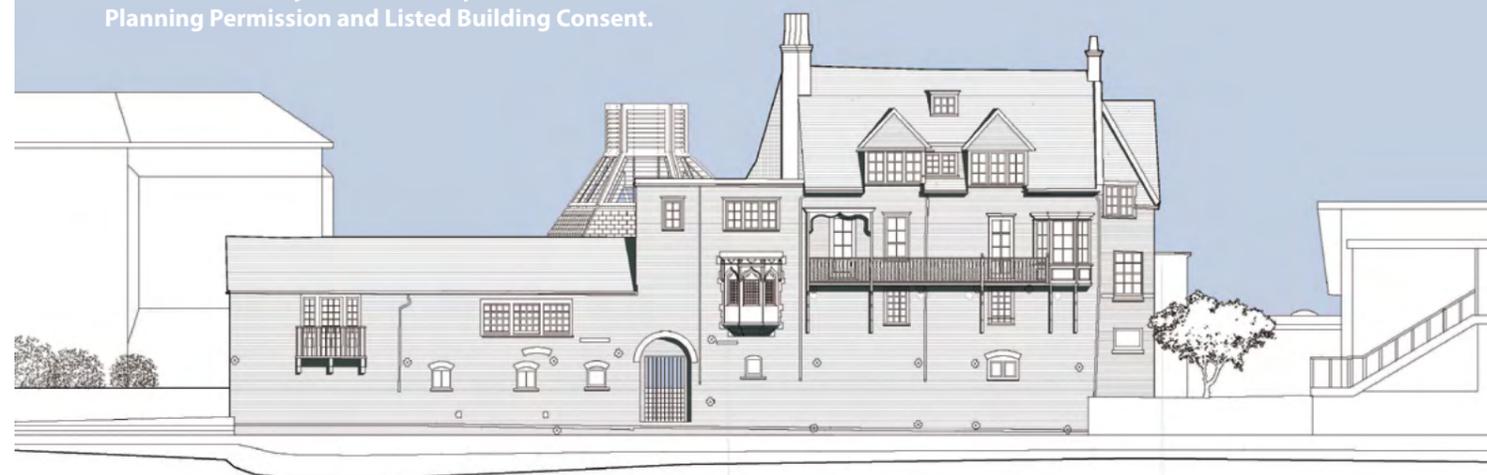
The Bradfield Project has recently received Planning Permission and Listed Building Consent.



The topmost floor of the Granary. A place of refuge on a Sunday morning.



Top: Children playing in the top floor of the Old Granary
Middle: The Old Granary today. © Inès Lion
Below: Architect's elevation of the Old Granary and Bradfield Court Building





Entry under arms but over a badge, Darwin and Rayne 'within a bordure or'

The shield, helm and crest of Darwin College greet entrants, just as the armorials of Lady Margaret Beaufort welcome arrivals at Christ's and St John's. Those over the door at Darwin are in monochrome, but on certain occasion the College Flag or 'banner of arms' flies above them in full colour.

Colleges use their arms to decorate buildings, on silver, crockery or paper napkins and to embellish invitations and menus. King's and Trinity use those of Henry VI and Edward III (the latter the founder of King's Hall later amalgamated into Trinity, whose arms are on the Great Gate) for flags instead of their own arms, but the corporate coats of both Colleges express their regal connections and that of King's the link to its sister, Eton, bearing a similar coat but with lilies instead of roses. The arms of Trinity, containing a *lion passant guardant or* and three roses speak of its foundation as such by another sovereign, Henry VIII. Arriving at Darwin through the Rayne Building one walks under arms recalling the Darwin family and Max Rayne, while inside the foundation story is in shields as well as words with arms for Trinity, St John's, Gonville and Caius and for the College.

Walking in over the armorial badge in the carpet makes for a comprehensively armorial introduction to the College.

Darwin, like King's was granted arms as part of its foundation, but older Colleges often adopted arms from their founders or employed some device alluding to their name. In 1575 it was a Johnian, Robert Cooke, Clarenceux King of Arms and sometime Acting Garter Principal King of Arms (incidentally, Thomas Woodcock, the current Garter is a Darwinian) who visited

Cambridgeshire to examine armorial bearings in use and either confirm and record or else disallow them.

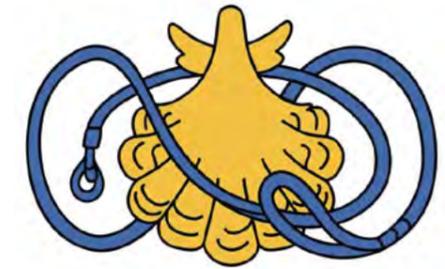
Cooke, who granted arms to the University in 1573 and to the Borough in 1575, sometimes confirmed the right of a College to use the arms of a foundress or founder without difference, e.g. at Clare, or else confirmed and granted, with differences, a coat often derived in some way from the foundress or founder. A convenient variation to produce a distinct coat was to place a *bordure* (broad margin) around existing arms; thus for Queens' a *bordure vert* went around the coat of Margaret of Anjou, Queen of Henry VI. St John's, Cooke's



own College, uses the arms of Lady Margaret Beaufort unaltered, so they are using a form of the Royal Arms of the time with the *bordure compony argent and azure* to distinguish them from those of the monarch. Christ's use the same. A *bordure compony argent and sable* appears in the coat for Gonville and Caius, otherwise deriving on one side from Edmund Gonville (with certain differences) and on the other from John Caius.

An unusual feature in the confirmations of arms for Trinity Hall, Jesus and Queens' was the grant of a crest to be born on a helm as well as arms to be displayed on a shield. Crests were not routinely accorded to corporate bodies at that time, being associated with wearing armour and participation in tournaments, activities not expected of a corporation.

When Darwin College received its grant through letters patent issued by Garter, Clarenceux and Norroy and Ulster Kings of Arms (Sir Anthony Wagner, Sir John Heaton-Armstrong and Aubrey Toppin Esq.) in January 1966, it included a crest and a badge. The grant sprang



Darwin College Badge.



The shields of Gonville and Caius, St. Johns, Trinity College and Darwin.

from the foundation, when by warrant under her Royal Signet and Sign Manual of February 1965, HM The Queen expressed to her Officers of Arms, via the Earl Marshal, her wish that armorial ensigns be assigned for the use of the Trustees of the Darwin College Trust and the Master, Fellows and Scholars or such other corporate identity as the new foundation should assume.

Like the arms of Gonville and Caius, Darwin's coat combines personal arms with a border. To the *dexter* (heraldic right from behind the shield) are arms granted to Reginald Darwin of Fearn in 1890 and born through descent by Sir Charles Galton Darwin (*argent, on a bend gules cotised vert, between two mullets each within an annulet gules, three escallops or*) and to the *sinister* (heraldic left) are those granted in 1963 to Max (later Sir Max and finally The Lord) Rayne, benefactor and Honorary Fellow (*per fess dancetty azure and gules, a caduceus between in chief two roses or*). This is a distinct coat for the College, not just an impalement of Darwin and Rayne, so a *bordure or* binds them.

The crest, *on a wreath or and azure, in front of a lion passant or, murally crowned azure, holding in the dexter forepaw a key, wards outwards or, three escallops argent*, is taken mostly from Max Rayne, but has the *three escallops argent* from Reginald Darwin for difference.

This should be born on a plain steel helm with closed visor, the form normally used by corporate bodies.

The College's badge is a *leading rein interlaced azure, the clip to the dexter, entwining an escallop or*. The source of the gold scallop is obvious and the leading rein is *canting*, i.e. a visual pun, of which heralds are traditionally fond, on Rayne. In late medieval times badges and liveries were used by great families and corporations to identify their households and retainers. Associations with unruly nobles and private armies brought them into disfavour outside the Royal House, but early in the 20th Century they were revived by Sir Alfred Scott-Gatty, of Christ's, Garter. Badges had originally appeared on the clothing of associates instead of the full coat, but modern custom generally accepts the extended use of corporate arms by individual members on their personal items; although only Heads of House may *impale* the arms, i.e. place the coat of their College alongside their own on a shield or lozenge.

The possession of a badge remains unusual for Colleges, although Selwyn, having earlier used the arms of Bishop Selwyn, acquired one with their own grant in 1964. Queens' have long used a silver boar's head with a gold cross and crozier *in saltire* as a form of badge. Unlike the City, the University and its Colleges do not have armorial supporters as such (the yales that are a striking feature of the gates at Christ's and St John's derive from the achievement of Margaret Beaufort). Perhaps appropriately without mysterious companions unknown to natural selection, Darwinians can rest content with their armorial ensigns, badged and within their golden border.

The author acknowledges with gratitude the assistance of *The Cambridge Armorial*, Humphery-Smith, Peek, Wright and Scott-Giles, Orbis Limited, London, 1985.

Tim Milner, Deputy College Praelector, University Senior Pro-Proctor and Ceremonial Officer.

Image, right: The Darwin College Achievement of Arms. The Shield is central, the helm sits on top of the shield and the crest is the lion with the key in its paw.

From the Development Office



The long days of summer are past but we have some lovely memories to reflect on. The May Ball was a fun packed event and it is pleasing that every year we have alumni coming back to enjoy the night with our current students. The Graduation in July was one of our biggest yet with 280 students and guests, and the lawn by the dining hall was completely filled with the largest marquee yet seen in College. The day went smoothly and was enjoyed by both the graduands, guests and the staff who made the day go so well.

Alumni events have been equally appreciated, the Master and Bursar had a wonderful time meeting alumni in the US and Canada in March. They were thrilled with the warm and friendly welcome they received in each place they visited. Plans are now being made for the Master's 2017 schedule and we will be sure to put details on the website and in the bulletin as soon as her itinerary is finalised.

In College we have an equally busy events programme. The Darwin College Society continues to organise 'Local Heritage' events many of which include private tours of museums or places of interest. We are always striving to expand our portfolio of events, indeed this year we added a

summer concert of classical music and Guest Night in November. If you have any ideas for events we can run either in College or at a venue elsewhere, we would love to hear from you.

A big 'thank you' to the large number of you who donated to the John Bradfield Court and Old Granary renovation project this year. With your help we are now at 62% of the £500,000 total needed to unlock the matched funding from Trinity College. (There is an interesting article about the Old Granary Past, Present and Future on page 4 of this magazine). If you would like to give to this exciting endeavour please use the donation form in the centre of this newsletter.

Another area we are developing is our small but beautiful merchandise range. Our newest item is a limited edition mug and it is selling fast. If you would like to order one please go to our website and click on 'Darwin Shop' towards the bottom of the right hand menu.

Remember if you would like to come back to College just to look around, for lunch or for a meeting please do not hesitate to contact us – alumni.relations@darwin.cam.ac.uk.

Leo Howe retires after 30 years' service to the College

Generations of students have reason to be thankful to the College Dean Leo Howe who retired in September after 30 years of calm and good humoured service.

In 1986 Leo moved to a post at Cambridge in the Department of Social Anthropology having spent the four years following his Edinburgh PhD at Queen's University Belfast as a Lecturer and then a Research Fellow.

Leo who lived in Belfast during the height of 'the troubles' spent time working on unemployment and labour markets, including the social benefit scheme, and the various difficulties inherent in the attempts not to categorize people as deserving or undeserving.

But it was his PhD research on people and culture - caste, kinship, religion and politics in Bali, Indonesia

- that was his real love and on which he focused throughout his career. Leo went on regular trips to Bali, bringing back all kinds of memorabilia, which adorned his office for years. Some of the masks, though colourful were rather unusual and always a good conversation starter!

Leo first served in the Deanery in the early 1990's and by April 1994 he was appointed Dean. Always calm and good natured, much of Leo's time was spent supporting individual students struggling with a myriad of different concerns – usually financial, but sometimes health problems or other more complex issues. Usually students required his help on an occasional basis but sometimes his assistance extended over many years.

Leo has served the Deanery for 24 years in total - almost half of the College's lifetime. The College thanks him for his long service to generations of students.

We wish him a very happy and well deserved retirement.

Our Glorious Garden

a hidden gem

As the late Derek Bendall wrote so eloquently in 'Darwin College: A 50th Anniversary Portrait':

"our gardens have grown organically in a way determined by the site, its history and a concept of the role of the garden in the life of the College. Above all there is the river, which is the hero of the story, to use the expression of Margaret Keynes in 'A House by the River'. The garden of Newnham Grange as we know it was largely the work of J.J. Stephenson, the architect employed by George Darwin when he purchased the property..... Stephenson seemed to have had a feeling not only for the buildings but also its immediate surroundings, seeing the site as a whole."

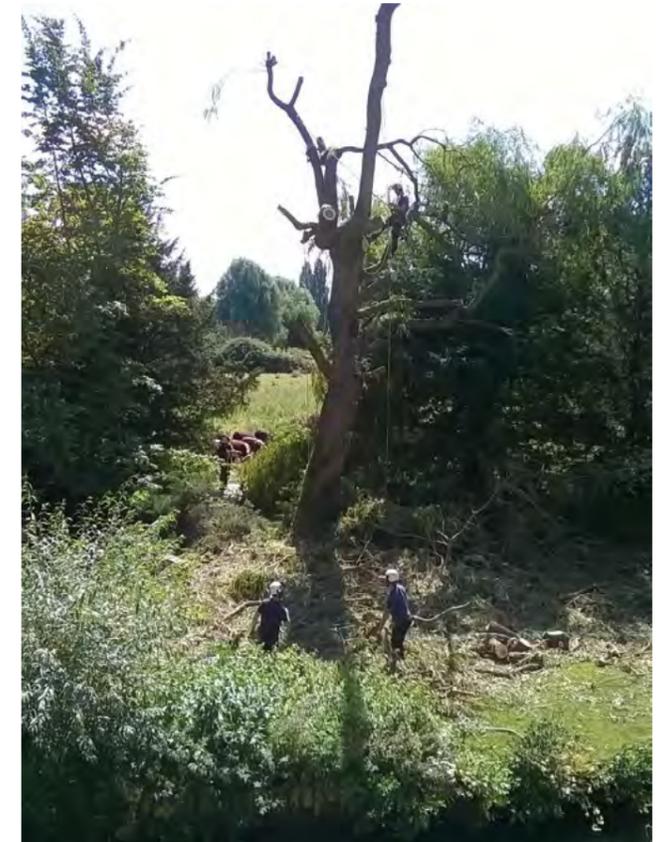
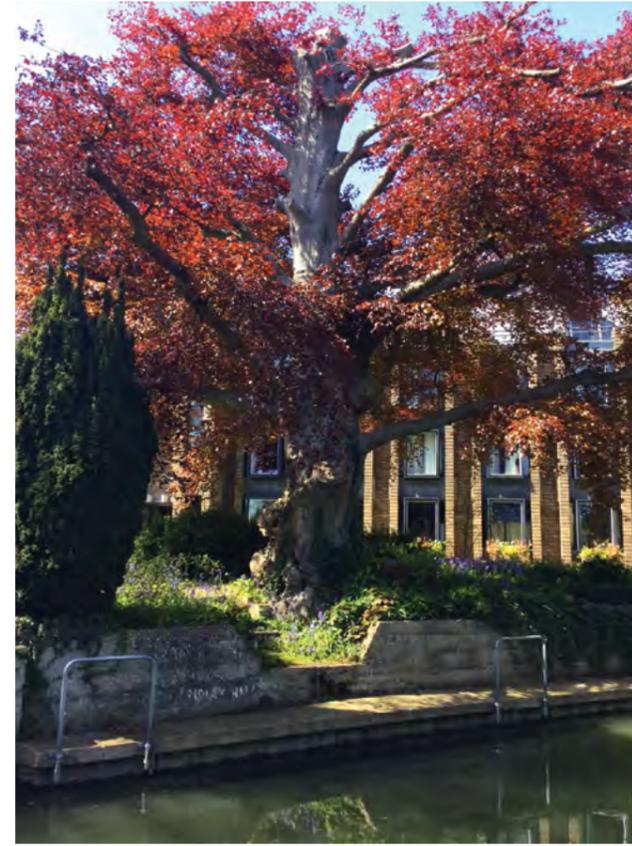
The gardens have changed organically and slowly since Stephenson's design. The copper beech, so well loved by all Darwinians was and still is the focal point of the garden. Indeed it was large enough for the young Gwen Raverat to climb to build a tree house.

The gardens have grown further with the purchase of Newnham Terrace and the students have a flourishing and well-tended allotment near the 'The Granta' pub.

The willow on the small island has had a drastic 'hair cut' after it was damaged by high winds in the summer; the prognosis is good though and it will be as glorious as ever in the next few years. The Coe Fen cows enjoyed watching the tree surgeons at work and many of them feasted on the discarded leaves and smaller branches.

This year, as every other year, the gardens have been well used for barbecues, croquet, the year photo, studying, taking coffee and of course graduation lunches, the May Ball and garden parties. It has been a joy to see such a large number of people enjoying our beautiful oasis of calm. The gardens are appreciated every day as a quiet escape for Fellows and students away from the hubbub of daily life.

Opposite, clockwise from top left:
 The Copper Beech in all its glory
 A pumpkin growing in the student allotment
 Tree surgeons working on the Willow with curious cows looking on
 An unexpected visitor



Florian Roessler

PhD student



An active member of the Darwin College Boat Club since he arrived in Cambridge from Germany, Florian is writing up his PhD in the Department of Chemistry. Once this is completed, he will be

off to London for an internship, partaking in a program called "Science to Data Science", which involves applying data science approaches to a variety of real life problems. He has, moreover, had an offer already for a post-doc position at Cambridge to work on computer-based drug development.

Born close to Frankfurt, Florian went to the Goethe University for his BSc and MSc in physics. At the Max Planck Institute for Biophysics at Goethe University he worked in computational biophysics. His route to Cambridge after that depended upon a serendipitous encounter with Dr Peter Bond. Dr Bond held a Lectureship at Cambridge, but frequently returned to Frankfurt. Strongly encouraged by Bond to join him in Cambridge, Florian got a summer student grant from the Chemistry Department to carry out research for his dissertation. Later, he got further funding from the Cambridge Crystallographic Data Centre and the Department of Chemistry to continue his research as a PhD student. Various other grants saw him through to completion this summer.

His PhD research involves describing interactions between protein and ligands, with a view to modelling their interactions at an atomistic level. Further, he has sought to model these molecular interactions in order better to understand biological processes of all kinds. This leads to improved knowledge about the mechanics of drug interactions with proteins, the aim being to improve the efficacy of drugs in the treatment of illness. For example, the HIV virus mutates easily. Clarification of how such mutations make the virus immune to previously-effective drugs can be achieved

by simulating protein-drug interactions, leading to better outcomes.

In his first year in Cambridge, a friend introduced Florian to Darwin, where he says he found the social life most congenial. He decided to apply for membership, which began in 2012 when he started his PhD. He quickly found himself a keen member of the College rowing club, where he became, first, captain of the men's boats, and soon after captain of all the boats, men and women. Rowing became a splendid complement to his research work. It was physically demanding, mentally stimulating – requiring intelligent team work – and socially rewarding, as he and others managed to build up a successful club. Florian particularly appreciated the Darwin Boat Club ethos, namely, that rowing and competition should be a lot of fun – and that winning in competitive races would follow naturally.

The Darwin Club has in fact done very well these several years in competition against other colleges, as well as in London at the "Head of the River" race. And it has been a wonderful way of making good friends.

Florian has found a warm, international social life at Darwin, which he feels has a 'more grown-up atmosphere' than other colleges. He has not only enjoyed strong friendships; he also met his partner Maria. Both these young people are enjoying their time in England, but think of returning to the continent in three or four years, to settle somewhere in Europe.

Stephanie Ashenden

PhD student



President of the Darwin College Student Association (DCSA) for the year 2015-16, Stephanie has just completed her second year as a Ph.D. student in the Department of

Chemistry. Convinced that Darwin has turned out to be the best place in Cambridge for her, she has wanted to "give something back" to other students, so she took on the DCSA position. Her presidency saw the founding of the Darwin College Families society which has built a community for students with children, and has proved to be most successful. In addition, she has taken a strong interest in the College Science Society, sitting on their committee and, inviting people from, for example, the British Science Association, to try to communicate the value of science to a wider community. Scientists need to find out how to reach into schools and stimulate an interest in children who have little easy access to museums, experts, and scientific influences generally. Stephanie wants to find ways to overcome gender, race, and class barriers, but, most especially, the "Geek" barrier – the notion that scientists are somehow different. In order to communicate to the public why science is so important – and such a rewarding career – we need to provide role models to overcome fears that science is too hard, too remote. Stephanie is, to that end in part, on the committee of the British Science Association, and she hopes to find further ways to help young people, as well as adults, make good choices.

During a B.Sc. in Forensic Biology, Stephanie spent nine months in Thailand working in industry at a research institute of BIOTEC in Pathum Thani, not far from Bangkok, although her time there was cut short due to terrible flooding. She researched malaria and met students from all over Asia – Korea, China, Malaysia, Japan, and so on – and learned some Thai as well as making a hobby of learning a little Japanese, Chinese, and Korean. She has always loved learning

languages as a way of reaching into other cultures and overcoming barriers between people. On her return, she completed her undergraduate degree and started a MSc (Res) in genetics, with a focus on cancer drug resistance. Following her masters she began a PhD at Cambridge where she is analysing chemical space. Having become interested in chemistry while an undergraduate – at a time when computational methods (informatics) were just being introduced as part of the undergraduate courses – she worked on bio-informatics for her MSc, and became fascinated by this field.

Chemical space is all the potential compounds that can be theoretically synthesised, which you can argue is only limited by imagination (although the number is commonly cited as being 1060 compounds). Therefore, the need to understand chemical space and how to navigate it is essential for effective drug discovery.

She now does research at the Centre for Molecular Informatics, where she works both in academia and industry as part of her CASE Studentship. She loves the teamwork required of both areas, and hopes to be able to continue this combination of research and industry projects.

In addition, Stephanie has participated in theatre – in particular, she performed in a pantomime that was designed to be taken to people who wouldn't normally get the opportunity to attend including a school for disabled children. Furthermore, she was involved with "Mastana", an Indian cultural performance involving dance, music, acting, and fashion. She is certainly making the most of her time at Cambridge and, given her energy and determination, she hopes she will be able to continue all these interests after the Ph.D. To keep up this wonderfully rich variety of interests, she will, however, need "time, strength, and patience!"



Jenneke van der Wal

Research Fellow 2012–16

“Why did I apply for a Research Fellowship at Darwin? Well, it’s quite close to my office on the Sidgwick site, so I figured it would be easy to come in for lunch!” Jenneke

van der Wal laughs when she tells how she first started as a Research Fellow in 2012. “But seriously, coming in for lunch is a great way to meet Darwinians. And since there is no high table and Darwin College has an informal atmosphere in general, it is indeed quite easy to meet people from many different nationalities and in a wide variety of academic fields. That is the heart of the College: the interactions between students, staff, fellows.”

Jenneke arrived in Cambridge in 2011 to start a postdoc in the ERC-funded project ‘Rethinking Comparative Syntax’, in the Department of Theoretical and Applied Linguistics. The aim of that project is to study how languages can vary so enormously, while at the same time showing many similarities in the restrictions there

are to this variation. By discovering the parameters that distinguish languages from each other, and developing a model for the relations between these parameters, we can discover the building blocks of grammar and arrive at a better understanding of our unique human ability to ‘do language.’

Jenneke’s personal research is inspired by the question ‘why do we say what we say in the way we say it’, or: what determines the rules of our grammar and the variation across languages? “When we want to get a message across, we cannot just pick the content words, but we need to formulate a proper sentence. The wellformedness of sentences is only partly determined by the syntactic rules of our language, for example how in English the verb always needs to show agreement with the subject: you cannot say ‘Ivan organise yummy dinners’ - it needs to be ‘organises’. Another part, however, is the packaging of the information: what do I want to highlight for the hearer? Whether I say ‘Janet contacted the MASTER’ or ‘It was JANET who contacted the Master’ makes no difference in the basic meaning

(there is still an event of contacting involving Janet and the Master), but there is a big difference in what information is contrasted. While English primarily uses intonation for this purpose, Makhuwa (of Mozambique) has different verb conjugations. If you say ‘Espen ooweha Torsten’ that just means that Espen saw Torsten, but if you change the verb and say ‘Espen owehale Torsten’ it means he saw Torsten and nobody else. The expression of information packaging differs across languages, and that is what keeps fascinating me.”

A particularly fruitful area to study this, Jenneke continues, are the Bantu languages. These are around 500 languages spoken in sub-Saharan Africa, including Swahili and Zulu. Her PhD thesis from Leiden University in the Netherlands described and analysed one of these languages, called Makhuwa, which is spoken in the north of Mozambique. “Local fieldwork is a life-enriching experience, although you have to be careful with malaria and local traditions. But gathering new data on an underdescribed language and making friends with its speakers is one of the best sides of this work!” Her fascination with African languages had started earlier, though, maybe even long before she started as an undergrad in the African Linguistics department of Leiden University - maybe even before she was born. Her parents worked in Nigeria for two years, and she was born in 1981 just before the family moved back to the Netherlands, where she grew up. “Even though of course I cannot remember anything from Nigeria, growing up in a house with African art and furniture does make you curious. ...”

And that curiosity has inspired her direction of research, where she always aims to combine language description and theoretical analysis. Novel data should drive the improvement of the theories and our understanding of language, and theoretical hypotheses should in turn inspire new questions for experiments and fieldwork, she explains. This approach also came to the fore in her collaboration with Dr Saudah Namyalo at Makerere University in Uganda, who was also a Visiting Associate to the College in 2014. Via the Cambridge Africa Programme the two linguists gained a grant from the Alborada Fund to describe the morphosyntax of information structure in Luganda. “Working with Saudah, who is a native speaker of the languages and a very driven linguist, was very stimulating. We both learned a lot from each other, and managed to not only gather data, but also write a paper together on the analysis of focus (the new or contrastive information in a sentence). We made an interesting discovery: the Bantu language Luganda has three ways to express

focus, but they crucially differ in their precise meaning. We came to the conclusion that one identifies the focused referent (‘what Jose serves is (identified as) white wine’), another makes it exhaustive (‘he served **only** white wine (not red)’), and one is underspecified.”

Over the last years in the project and in the College, Jenneke found that she has been given great opportunities to learn and grow as an independent and all-round academic. Part of this learning was in teaching and supervising students in linguistics, but another important part was in the College. “In the official admission as a Fellow we promise to promote the wellbeing of the College as a place of education, learning and research, and I wondered how I could contribute to this wellbeing. Seeing that there are so many knowledgeable people with all sorts of ‘transferable skills’, I thought it would be good to have a place to share these.” And hence, with the help and encouragement of the Master, the ‘How To’ workshops were started in 2013, with 4 evenings per year on topics such as how to make an effective presentation, how to write a good CV, how to do mindmapping or how not to procrastinate. “Especially the last one was very popular, as you can imagine,” Jenneke adds with a smile, “with some students indicating weeks after the workshop that they were still using the pomodoro and 4D techniques that were discussed. But most importantly, Darwinians did this together: I am very grateful that fellows happily gave up an evening to share their years of knowledge, be that about decision-taking or fostering confidence, with the students and post-docs at Darwin.” It is hoped that the workshops will continue to be organised by others in the future.

Jenneke has left Darwin and Cambridge to take up a temporary position as a Lecturer in linguistics at Harvard University. Her husband, who works as an advisor on nature conservation at Natural England, will visit often and otherwise find company with Darwinians who became friends of the couple over the last years. “I will miss the good friends I’ve made here. And the Darwin Cuban salsa dancing, the conversations over a meal, and generally the vibrant yet relaxed atmosphere. But Darwinians are all around the world, and we know that having lunch together is a great way to meet people!”

Links

www.languagesciences.cam.ac.uk/news/caprex-cambridge-africa-a-personal-view

Munawar Chaudhri

Emeritus Fellow



Born in Kahnaur, Rohtak in the Punjab in 1941, Munawar came to England in 1966, at his father's urging, to do a PhD in physics at the Cavendish Laboratory – the beginning of a long and fruitful academic career in Cambridge. His father, Rafi Mohammed Chaudhri, had earlier been a PhD student – also at the Cavendish – working in part with Mark Oliphant, and he became a notable student of Ernest Rutherford (Nobel Prize 1908, and considered by some “the greatest experimentalist since Michael Faraday”) from 1929 to 1932. While at the Cavendish, Rafi Chaudhri had advice from Thomson, Chadwick, Cockcroft and Fowler. The Nawab of Bhopal had given him a scholarship to fund his Cambridge PhD: Mr Chaudhri had achieved record-breaking high marks in his MSc that were not surpassed for thirty-five years. (Munawar’s maternal grandfather had close connections with the British: he was a cavalry officer who fought in WWI, winning medals for bravery; he was also given land in the West Punjab, which remains in the family.) Unlike Munawar many years later, his father returned, first to Islamia College Lahore as Professor of Physics and Head of Sciences, then, from 1938 to 1948 as Professor of Physics and Chairman of Physics department at Muslim University

Aligarh (about 140 km from Delhi). However, concerned about the severe scientific needs of the newly created Pakistan where a vacuum of scientists had been created by the rapid exodus of talented Hindu teachers and researchers, Mark Oliphant wrote to Mohammad Ali Jinnah, the first Governor General of Pakistan, to invite Rafi Chaudhri to Pakistan. Mark Oliphant’s letter had a profound effect and Rafi Chaudhri was invited to become the Professor and Head of department of physics, Government College, Lahore (now Government College University, Lahore).

In the spring/summer of 1947, Munawar’s father returned to Kahnaur, after spending a year in Oliphant’s laboratory in Birmingham. The news of the date of partition of India into Hindustan and Pakistan had spread throughout the sub-continent. Many Muslim families had started migrating to the newly created Pakistan because of the rampant violence against them. Munawar’s father decided to move the family to Aligarh (225 km from Rohtak) by road, while Munawar’s maternal grand parents chose to go to Pakistan by train from Rohtak. The journey on 14th August 1947 (the Independence Day of Pakistan) was harrowing. The first stop was Delhi where the family were put up in a house close to the Deputy Commissioner’s (a Muslim) residence. At midnight (i.e. 15th August – the Independence Day for Hindustan) the intensity of violence in the city of Delhi was beyond belief, but the family survived. The next morning Munawar’s family left for Meerut (about 70 km from Delhi), this time with armed guards. On crossing the Jumna River, Munawar still remembers seeing many dead bodies and severed heads floating in the water.

On reaching Meerut, the family were welcomed by the Deputy High Commissioner (a Hindu) of Meerut, who fed the family well and provided them with safe accommodation where the family could sleep for the night without fear of being slaughtered. The last leg of the journey to Aligarh was smoother and the family were relieved to be back in their large University house.

The Government of Pakistan’s invitation to Munawar’s father came during the following months and the entire family flew to Lahore, Pakistan in the summer of

1948 and, apart from one life-threatening incidence in Lahore, went directly to Munawar’s maternal grand parents’ residence in a village near Arifwala (west Punjab). Munawar’s father then returned to Lahore, joined Government College, Lahore and soon afterwards resigned his position at Aligarh University. Rafi Chaudhri was then allocated a large government house in Golf Road in a special residential area housing high-ranking government officers and ministers. Soon afterwards, the entire family moved to Lahore, and all the children were found good schools.

After finishing school, Munawar became a student of Government College. He completed his B.Sc (Hons) in 1959 and M.Sc. (physics) in 1961, carrying out a research project. The results from this project were published in Nature in 1962 (his first publication). Munawar carried out another three years’ research at High Tension and Nuclear Research Laboratory, Government College before coming to Cambridge in 1966. During these three years, Munawar worked on the impact of fast protons, produced from a Cockcroft-Walton generator and electrical discharges in gases. Results obtained were published in Nature and proceedings of international conferences. Munawar believes that the research training received in Lahore was of great help in completing his Ph.D. thesis at Cambridge.

After some considerable time reading background literature and carrying out simple experiments, Munawar decided to study the explosive behaviour of silver and lead azides by growing large crystals of these sensitive primary explosives.

Munawar submitted his Ph.D. thesis in December 1969, and was offered a post-doc position at the Cavendish. This was followed by an offer of a Junior Teaching Appointment (Senior Assistant in Research) at the Cavendish in 1971.

Over the years in Cambridge, he supervised 18 graduate students working with him on various projects, 17 of them completing their Ph.Ds. (the 18th is still writing up). Munawar also supervised about 45 final-year students’ research projects at the Cavendish, which gave him great satisfaction and pleasure.

Munawar has published widely and after working for many years on explosives with great success, he turned to research two other major areas. First, he investigated micro- and nano-indentation hardness of ductile and brittle solids, making progress in the understanding of the physics and mechanics of the strength properties of solid surfaces and thin coatings. He and his colleague Lim showed that the current methods of analysis of data, obtained from modern load-displacement instruments required fundamental modifications. These suggestions have been well received and are yielding results of great significance.

He and his colleagues have also made significant discoveries in the fracture of brittle and semi-brittle solids. For example, Srinivasan Chandrasekar and Munawar used very high-speed framing photography to follow the mechanical processes during the explosive disintegration of Prince Rupert’s drops. They came up with the correct explanation of the disintegration phenomena, which had puzzled scientists since the 1660s work of Robert Hooke.

In 1989 Munawar became an Assistant Director of Research and in 1990 he became a Fellow of Darwin, where he has found a congenial and stimulating *milieu*; in 2001 he became a Reader, and retired in 2009. He comes regularly to lunch and enlivens the hour with his marvellous warmth, his priceless sense of humour, and intriguing stories of Pakistan, his famous father, and his youth. He is married to the beautiful and accomplished Anna, who is a headmistress. Anna is a linguist, a graduate of Robinson College and a former Junior Research Fellow of Clare Hall. She has published work in the field of Caucasian literature and folklore.

Munawar is a keen sportsman. He has a Half Blue in Table Tennis, has played squash for Cambridgeshire county and has represented Churchill in Cuppers cricket team.

Professor Sir David MacKay FRS

A Darwin Tribute



Many obituaries have been published, celebrating the life and achievements of Professor Sir David MacKay, much-loved fellow of Darwin College, who died from cancer on 14 April this year. As government chief scientific advisor on energy and climate change, and as the first Regius Professor of Engineering in Cambridge, he was one of our most prominent fellows. A feature in the summer 2015 issue of this magazine described his many academic and professional achievements and honours. In this article, we remember him as a dear friend and talented colleague, and especially as a Darwinian, who loved the college and exemplified so many of its ideals.

David arrived at Darwin immediately after a PhD at Caltech. He had gone there to work with John Hopfield, who had recently created a world-leading interdisciplinary programme exploring new frontiers in the computational understanding of the brain. David's father Donald MacKay had also been a pioneer of computational neuroscience, one of a handful of British researchers who participated in the American development of Artificial Intelligence research. David's own talent for research, and ambition to pursue this topic, had been apparent since he was a schoolboy.

Although David's mathematical achievements as Hopfield's student were hugely impressive, he was also lonely, missing the Cambridge life he had experienced as an undergraduate at Trinity, and wrote to his

mentor Steve Gull in the Cavendish saying how much he wished he could return. The opportunity to join Darwin arrived through a competition for the Royal Society Smithson Research Fellowship - the only time to date that Darwin College has hosted this prestigious appointment. Eminent Darwinians who interviewed David on his application, including Ron Laskey and Geoffrey Lloyd, still remember how clearly outstanding he was at their first meeting.

This is how David arrived at Darwin in early 1992, determined to make the most of the friendship and intellectual stimulation of College membership, and throwing himself into College life. Like many members of Darwin, David was always excited by conversations over lunch, in the parlour and gardens, advancing new theories, carrying out experiments, starting campaigns and inventing things. His mathematical talents were always at the ready, with conversations often accompanied by equations and graphs drawn on a napkin, using the multi-colour ballpoint pen he carried in a waist pouch alongside a Psion computer - and a hat in case of sun. We loved him for the artless pragmatism apparent in all his habits: shorts in all seasons for freedom and ventilation, sturdy leather shoes and socks for safety on his bicycle, with a jumper or waterproof when necessary as the only concessions to Cambridge climate.

Although David's modest personal habits, from bicycling to his vegetarian diet of lentils and vegetable juice, could easily have seemed earnest, he was anything but austere. His generous vivacity and sense of fun led to constant adventures. Lunchtime entertainment ranged from the invention of a moderately profitable football betting system, to a mathematical proof that the optimal number of genders (for maximum efficiency of evolution through sexual reproduction) was indeed two. He loved being active, and was a driving force behind the successful Cambridge Ultimate Frisbee team "Strange Blue". He applied maths and science everywhere, whether devising complex new strategies for Ultimate, experimenting in the Darwin parlour with home appliances from bathroom scales to vacuum-assisted haircuts, or inventing new technologies such as the automated "Internet Receptionist" that grew into the business success of Transversal.

The combination of a brilliant intellect, gregarious generosity, and levels of energy that seldom flagged, made David a natural campaigner. He came from an extraordinary family, fervent in their Christian beliefs as well as dedicated to causes in science, justice and the arts. David's own evangelical energies departed from religious belief, instead expressed through fizzing enthusiasm to improve life in Darwin and in Cambridge. He organised social events for Darwin families, volunteered to serve as College librarian so that he could overhaul the cataloguing system, helped form a music committee and sang in a Darwin choir tour to Portugal. He was a constant reformer, working with Sanjoy Mahajan to introduce new teaching methods in the Cavendish, to develop and deliver curriculum for an African Institute of Mathematical Sciences, and proposing a Darwin Lecture Series on Power, that first initiated his integration of themes across political activism and sustainable energy. The same spirit infused his research. He always had an agenda, to see what was not right, and to encourage rightness, not least in his good-humoured campaigns against the traditional "frequentist" approach to statistics that he and his Bayesian colleagues wished to reform.

He was devoted to working across disciplines, inventing the concept that has become talks.cam - a Cambridge innovation that is unique in the world for allowing University members access to current research in every field of academic endeavour. He also recognised few boundaries between academic and public life. Even before his influential role in government, he campaigned against the Iraq war, for the restoration of Cambridgeshire railways, and against miscarriages of justice. These were both local, such as volunteers at Wintercomfort Cambridge prosecuted for the drug use of their homeless clients, and nationally prominent misapplications of maths and statistics, leading to repeal of Sally Clark's conviction for the sad coincidence of her children's deaths. Most famous, of course, was his unflagging campaign for proper numeracy in public debate, brilliantly communicated through his book *Sustainable Energy Without the Hot Air*, which was followed by a punishing schedule of touring to give hundreds of public lectures on that theme.

David was ambitious, and he was driven by that ambition - in the most admirable ways. He always had

the highest aspirations in his academic career, and recognised no limits. His scientific achievements were remarkable, and inspired a generation of students. He agonised over his Part III lectures, wanting them to be as perfect as possible, and they were consistently voted by students as the most popular in the Cavendish. The textbook developed from that course "Information Theory, Inference and Learning Algorithms" has become not only an indispensable modern classic, but a joyful and entertaining example of interdisciplinary mathematics at its very best.

This article cannot start to do justice to the significance and impact of David's scientific achievements. Even the applications of that work are amazingly diverse, from error correcting codes, genetics, artificial intelligence, and machine learning, to the brilliant invention of Dasher, which has provided a means of communication to disabled people around the world. Three days of seminars, shortly before he died, hosted hundreds of people talking about their own scientific and technical work, in many different fields, that had directly built on or been inspired by David's discoveries. In these highest echelons of academic excellence, David could easily have been the recipient of a Fields medal or Nobel prize, if the cards had fallen in the right order.

As things have turned out, the world has been cruelly deprived by his untimely illness and death. Most of all, we think of his family, of his wife Ramesh and children Torrin and Eriska, who have lost a brilliant, inspiring and loving husband and father. For them most of all, but also for all of us at Darwin, we remember a wonderful friend who inspired (or if necessary, persuaded) other people to do things that they might not otherwise have done, and has got all of us to be a bit braver than we otherwise would have been. The College is now working to fund the permanent endowment of a Research Fellowship in David's name, which we hope will commemorate and nurture those ideals for generations to come.

Alan Blackwell and Davin Yap

A programme and videos of the two public days can be seen online at <http://divf.eng.cam.ac.uk/djcms2016>

Professor Sir Patrick Sissons



Gifted physician who studied immune-mediated kidney disease and human persistent virus infections

Patrick Sissons, who died on 25 September, will be remembered as much for his groundbreaking research in nephrology and infectious disease as for his leadership of the University of Cambridge's Clinical School, where he was Regius Professor of Physic.

He had an intuitive mastery of detail, and a deep understanding of the ever-changing landscape of university research and education. Calm and unshowy, he brought a strong dose of realism to the management of the often-contradictory demands that emerge in settings combining health care and medical research.

(John Gerald) Patrick Sissons was born in Hestle, East Yorkshire, in 1945, to Gerald, owner of a family timber mill, and to Georgina, who came from a shipping family based in Gainsborough.

Educated first in Ilkley, followed by Felsted School, Sissons trained with distinction in Medicine at St

Mary's Hospital Medical School. After junior posts in clinical pathology and nephrology, his perspectives changed when he undertook clinical research at Hammersmith under the charismatic influence of Keith Peters and Peter Lachmann.

He studied patients with immune mediated kidney diseases, identifying anti-complement autoantibodies associated with glomerulonephritis. He understood the potential for specific treatment that would come from a better knowledge of the disease and its underlying causes. In one notable case, he encountered a nurse who had developed immune-mediated kidney disease through repeated self-immunization with tetanus, diphtheria and polio vaccines.

After further clinical training at the University of the West Indies, a prestigious NIH Fogarty Fellowship enabled Sissons to join Mike Oldstone at the Scripps Research Institute, San Diego, for three years. There, in highly cited research conducted during a local measles outbreak, he demonstrated the critical role played by protein molecules in the blood, known as complement, in the destruction of cells infected by the measles virus.

A Senior Lectureship awarded by The Wellcome Trust allowed him to return to Hammersmith in 1980, ultimately transferring to the department of Virology. He shared a major MRC grant award with Keith Peters, and with Jonathan Cohen established the academic infectious diseases service, combining clinical interests in infectious disease with the scientific pursuit of human persistent viral infection.

He focused on cytomegalovirus, a virus that is latent in the majority of humans but which can easily kill patients with suppressed immunity. His pioneering work in this field coincided with the emergence of the AIDS epidemic, caused by human immunodeficiency virus.

At a time when cytomegalovirus infection was studied mostly in animal models, Sissons and his colleagues –including John Sinclair and Leszek Borysiewicz (then a PhD student, now Vice-Chancellor at the University of Cambridge)—developed innovative methods to examine the virus in its natural host.

This work expanded after Sissons' move to Cambridge in 1987. Research by the Sissons-Sinclair laboratory, funded continuously for 25 years by the Medical Research Council, has since been at the forefront of research into virus latency and reactivation. Cambridge is now a designated centre of excellence for research into critical pathogen-host interactions.

At Cambridge, Sissons teamed up with his former mentor, Keith Peters, then Regius Professor of Physic. Peters' acceptance of the position had been contingent on the appointment of Sissons as a Professor of Medicine. He revealed his deep understanding of large and complex institutions, as well as his understated, but highly effective, style of academic leadership.

Trusted by members of other faculties, and able delicately to accommodate and improve local practices, he was crucial to the development of the Faculty of Clinical Medicine, delivering a living academic organism that finally met the expectations of a world-class university. Today's expanding biomedical campus – incorporating diverse research buildings as well as the nationally unequalled MRC laboratory of Molecular Biology alongside the large regional Addenbrooke's hospital—embodies the vision shared by those who first welcomed Sissons to Cambridge.

Sissons succeeded Peters to the Regius Professorship and despite many demands at home and abroad, did not abandon clinical undergraduate teaching; as honorary Consultant Physician, he maintained more

than symbolic clinical responsibilities. He served with great distinction for seven years until retirement in 2012. Earlier that year Sissons was knighted for services to Research and Education in Clinical Medicine.

A Founding Fellow (1998) of the Academy of Medical Sciences, he served as Clinical Vice-President from 2010. Among other duties overseas, he chaired the 2014 Research Assessment Panel for the Universities Grant Council in Hong Kong, served on the Medical Advisory Board of the Gairdner Foundation in Canada, and was Distinguished Visitor of Singapore's Agency for Science, Technology and Research. He was elected a Fellow of Darwin College, Cambridge in 1988.

A brilliant clinical scientist, academic strategist and administrator, Patrick Sissons was wise, scrupulously fair and unstinting in support of others –especially younger academics and trainees. He is remembered for his patience and ability to clarify complex matters by adroit and penetrating questioning.

Modest and private, he bore a rapidly progressive and cruel illness stoically but his dry wit, interest in others and refined intelligence were undimmed. He had two daughters from his marriage, in 1971, to Jennifer Anne Scovell (d. 1991): Sarah (b. 1973) lives in Levensham, North Yorkshire; Rebecca (b. 1974) lives in Derbyshire with her husband and three children. Their loss, and that of his partner, Jean Thomas, will be felt by a vast community of clinicians, researchers and friends.

This obituary was written by Professor Tim Cox with contributions from Professor Dame Jean Thomas, Professor Sir Leszek Borysiewicz and Professor Patrick Maxwell.



Dr Ronald "Jimmy" George James

Jimmy James, Emeritus Fellow of Darwin College, died on 16 June 2016, at the age of 84.

From the age of 28, Jimmy was based in the Cambridge University Department of Engineering, firstly as a research worker, then as a Research Student in what was then the Soil Mechanics Group, where he successfully submitted his PhD thesis. He then became a University Senior Assistant in Research, before promotion to become an Assistant Director of Research. He was particularly enthusiastic in devising material for the teaching of undergraduates. He retired in 1990, although he continued to support the Department in a variety of ways in later years.

Jimmy was brought up and went to school in the Luton area, Bedfordshire. After leaving school he worked for two years as an apprentice dispenser for Boots, the Chemist, but then became an Engine Fitter in the Royal Air Force for the two years of what was then obligatory National Service. This move can be seen as creating for Jimmy two linked fascinations that never left him. These were his love of flying, and his delight in mechanical engineering and making things work!

It is interesting to find out how Jimmy's career developed towards engineering and flying. After leaving the Royal Air force, he worked for a year with English Electric Aviation in Luton, studying part time

at Luton Technical College and improving his grip on Mathematics and Physics, before going to City and Guilds College, that had become merged into what was Imperial College, South Kensington, London. After three years based in South Kensington, Jimmy was awarded an Honours Degree by the Department of Mechanical Engineering. He then joined the De Havilland Engine Co. Ltd., before gaining his first appointment at Cambridge University.

The diversity of Jimmy's interests in Mechanical Engineering whilst working in Cambridge University was remarkable. Shortly after Jimmy came to Cambridge, his Head of group, Ken Roscoe, managed to raise funding to build a very large centrifuge, but after the tragically early death of Ken in a car accident, Jimmy became a key figure working with Peter Wroth and Philip Turner in the building and running of this remarkable experimental facility. The centrifuge can take samples of granular materials (for example soils) up to some one ton in weight, and subject them to very high centrifugal stresses for periods of hours or more, by whirling them around on the end of a 10m long beam. The sample could then be examined to see how it had been altered by this high-stress, relatively long period, treatment. The potential danger of the high speeds and masses involved in running this equipment are all too obvious too, so it operated in a chamber buried deeply in the local Gault Clay bedrock, excavated below the ground surface in an isolated site in West Cambridge, although this is now not far from the route later engineered for the M11 motorway.

Jimmy was also much involved in the investigation and design of materials that might form the foundations of off-shore installations such as oil-rigs, or the flood walls of major rivers. In fact in 2015, the American Society of Civil Engineers made a special award to him for a paper published in 1991 on "Findings from a Joint Industry Study on Foundation Fixity of Jack-up Units".

Another of his research interests was Stirling Cycle Engines, which he constructed and tested in his own home workshop. Members of the College remember a talk delivered to a non-specialised audience in College, where the centre of attraction was a lively little machine that emitted clouds of steam and spluttering noises in its attempts at "perpetual motion" in College surroundings not normally associated with such activity!

Jimmy became a well-known and highly regarded figure in the East Anglian flying world, where he played an important role as Instructor, as well as in the certification of flying training. Not only did Jimmy become an important figure in local flying but he was regarded with great affection by many of its members. In mid August, Terry Holloway paid Jimmy a special tribute by making a memorial flight in Jimmy's memory over Anglesey Abbey, near where Jimmy and his family lived, deliberately lining up towards Marshalls runway in the area where Jimmy had first learned to fly.

In his later years, Jimmy became one of the characters of Darwin College. He tended to come to College lunch on Fridays, making the journey from his home in the fen-edge village of Bottisham by bus, and then timing how long it took him to walk from the Drummer Street bus-station down to the College. These visits will be greatly missed. It is good to hear that a bench has recently been dedicated in Jimmy's memory at Anglesey Abbey between Bottisham and Cambridge. Jimmy is survived by his wife Paddy.

Peter Friend
Emeritus Fellow



Alumni Events in 2017

Friday 13th January to Friday 3rd March

Darwin College Lecture Series
All alumni welcome, if you would like to attend Formal Hall afterwards please contact the Alumni Office
Venue: Lady Mitchell Hall

Friday 10th March

Darwin College Society Reunion
Dinner during Formal Hall
Venue: Dining Hall and Richard King Room

Friday 12th May

Alumni Reunion Dinner 1964-75 and 1984-1991
Venue: Dining Hall

Friday 9th June

Darwin College Society Bumps
Dinner (provisional)
Venue: Dining Hall

Friday 7th July

Alumni Garden Party
Venue: Gardens

Saturday 23rd September

Alumni Family Lunch
Venue: Gardens and Dining Hall

Editors:

Kathy Wheeler, Sophia Smith, Inès Lion

The editors especially welcome short articles, pictures and news from all our alumni but particularly those overseas.

Correspondence to: darwinian@darwin.cam.ac.uk
To sign up for our ebulletin use this link: eepurl.com/pLzBH or scan our QR code

