Highlights:

Nobel Prize in Physics 2016 – The man and the science

A library full of secrets

Meet the NatScis

Radicalisation: moral change and meta-mechanisms

Issue 25 | Spring 2017
One of our treasures in the Old Library is a letter from Charles Dickens to his son, full of advice on how to conduct himself at Cambridge. The letter is part of the Royal Mail’s Letters of Our Lives campaign that displays key moments in the country’s social history.

The small piece of pale blue Victorian writing paper, covered with Dickens’ distinctive handwriting in dark blue ink, was given to us by the author’s great-great-grandson and Trinity Hall alumnus Christopher Charles Dickens (1957). In it, the famous author gives advice to his son, Henry Fielding Dickens, “My Dear Harry”, at the start of his time as an undergraduate at Trinity Hall in October 1868. This parental advice has a timeless quality that still rings true today and the letter always catches the imagination of our visitors.

The letter from his father includes a generous allowance of £250 a year, “handsome for all your wants” and the news that he has ordered “3 Doz: Sherry, 2 Doz: Port, and 3 Doz: light claret to be sent down to you…and 6 bottles of Brandy”. Dickens tells his son, “Whatever you do, above all other things keep out of debt”. Dickens, who was tremendously proud that his son was at Trinity Hall, signs off, “Ever your affectionate father, Charles Dickens”.

About Front Court

Front Court keeps members and friends up-to-date with College and alumni news.

Front Court is produced twice a year. If you have any suggestions or articles for the next issue (Autumn 2017), please contact the Editors.

All our publications are available as PDF files from our website: www.trinhall.cam.ac.uk/alumni/publications

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The Dickens family at Trinity Hall

Harry (Henry) (1868)

Henry (1892)

Philip (1906)

Cedric (killed on the Somme in 1916)

Christopher (1957)

(Henry’s grandson)

Cedric (1935)

The small piece of pale blue Victorian writing paper, covered with Dickens’ distinctive handwriting in dark blue ink, was given to us by the author’s great-great-grandson and Trinity Hall alumnus Christopher Charles Dickens (1957). In it, the famous author gives advice to his son, Henry Fielding Dickens, “My Dear Harry”, at the start of his time as an undergraduate at Trinity Hall in October 1868. This parental advice has a timeless quality that still rings true today and the letter always catches the imagination of our visitors.
The works involved renewal of the roof, replacement of worn stonework and old iron windows, renewal of services, removal of an immense quantity of asbestos, reordering of some rooms (though not the main rooms on the ground floor) and, above all, conversion of the top floor from Fellows’ rooms to guest rooms, with separate access by lift and stair. Those of you returning to College for a reunion or some other event will doubtless see what an extraordinary job has been done, when we welcome you to the Lodge for pre-dinner drinks. The refurbishment has put quite a strain on the College over the last 18 months. So I’m enormously grateful to everyone here for making it possible.

We are going through a time of some uncertainty about the future of higher education, especially over the likely impact of the Higher Education Bill, which will result in changes to how university education works in the UK. There is very little optimism about that here. I fear we are seeing the insertion, in the interests of regulating a ‘market’, of a highly bureaucratic mechanism into higher education that may undermine universities’ autonomy and independence, and stifle opportunities for creative innovation. There is much disagreement, clearly, about the desirability in principle of a market model in higher education. But let me quote Lord Waldegrave, a defender of that principle, speaking in criticism of the Bill in the Lords in December: “We have given power to the students, who take the money with them...What those students need...is better information about comparative teaching quality...and they need more information on pastoral outcomes and so on. What they do not need is a centralised behemoth of a regulator. That is a completely different policy.”

By the time you are reading this, the final shape of the Bill should be clear. Cambridge has survived, and thrived, for over 800 years, and no one doubts that it will continue to do so. This may be yet another obstacle in the road, but it is simply something we will have to learn to negotiate. In the meantime, there is much to continue to celebrate, including public lectures, a regatta, a student-run arts festival, the commissioning of portraits and a major summer celebration to mark the 40th anniversary of the admission of women to Trinity Hall. You will find further details on the College’s website at www.trinhall.cam.ac.uk/th40. I do hope you are able to join us in the celebrations, in spirit if not in person.
With the help of David’s friend, Martin, and Trinity Hall Fellow, John, we look a little closer at the man and the science behind the Prize-winning theory.

The man

David Thouless and I both came up to the Hall in 1952 and joined the Boat Club and Signals section of the Cambridge University Officers Training Corps. We both expected to be called up for National Service after we got our degrees (David never was), so each summer we went to do three weeks Basic Training with other conscripts in Catterick.

While at Cambridge, David played chess for the University Dragon’s team. I remember one year when we were on a 36-mile route march, we played a game of mental chess, ie without a chessboard. As always, he won. We both belonged to the sizeable proportion of undergraduates who attended Chapel for Evensong during the week and Holy Communion on Sundays.

We were also in a group of five who learned to play Bridge together and we could usually get four together on a Friday night. We did not play for money but one of our number kept the scores for each term, to discourage wild bidding towards the end of the evening.

After rowing one day in the spring of 1953, David approached me and asked if I would share rooms with him later that year (as a major scholar, he was entitled to have rooms in College all three years). We were in L3 for our second year and T2 for our third. I was reading Maths and David was reading Physics, although his maths was better than mine, and we both worked industriously during the day. One winter, the Cam froze over solidly for about 10 days and David spent a lot of time skating. When he went for a Supervision with a rather reduced quantity of work to his supervisor, Dr Shaun Wylie – whose rooms overlooked the Cam – Shaun asked, “Had a quiet week, Thouless?” (pronounced to rhyme with ‘thou’, but with a soft ‘th’.)

David and I have been friends and remained in contact ever since. He asked me to be his Best Man when he married Margaret in 1958.

Martin Turner (1952)

The science

At school, we learnt of three phases of matter: solid, liquid and gas. Gases are chaotic and disordered, solids are regular and ordered, and liquids are somewhere between. As we cool any substance, it undergoes transitions into more ordered phases. For example, steam condenses into a liquid then freezes into ice. In reality, further cooling often yields further transitions (eg below 750°C iron becomes magnetic) and, at very low temperatures, several truly bizarre (exotic) phases emerge, including superfluids, which offer no resistance to flow.

David’s Prize is for understanding transitions between these exotic phases. He linked these transitions with topology, the branch of mathematics that classifies shapes by properties such as number of holes that can’t be changed by stretching or deformation, but only by cutting or gluing. Topologically, a doughnut is equivalent to a teacup, since both have one hole, but different to an apple, which has none, or a pretzel that has three. Most famously, David showed that although a thin film of superfluid is inactive when it’s cold, when it reaches a certain temperature, it transitions to a highly active swirling state full of whirlpools. Previous theories had missed phase-transitions of this type as they didn’t consider topological changes such as the arrival of whirlpools. David’s work opened a whole research field – topological phases of matter – that promises to deliver further Nobel Prizes and perhaps, powerful quantum computers.

Dr John Biggins
Staff Fellow in Physics

Professor David James Thouless arrived at Trinity Hall as an undergraduate in 1952 to study Physics and obtained his PhD at Cornell University. In 2014, David became an Honorary Fellow of Trinity Hall. He is a Fellow of the Royal Society.
A library full of secrets

The Old Library’s project to catalogue the 16th-century printed books has uncovered a treasure trove of previously unrecorded information: from books we didn’t even know we had to fascinating inscriptions by former owners.

The collection is particularly strong in early law books and we have discovered a large number of rare editions and even some unique items. The majority of these are law texts printed in France, particularly in Lyon. Other subjects are represented including Jean Pyrrhus d’Angleberme’s *Institutio boni magistratus*, printed in Orléans by Pierre Asselin in around 1518; an edition of Gratian’s *Decretum*, published in Lyon by Jacques Sacon in 1512; and *Infortiatum, Pandectarum iuris ciuilis tomus secundus*, printed in Lyon in 1580.

The project has also involved detailed identification of former owners, including Masters, Fellows and alumni of Trinity Hall. We are building up a complete online record of the law books owned by William Mowse (Master 1552–53 and 1555–59?) and Thomas Eden (Master 1626–45). Books frequently changed hands either by gift or sale. William Mowse acquired a volume containing *Tractatus solennis excell(ent)issimi J.V. Monarch domini Andree Barbatia* (Lyon, 1518). The title page bears the inscription of Thomas Cranmer (1489–1556), reformer and Archbishop of Canterbury, and the binding bears the arms of William Cecil, Baron Burghley (1520–98), principal adviser to Queen Elizabeth I, twice Secretary of State and Lord High Treasurer.

It is a mystery how some books arrived in the library. We have a large collection of law books that belonged to Edmund Pope (d. 1630), a Fellow of All Souls College, Oxford. One notable book, *Della fabrica del mondo* by Francesco Alunno (Venice, 1560), bears the armorial binding stamp of Robert Dudley, 1st Earl of Leicester. An unexpected surprise was the discovery of four additional books from the library of Barnard Hampton (d. 1572), a mysterious Tudor figure who was clerk to the Privy Council of King Edward VI, Queen Mary I and Queen Elizabeth I. Until this project, only six volumes from Hampton’s library were known to exist including only one recorded at Trinity Hall.

Some of the books have beautiful bindings. The most significant include a gold-stamped armorial binding of Cardinal Jules Mazarin (1602–61); an English panel-stamped binding by Andrew Ruwe; and a panel-stamped binding executed by John Reynes in London of the baptism of Christ on the front and St George on the back.

Our rare books cataloguers, Adriana Cel Mare and Allen Purvis, have now started cataloguing 17th-century books and are looking forward to uncovering many more of the Old Library’s secrets.

Thank you to our donors who have made cataloguing these books possible.

Dominique Ruhlmann
Director of Library Services
Meet the NatScis

While we recognise Cambridge as a great scholarly university, the collegiate University is often noted for its transformative contribution to the sciences over hundreds of years – Newton, Darwin and many others including our own David Thouless (1952) and Stephen Hawking (1962). Our tradition of freedom to explore new ideas, innovation and research has helped shape the modern world.

At the heart of our world-class teaching is the supervision system and access to leading scientists to deliver the teaching. Historically, Trinity Hall has admitted a small cohort of science Fellows and students, but the growth in science disciplines and the value of our graduates to many professions means that both the Fellowship and our student intake (as undergraduates and graduates) has grown in number in recent years. When I joined Trinity Hall in 1999, there were three Fellows in Natural Sciences; Neil Bruce (now Professor of Biotechnology at the University of York), Mike Hobson (Professor of Physics and currently Vice-Master) and Vasant Kumar (Material Scientist who was elected to the Fellowship the previous year). Between us, we attempted to support our students across the breadth of the demanding Tripos. Now we benefit from the considerable experience of 12 fantastic science Fellows to teach and guide our bright and enthusiastic students who then go on to do incredible work in Cambridge and elsewhere. Here we meet a few of these brilliant NatScis; alumna Caroline of the Francis Crick Institute, undergraduate Catherine, alumnus Victor of Desktop Genetics, and Fellows Sasha (Earth Sciences) and Edmund (Biology).

Based on examination results, the vibrancy of our graduate community of scientists and the positions that our science graduates go to when they leave College, Natural Sciences at Trinity Hall is going from strength to strength.

Dr Nick Bampos
Director of Studies in Chemistry
Dr Caroline Hill (1981)
Group Leader, the Francis Crick Institute

Studying Natural Sciences at Trinity Hall was a transformative experience for me. I arrived wanting to be a physicist but left a biologist. It was the life sciences that I found compelling.

After a PhD in Cambridge, I went to the Imperial Cancer Research Fund in London to work on cell communication, which I continue to work on to this day. I have now been directing my own lab for over 20 years, most of that time in the flagship institute of Cancer Research UK in London. We study the phenomenon of cell signalling, where one group of cells sends chemical signals to neighbouring cells to alter their behaviour: this could be their growth rate, ability to move, identity or shape. Cell signalling is essential for embryonic development and goes awry in human diseases, most importantly, cancer. The particular signals that my lab works on are required for specifying different types of cells in the embryo and they play critical roles in driving both the initiation and spread of tumours in humans. We want to understand how these events are regulated so that we can eventually determine how to develop better drugs to treat different types of cancer.

As well as directing my research group of graduate students and postdocs, and sitting on various funding committees and advisory boards, I am also involved in running the Institute. Most excitingly, my lab has very recently moved to the Francis Crick Institute in St Pancras, which is a huge brand new biomedical research institute investigating the basic biology underpinning human disease. I chair the Faculty Committee, which is developing policies and new ways of working. This is extremely stimulating as we are building a new type of multidisciplinary institute to meet the challenges of the 21st century.
Catherine Hooper (2014)
Undergraduate

It has been three years since I received my offer to study Natural Sciences at Trinity Hall and I cannot believe how quickly the time has flown by.

It comes as no surprise that I have chosen to study chemistry in my final year; reading about theories that we can use to predict or understand molecules is fascinating and I have always enjoyed learning methods that I can use to solve problems. Third year has presented many changes, including more practical work. I have found this increasingly enjoyable throughout my degree and I am looking forward to spending more time in the organic laboratories. However, the greatest adjustment in third year has to be the end of Saturday morning lectures. After two years, the reappearance of a weekend is certainly a welcome one!

Despite knowing I would study chemistry in third year even when I applied for Natural Sciences, I have found the best part of my degree has been the opportunity to study other disciplines. Over my three years, I have been able to continue studying cell biology, which I was keen to do beyond A-Level, and tackle new subjects such as materials science, which I had not previously heard of, let alone considered reading at degree level. This has given me the confidence to pursue careers that will require a wider scientific knowledge, spanning across multiple disciplines.

Next year I hope to complete my Master’s in Chemistry and beyond that, I am still considering the broad range of possible careers in science. I know that whatever I choose to do, it will be with the knowledge and the confidence I have gained during my time at Trinity Hall.

“I am looking forward to spending more time in the organic laboratories.”
During my chemical engineering undergraduate studies, I was interested in biotechnology (basically biology for engineers) and its potential to radically change the chemical production industry: entire factories could be condensed into a single cell organism and it could all be engineered from scratch.

This led me to the University of Cambridge’s MPhil in Bioscience Enterprise [MBE] course. The MBE was the perfect conversion from oil and gas to life sciences; an intense year learning everything about the biotechnology industry from the fundamental science to its transformation into cures to save lives, improved crops to feed growing populations and fuel-producing cells to power the world.

It was also how I met my cofounders, Riley Doyle (Hughes Hall, 2011) and Edward Perello (2011). Together, we started Desktop Genetics from Edward’s room in Walter Christie; a 100% Wychfield Site company. During our studies, we saw the speed of reading DNA was orders of magnitude higher than that of writing DNA. This held back biology research because the time spent and money wasted on old DNA writing techniques was enormous. We hypothesised this was, above all, an information problem and the solution would be found in computer technology. We left Wychfield in 2012 with our prize money from the Cambridge University Entrepreneurs competition (Life Science Startup of the Year) to start Desktop Genetics, a biology software company. Today, the company is developing artificial intelligence to tackle the root genetic cause of disease. We process the petabytes of data coming out of DNA sequencing machines to design, manufacture and analyse cells with precisely modified DNA for use in fundamental research and cell therapies. We do this with a team of biologists, engineers, software developers and data scientists from our London office; no lab involved, just computers.

Victor and Edward are listed in ‘Forbes 30 Under 30’ European technology 2017 category. Read more on page 17.
Dr Alexandra (Sasha) Turchyn
Director of Studies in Earth Sciences

Alongside teaching in the Department of Earth Sciences and my roles directing studies in Natural Sciences and as Deputy Graduate Tutor at Trinity Hall, I use chemistry to study the carbon cycle over very long periods of Earth’s history.

Much of my research explores how the formation of rocks and minerals removes carbon from the planet. Traditionally, researchers studied this through exploring the distribution of different types of mud on the ocean floor. My research has demonstrated that mud changes composition dramatically below the seafloor, driving certain minerals to dissolve and others to precipitate. Microscopic life, which lives within the mud up to a kilometre below the ocean floor, drives these chemical changes. This microscopic life, bacteria and archaea called the ‘deep biosphere’, lives without oxygen and are similar metabolisms to those that existed in the earliest days of life on the planet. My work has shown that the deep biosphere exerts a large amount of control on the volume and type of carbon removed from Earth’s surface, and that the chemical changes imparted can influence ocean chemistry over geological time.

This is important because carbon buried in mud as organic material (the remains of dead organisms) leaves oxygen behind; this burial allows our planet to be oxygen rich and support multicellular life, like humans. However, if the organic carbon in the deep biosphere transforms into other forms of carbon, it does not leave oxygen behind. It is likely that these organisms and the transformation of organic carbon played a key role in generating the habitable planet we know today!

TODAY, THERE ARE 40,000 x 10^{12} KILOGRAMS OF CARBON AT THE SURFACE OF THE PLANET, OF WHICH \simeq 93% IS IN THE OCEAN, DISSOLVED MOSTLY AS THE BICARBONATE ION.

The 2% of carbon at the surface of Earth that is in the atmosphere, largely in the form of carbon dioxide, determines how warm or cold Earth is. Beneath the surface of the planet, in the mantle and in various rocks, there is around 4,000,000,000 x 10^{12} kilograms of carbon, which is five orders of magnitude more than at the surface. Carbon comes to the surface through volcanoes, and is removed through the formation of minerals and rocks in the ocean that contain carbon, including the dead remains of organisms and calcium carbonate, or limestone.
Dr Edmund Kunji
Director of Studies in Biology

When I brought her daughter from the Low Countries to the island inhabited by the British, I told my mother-in-law that she did not need to worry. After all, it would only be for two years. Twenty years on, we are still here and she has learned that time keeping is not one of my best qualities. So how did we get here?

Well, I met Richard Henderson, an amazing scientist, at a conference and discovered on the World Wide Web that he worked at the Medical Research Council (MRC) in Cambridge. He kindly gave me a chance to work in his lab and taught me how important it is to work on long-term scientific problems, although I never acquired his skill or fearlessness. A few years later, John Walker, another amazing scientist, offered me the opportunity to be a group leader in the MRC Mitochondrial Biology Unit. There I work with an amazing group of young scientists on mitochondrial transport proteins (Fig. 2), which are small membrane proteins that transport food molecules into mitochondria, the powerhouse of human cells (Fig. 1). We throw all forms of radiation at our problems, such as UV, infrared, x-rays, electrons, neutrons, betas and gammas to see what will happen and hope for the best.

So why are we still in Cambridge? Is it because we like Victorian houses with pink carpets and drafts like gale-force storms? Is it because we like to eat nuclear-green mushy peas and puddings that, in all reality, are not puddings? Is it because we enjoy being part of the large group of cyclists that navigate the narrow roads and miniature roundabouts of this medieval town? Actually we do. But it is mainly because Cambridge is full of amazing people, who have opened my eyes to what is beyond my small world. Twelve years on, I am still bewildered by this beautiful place, puzzled by its unspoken rules and impressed with the hard work that everybody puts in to make it a success.

How did I get involved with Trinity Hall? Well, following the advice of Dirk Slotboom, my former postdoc and Trinity Hall Junior Research Fellow, I applied for a Fellowship in the Natural Sciences here and they kindly, but somewhat foolishly, gave me that wonderful opportunity. It is so nice to meet all of these amazing people, who have opened my eyes to what is beyond my small world. Twelve years on, I am still bewildered by this beautiful place, puzzled by its unspoken rules and impressed with the hard work that everybody puts in to make it a success.

Above: Figure 1 – View inside a human cell, showing a mitochondrion, charged up by the breakdown of food molecules.
Below: Figure 2 – Atomic structure of the yeast mitochondrial ADP/ATP carrier, which transports the spent cellular fuel ADP into the mitochondrion and newly synthesised cellular fuel ATP out of the mitochondrion.
Radicalisation: moral change and meta-mechanisms

I never got over reading Isaiah Berlin’s *The Hedgehog and the Fox*. “The fox knows many things,” says Archilochus, “but the hedgehog knows one big thing.” Berlin proceeds from this aphorism and his own digressions on Leo Tolstoy to postulate that there are two sorts of thinkers: the foxes, who deny universal principles exist that account for the diversity of life as they know it, and the hedgehogs, who believe that unifying frameworks can make sense of the whole of human experience. Like most dichotomies, this opposition is a caricature, yet its reductionism is seductive.

What, then, are the meta-mechanisms of radicalisation? My own work draws from epidemiology and social ecological theories of criminality to articulate a model that I call IVEE (Individual Vulnerability, Exposure, Emergence). Radicalisation is a process of terrorist propensity development, whereby individuals who are cognitively susceptible to moral change become exposed, through self- and social selection, to the radicalising settings that have emerged in their environment. The model predicts that the characteristics of terrorists will change as radicalising settings displace and new kinds of (susceptible) people become exposed to their terrorism-supportive features. It also predicts the poor performance of risk assessment tools based on so-called risk factors, absent is an ontological understanding of what these factors are and how they can be expected to change across contexts.

There are scores of individuals susceptible to moral change in our societies, yet very few radicalise. If we want to better understand why and keep this number down, foxes and hedgehogs should band together going forward.

Dr Noemie Bouhana (1998)
Senior Lecturer, Department of Security and Crime Science, University College London

© SHUTTERSTOCK
On graduating from Trinity Hall in 1985 to embark upon a career which took me from the Bank of England through to the senior leadership team of Volkswagen AG (as the most senior woman globally) and subsequent Board roles, I was seldom conscious of gender being an obstacle.

However, the broader picture suggests that there are still remarkably few female business leaders. The FTSE 100 has only six female CEOs and four female Chairs; the German DAX 30 has less than 9% female representation on the Management Board.

Lack of diversity in banks was underscored by the 2008 Financial Crisis. Christine Lagarde, Managing Director of the IMF, recently mused “the financial downturn might have turned out differently if the failed Lehman Brothers had been Lehman Sisters.”

Since 2008 there has been international focus on increasing female representation, particularly in the Boardroom. Norway introduced quotas as early as 2003 with Germany following in 2016. In the UK, the 2010 Davies Review set a target of 25% of female Board representation for the FTSE 100 which was achieved (just) by 2015.

My career, which took me from the City to Germany, initially focused on attracting international capital for major German and latterly Swiss corporates. The dialogue between investors and management was about valuation. It was clear to me that a key driver of valuation is the calibre and composition of the leadership; not a controversial idea but the link was seldom explicitly made by companies or shareholders.

Thus I set up Fidelio in 2009, providing Board Development and Search with a focus on building effective public company Boards. Diversity is a key element of effectiveness; the benefits it brings include reducing group-think and improved decision-making. Thus, when the Davies Review challenged companies and advisors to increase Board diversity, Fidelio was delighted to design and deliver the ‘A Seat at the Table’ programme; an intensive programme enabling talented women to succeed to, and at, the top table, and building a pipeline of female CEOs and Chairs. Now in its fourth iteration, it has attracted female business leaders from the UK, Europe, the US and Africa.

The focus on Boards is not coincidental. A critical number of women in leading positions produces a cascade effect. Building my own Board portfolio I clearly see this. Before a recent Jaguar Land Rover India Board Meeting, I met talented women within our company and Tata Motors, an impressive number of whom were engineers. At a recent Harvard Business School Alumni Board Meeting, a key agenda item was diversity within the School; and as a German British Forum Board Member, I have initiated seminars on the German Frauenquote, including speakers such as the (female) Vice-President of the Bundestag and the (first female) Chair of the Institute of Directors.

There is great opportunity for women embarking upon a career in business today. However, the combination of regulation, targets and concerted effort by women at all levels in the workplace remains critical in achieving greater gender balance.
Make a difference

Last year we appointed a full-time Schools Liaison Officer (SLO) and increased the hours of our Mental Health Advisor, both of whom have a significant impact on College life. This was made possible through two donations from alumni.

In 2013, we employed a part-time SLO, shared with another College, to offer University application advice to groups from areas that are currently under-represented at Cambridge, raise the profile of the College and contribute to student recruitment.

To be more proactive in our initiatives we needed the role to be full-time, as Dr Andrew Murray, Admissions Tutor, explains: “We have seen the value of working with networks of schools, which has enabled able and enthusiastic students from a wide range of backgrounds to get a taste of what University can offer. With a full-time SLO we will be able to provide similar experiences to many more students, encouraging them to follow their passions, work hard and aim high.”

Thanks to a donation from Tim Bunting (1982) to help cover the increased cost, Helena joined us as our full-time SLO last term: “Working here full-time will help me think strategically about our outreach activity. We plan to continue our HE+ project in Somerset, set up a similar arrangement with the schools we currently work with in Bath and North-East Somerset, and work hard to increase our engagement with schools in Bristol.”

Within College, mental health care is a critical part of our support system. Although Cambridge still has a lower dropout rate than the average for UK universities, studying here can be stressful. In 2016, we appointed a Mental Health Advisor for a few hours per week to enable our members to benefit from early specialist support. Now, thanks to a donation from Sarah Bates (1977), we have been able to increase her hours to 18 per week. Dr Clare Jackson, Senior Tutor, explains how important this is: “The Mental Health Advisor provides an invaluable specialist service, seeing students and supporting the Tutors and other College staff in identifying and implementing ways of promoting student wellbeing.”

Juliet explained her role: “Students are able to contact me directly to arrange an appointment or they may be referred by their Tutor. I provide mental health assessment, advice, information and ongoing support.”

We are very grateful for the donations that have made these roles possible.

You can support our outreach activities and pastoral care through donations to the Trinity Hall Fund: www.trinhall.cam.ac.uk/onlinegiving

For more information contact director.development@trinhall.cam.ac.uk

MEET THE NEW RECRUITS …

HELENA BLAIR
SCHOOLS LIAISON OFFICER

I studied Education with English and Drama as an undergraduate at Homerton College, graduating in 2014. As the first from my school in Bradford to study at Oxbridge, I quickly became interested in Access to Higher Education issues. I spent two years at Cambridge University Students’ Union as Access and Funding Officer, an elected full-time position focused on widening participation, before coming to Trinity Hall.

JULIET BRISTOW
MENTAL HEALTH ADVISOR

I qualified as a social worker in 1997 and worked for the NHS in the Cambridge mental health services from 1997–2010, which included community mental health teams, the drug and alcohol service and A&E. Then I became the first mental health advisor at the University Counselling Service, where I was responsible for developing the role across the Colleges and University.
When I was at Trinity Hall in the 1970s, North West Cambridge was mainly where we went to use the College playing fields at Wychfield. Little did I foresee that many years later I would find myself on the other side of Storey’s Way, in what was then University farmland, involved in the major project that is now the North West Cambridge Development – the largest single capital project that the University has undertaken in its 800 year history. I was delighted when I was asked to become chair of the project’s Board last year.

Outline planning consent for the entire 150 hectare site was granted in 2013 and work on the first phase, now nearing completion, began that year. When the scheme is fully built out in 15–20 years, the development will be home to approximately 8,500 people and will feature 3,000 homes, 2,000 student bedspaces and 10,000 sqm space for academic and commercial research. All of this will help the University’s long-term plans to remain one of the world’s leading universities by attracting and retaining the best staff from around the world to undertake its research, and providing much needed affordable housing close to Cambridge.

But this is not just about meeting the University’s needs, vital though these are. Our vision is to create a new district and extension to the City, centred around a mixed academic and urban community: a place that is sustainable, long-lasting and ambitious, offering a high quality of life to enhance both the City and the University. That vision resonates strongly with my own background as CEO of The Crown Estate, which, like the University, is a long-term landowner and investor that strives to balance commerciality with the creation of high-quality, sustainable developments that will stand the test of time.

“The first phase includes 700 affordable homes for qualifying University and College staff, 400 market homes and 325 rooms for post-graduate students, in addition to extensive community facilities including the primary school (a University Training School linked to the Faculty of Education, which opened in September 2015), community centre, supermarket, shops, GP surgery, energy centre and open green space. The local centre, called Eddington, will open later this year.

The designers of our post-graduate accommodation – RH Partnership Architects – also designed the award-winning accommodation completed at Wychfield in 2007 and have drawn on their experience there. Another link between the Hall and North West Cambridge!

The University’s long-term perspective on development is unique and has framed the ambitions of the site, particularly in respect of sustainability. Innovative measures include the largest water recycling system in the country, which will cut potable water consumption to approximately half the Cambridge average; the underground waste management system; and a centralised energy centre providing heating and hot water for all residents on site. Such measures have been designed into the scheme from the outset and will be coupled with other initiatives and features to help people think about living more sustainable lives.

The North West Cambridge Development is a great opportunity to write the next chapter for the University and the City. This year will be pivotal and our team, led by Project Director Heather Topel, is working hard to deliver a place of which the whole Cambridge community can be proud.

Roger Bright (1970)
Chair of the North West Cambridge Development Project Board
WYNG Gardens opens

In November 2016, the first students took up residence in WYNG Gardens after two years of construction on the site formerly occupied by St Clement’s Gardens.

The four-storey development on Thompson’s Lane has 72 en-suite bedrooms, kitchen facilities, communal spaces and a walled garden with seasonal planting, climbing roses and hydrangeas.

Architect Tristan Rees-Roberts (1967) said: “Our aim for the new building in Thompson’s Lane was to design a good looking, contemporary building which would respond sensitively to its surroundings. The scale and materials of the building were carefully considered to fit into the streetscape, and the interior has been designed to give a high standard of accommodation.”

Glen Sharp, Junior Bursar, who has overseen the building project, said: “The new building will be an asset to the College, providing us with much-needed, up-to-date facilities as expected by students today.”

Trinity Hall is grateful for the ongoing relationship and support of the WYNG Foundation and to everyone who has helped with this project.

For further information on the conference facilities and bedrooms, available for bookings outside term, visit: www.trinhall.cam.ac.uk/wyng-events or contact events@trinhall.cam.ac.uk

TRANSFORMING CLEM’S TO WYNG

1911–2014

St Clement’s Gardens

1911–2014

St Clement’s Gardens

1911–2014

St Clement’s Gardens

Nov 2014

Clem’s demolished

Nov 2014

Clem’s demolished

Nov 2014

Clem’s demolished

May 2015

Archaeological survey

May 2015

Archaeological survey

May 2015

Archaeological survey

Sept 2015

Construction begins

Sept 2015

Construction begins

Sept 2015

Construction begins

Jan 2016

Frames complete

Jan 2016

Frames complete

Jan 2016

Frames complete

May 2016

Topping out

May 2016

Topping out

May 2016

Topping out

Sept 2016

Bike shed ramp complete

Sept 2016

Bike shed ramp complete

Sept 2016

Bike shed ramp complete

Nov 2016

Students move in

Nov 2016

Students move in

Nov 2016

Students move in

Kitchen

Conservatory

Double bedroom

Rear garden space

Return to Contents
New members of the Fellowship

In the 2016/17 academic year so far, we have welcomed the following people to the Trinity Hall Fellowship:

<table>
<thead>
<tr>
<th>RESEARCH FELLOWS</th>
<th>HONORARY FELLOWS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexandria Boyle</td>
<td>Dr Eugenio Giannelli</td>
</tr>
<tr>
<td>Dr Eugenio Giannelli</td>
<td>Mary Hockaday (1981)</td>
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<tr>
<td>is the WYNG Research Fellow in</td>
<td>is Controller of BBC World</td>
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<tr>
<td>Philosophy. Her research will</td>
<td>Service English, responsible for</td>
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<tr>
<td>focus on the nature of episodic</td>
<td>the BBC World Service’s international radio and digital services.</td>
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<td>memory and the evidential</td>
<td>From 2009-2014 she was Head of the</td>
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<tr>
<td>standards used to detect episodic</td>
<td>BBC Newsroom.</td>
</tr>
<tr>
<td>memory in animals.</td>
<td></td>
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<tr>
<td>Mary Hockaday (1981) is Controller</td>
<td>Rachel Weisz (1988) is an actor who</td>
</tr>
<tr>
<td>of BBC World Service English,</td>
<td>has starred in many films including</td>
</tr>
<tr>
<td>responsible for the BBC World</td>
<td>'The Constant Gardener', for which</td>
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<tr>
<td>Service’s international radio and</td>
<td>she won an Academy Award, Golden</td>
</tr>
<tr>
<td>digital services. From 2009-2014</td>
<td>Globe and Screen Actors Guild</td>
</tr>
<tr>
<td>she was Head of the BBC</td>
<td>Award.</td>
</tr>
<tr>
<td>Newsroom.</td>
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</table>

Fellow-Commoners: Dr Amaleena Damlé and Dr Claudia Marx.

Staff Fellows: Dr Jasmin Fisher (Natural Biological Sciences), Dr Heather Inwood (Asian & Middle Eastern Studies (Chinese)) and Dr Andrew Sanchez (Social Anthropology).

Visiting Fellow: Professor Jens Zimmermann.

Emeritus Fellows: Professor Michael Kelly and Dr Christopher Padfield.

Alumni in ‘Forbes 30 Under 30’

Victor Dillard (2011) and Edward Perello (2011) are listed in ‘Forbes 30 Under 30’ in the European technology category for their work to discover and treat genetic diseases using artificial intelligence. The duo’s biotechnology company, Desktop Genetics, is based in London, but began at Wychfield during their studies.

Read more about Victor’s work and time at Trinity Hall on page 9.

NEXT VICE-CHANCELLOR APPOINTED

Professor Stephen Toope, international law scholar and university leader, has been appointed as the next Vice-Chancellor of the University of Cambridge. He will take over from Professor Sir Leszek Borysiewicz on 1 October 2017.

Professor Toope is currently Director of the University of Toronto’s Munk School of Global Affairs and formerly served as President and Vice-Chancellor of the University of British Columbia. He is a scholar specialising in human rights, international dispute resolution, international environmental law, the use of force and international legal theory.

New Dining Menu

Our new Spring and Summer Dining Menu showcases the very best of this season’s produce, take a look online: www.trinhall.cam.ac.uk/conferences/events

If you’re thinking about holding an event at Trinity Hall, speak to our Conference & Events team on: +44 (0)1223 764444 or events@trinhall.cam.ac.uk.

Don’t forget that we offer a 5% discount on all bookings made by alumni!
On Thursday 12 May 2016, we made a return visit to the Royal Geographical Society in South Kensington where around 180 alumni gathered for drinks and canapés on a lovely spring night. We were delighted to welcome the traveler, writer and broadcaster John Pilkington (1968) who regaled those present with a fascinating talk and some wonderful slides on his travels along the Silk Road. For a number of those present there was also the opportunity to visit a part of the RGS’s collection. As is so often the case, the evening went all too quickly.

We held the 2016 Annual General Meeting (AGM) in College on Saturday 24 September, once again preceded by presentations from the three 2016 THA Award winners, recently returned from their time abroad: Kathryn Batchelor (2013), Luke Sawyer (2012) and James Grimwood (2015).

At the AGM, we said farewell to Martin Ansley-Young (1985) who had brought great clarity and accuracy to our financial affairs for the last eight years. The motion to appoint Roy Warden (1973) in his place was carried nem con. We also said farewell to Dr Nigel Chancellor (1990) who had given great service to the Association, including three years as our President. We appointed Dr Emma Bailey (2009) and Jonathan Cornwell (1992) to the Committee to fill the vacancies that had arisen.

After the AGM, we enjoyed our annual Cambridge Dinner in Hall. The event was well up to the standard that we have come to expect with wonderful food, great wines, superb service and excellent company, followed by drinks in the Aula Bar.

Saturday 12 November found the THA in Glasgow for dinner in the House for an Art Lover, set within the grounds of Bellahouston Park and inspired by the designs of Charles Rennie Mackintosh. It was a small, select gathering in what proved to be a good venue and a very enjoyable evening.

We look forward to seeing as many of you as possible at our events during 2017. A highlight on this year’s calendar is on 11 November when we will be at Penshurst Place, the ancestral home of the Sidney family. There will be a drinks reception around the fire in the Baron’s Hall, followed by dinner in the Sunderland Room; it should be another outstanding event! We are always open to suggestions for venues for future events.

Dr Chris Angus (1967), THA Secretary
In 2013, I took the job of Head of Technology for British Cycling from Chris Boardman – very exciting! The brief? “Use technology to make Team GB’s riders faster. Equipment, training methods, psychology; whatever you can dream up! By the way, there’s been a group working on this for a decade so all the obvious has been done. Good luck.” It felt like James Bond; M briefing Q.

Team GB cyclists had been so successful that this felt like a poisoned chalice. I thought to myself, “We need super clever, hardworking engineers bursting with ideas and we need them now.” Gulp! “Hmm, I wonder if our students can answer the call?”

Sixteen engineering fourth-year projects and one PhD later, we were ready to attack the Rio Games with new suits, shoes, handlebars, wheels and tyres, all improved by science and all backed with evidence that the item in question was quicker. Test results came from complex rigs scattered around the Engineering Department and the Manchester Velodrome that we had crammed with Cambridge-developed monitoring equipment – our ‘Cambridge North’ lab. The cut-off for new discoveries was seven months before the Games. Now we just had to make the parts. Things did get rather tight but better to be late and fast, than on time and slow! The marginal gains mantra still resonated and adding it all up, it didn’t look marginal, so we went for everything. Fortunately, all the parts arrived and worked beautifully on the day. The results were an absolute dream: six gold, four silver and two bronze. To top it all off, Jason Kenny came along to Trinity Hall for an evening with our students to tell them just what it was like to win that sixth medal.

Did the media report it all accurately? Were the real Team GB the 30 or so Cambridge students and academics involved over the last three years? Tongue-in-cheek maybe, but our students really did make a difference.

Professor Tony Purnell
Fellow-Commoner in Engineering and Head of Technology for British Cycling
Events

7 April 2017
Aula Club dinner, Cambridge

8 April 2017
Boat Club regatta

18 May 2017
THwomen40 lecture – Women in our own right or ‘Honorary Men’?

25 May 2017
THA London event

26 May 2017
MCR dinner

7 June 2017
Paris dinner

8 June 2017
Brussels drinks

17 June 2017
Last day of May Bumps

29 June 2017
General Admission

1 July 2017
THwomen40 Anniversary Event and Black & White Ball

14 July 2017
60th anniversary lunch [1957]

15 July 2017

2 September 2017
25th anniversary dinner [1992]

9 September 2017
50th anniversary dinner [1967]
30th anniversary dinner [1987]

13–18 September 2017
Australia events

21 September 2017
Hong Kong dinner

22–24 September 2017
University Alumni Festival

23 September 2017
THA AGM and Cambridge dinner

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Alumna-designed silver pendant

Our new sterling silver pendant, designed for Trinity Hall by alumna Laura Davidson (1998), is available to buy. It is handcrafted from high-quality sterling silver and comes with a chain in a Trinity Hall presentation box.

Laura says, “I hope my fellow alumni are pleased with the final commemorative pendant. It incorporates both the Trinity Hall crescent and the ermine detail on the College crest in what I hope is a very wearable and elegant design.”

£50 plus P&P. Order yours: www.trinhall.cam.ac.uk/gifts

E: merchandise@trinhall.cam.ac.uk
T: +44 (0)1223 332562

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For further information visit www.trinhall.cam.ac.uk/events or contact Liz Pentlow: alumni@trinhall.cam.ac.uk or +44 (0)1223 332567.

For University events go to www.alumni.cam.ac.uk/events.

Information correct at time of going to press.